

Washington Tree Fruits

Prepared by

WASHINGTON CROP AND LIVESTOCK REPORTING SERVICE

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Agricultural Statisticians

CHAPTER I

THE DEVELOPMENT OF THE FRUIT INDUSTRY

Fruit was a fairly important part of pioneer subsistence agriculture in the State of Washington. Fruit trees were brought in by the early settlers just as they brought in their work stock, their milk cows, and their chickens. Of necessity each family had to be as nearly self-sufficient as possible. Whatever was needed during the winter months had to be raised on the farm. Especially was this true of the early settlements in the Pacific Coast states which were separated from other agricultural areas in the country by thousands of miles of plains, mountains, and deserts.

Washington proved to be an almost ideal area for many fruits. Pioneers who moved into the region west of the Cascade Mountains found a long growing season and a mild winter. Those who moved into the southeastern portion of the state near Walla Walla found winters somewhat more severe than west of the mountains; but summers were warm, with a high percentage of sunshine, while nights were relatively cool.

Because of the physical advantages for fruit growing, expansion was rapid. The number of farms in the state almost doubled between 1890 and 1900—rising

from 18,056 to 33,202. At the same time, the number of fruit trees of bearing age (apples, apricots, cherries, peaches, pears, plums, and prunes) rose from 534,344 to 4,805,547.

Handicaps to Expansion

There were some handicaps, however, which restricted expansion until about the time of World War I. One of the foremost was transportation. Fruit had to be moved to market rapidly, and the markets were mainly in the East and Midwest where the large centers of population were located. Many communities did not have railroad service until about 1900. Even after the railroads came, they were not completely satisfactory. Trains were slow by modern standards, and fruit did not always reach the market in a condition that made it attractive to the buyers.

Irrigation was an important factor. Temperatures and soil were ideal in many parts of the state east of the mountains, but lack of rainfall made full-scale fruit raising impossible. Development was restricted to small areas which could be irrigated by individuals or small groups. It was not until large irrigation projects brought water to thousands of acres that fruit production really became important in the State of Washington.

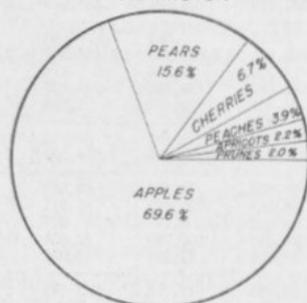
With the beginning of irrigation came a third important factor—the experience necessary to produce quality fruit on an irrigated ranch. Many early growers had little or no experience with irrigated agriculture. Indeed, for many growers, fruit raising itself was new. As a result, some orchards were planted in undesirable locations. Some varieties of fruit were planted that were not well adapted to growing conditions and to transporting long distances. Washington fruit growers also found it desirable to market a quality product. Experience and education worked hand in hand for improvement in picking, packing, shipping, and marketing.

Expansion Begins, 1900-1910

Between 1900 and 1910 came the first big expansion in Central Washington. Western and southeastern areas declined in importance so that tree numbers for the state as a whole were not greatly different in 1910 than in 1900. According to the United States Census for 1910, there were 4,937,000 fruit trees of bearing age in the state. This was a small gain over 1900, considering the fact that the number of farms increased from 33,202 to 56,192.

The great increase came between 1910 and 1920. Fruit trees of bearing age reached 10,732,044 in 1920—the largest number reported by any census through 1950. In part, this great expansion was caused by the high prices resulting from World War I; but the annual production records for apples, peaches, and pears show that many of the trees came into bearing about 1915 prior to the period of

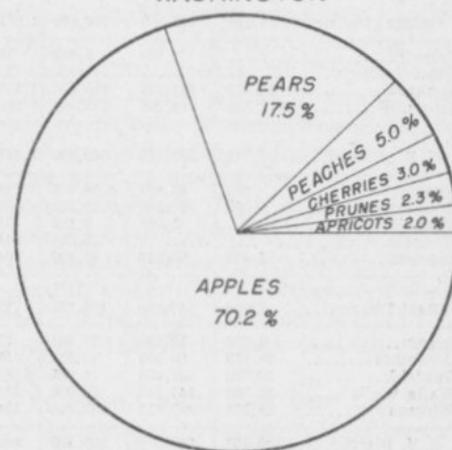
VALUE OF TREE FRUIT PRODUCTION
WASHINGTON



PERCENT OF 1941-50 AVERAGE VALUE

Figure 1. Apples accounted for almost 70 percent of the total value of all tree fruit crops in Washington during the years 1941-50. The order of the other tree fruits is not the same as the order in production because some fruits have a higher value per ton than others. Pears are second in value; but cherries were third; peaches, fourth; apricots, fifth; and prunes, sixth.

TREE FRUIT PRODUCTION
WASHINGTON



PERCENT OF 1941-50 AVERAGE TONNAGE

Figure 2. Apples are the most important tree fruit crop in the State of Washington. Over the 10 years 1941-50, apples accounted for slightly over 70 percent of the tonnage of all tree fruits produced in the state. Pears ranked second in tonnage, and peaches were third. Cherries, prunes, and apricots followed in order.

highest prices. Whatever the reason or reasons, there was a gain of almost 6,000,000 trees in the years 1910-1920.

Numbers Decline After 1920

After 1920 there was a constant decline in the number of fruit trees of bearing age. Numbers dropped from 10,732,000 in 1920, which was the census high point, to 9,136,000 in 1930. A very great decline came during the depression years, tree numbers dropping to 7,274,000 by 1940. Even in the 10-year period including World War II, fruit trees continued to be removed more rapidly than young trees came to bear-

ing age. In 1950 the Census reported 6,241,000 trees of bearing age—a decline of 42 percent from the 1920 peak.

Despite the decrease in bearing surface after 1920, production continued high with considerable year-to-year variation. Some of this was due to new varieties coming to maturity as earlier plantings were replaced. Some was due to improvements in production practices—especially fertilization and the use of new sprays for insects and disease. Production was at its peak in 1946 when, along with a large apple crop, there was a record tonnage of pears harvested. Production was second highest in 1947.

Apples Leading Tree Fruit

Apples have always been the most important tree fruit produced in the State of Washington. Even in 1890 almost 60 percent of all the trees of bearing age were apples. This dropped to 57 percent of the total in 1900 as a large number of soft fruit trees reached bearing age. Apple trees comprised about 61 percent in 1910, and in 1920 accounted for three-quarters of all the bearing trees in the state. With the second great period of expansion in soft fruits, the percentage of apple trees dropped to 57 percent (1930), to 47 percent (1940), and then to 43 percent in 1950.

**Table 1.—Apples: Trees of Bearing Age and Production, Washington, 1890-1950
(Data From United States Census)**

COUNTY	NUMBER OF TREES OF BEARING AGE							PRODUCTION (BUSHEL)S ^①						
	1890	1900	1910	1920	1930	1940	1950	1889	1899	1909	1919	1929	1939	1949
Clallam.....	2,676	16,208	19,088	15,605	7,571	7,352	5,518	4,246	6,186	17,856	26,204	12,388	16,096	60,553
Clark.....	26,918	125,478	104,374	100,794	55,305	42,751	22,892	28,253	18,585	67,660	163,627	60,209	75,307	20,697
Cowlitz.....	13,578	63,642	45,523	37,144	20,390	13,129	10,042	10,270	7,082	58,556	59,586	26,887	26,191	8,291
Grays Harbor ^② ..	4,151	36,611	22,053	20,264	12,484	13,125	8,605	3,962	49,352	18,407	79,875	24,050	36,635	7,928
Island.....	11,426	35,652	28,511	15,834	8,538	7,082	5,028	19,834	16,215	18,584	29,555	7,517	5,653	4,173
Jefferson.....	2,085	18,484	10,873	6,871	6,741	5,613	3,059	2,363	6,235	14,271	7,678	5,506	9,579	2,984
King.....	13,566	146,817	114,863	118,115	60,796	38,636	25,623	10,274	50,124	153,971	205,563	81,657	49,607	22,630
Kitsap.....	2,457	21,911	40,705	45,876	22,604	18,753	10,512	2,152	4,977	45,979	63,079	26,844	24,126	9,790
Lewis.....	14,557	112,483	76,129	79,815	50,796	33,730	23,465	5,569	15,047	71,569	112,516	64,301	87,217	16,266
Mason.....	3,629	22,828	23,595	16,522	11,762	5,878	4,323	3,562	3,846	22,047	19,145	11,440	9,703	4,586
Pacific.....	4,004	13,687	8,258	8,382	7,465	6,284	3,534	5,097	2,258	6,560	13,850	12,387	21,974	2,706
Pierce.....	7,432	119,147	115,937	109,404	63,979	39,220	19,343	9,965	27,338	104,949	172,355	76,747	75,773	25,952
San Juan.....	12,722	72,408	76,731	49,874	21,547	10,763	5,059	9,974	36,847	74,104	37,913	20,451	10,973	9,177
Skagit.....	10,240	52,657	47,028	39,718	24,356	15,858	9,307	14,011	30,801	85,256	61,476	27,937	26,215	11,856
Skamania.....	2,915	17,562	9,162	26,889	23,782	17,010	10,496	3,448	1,120	4,090	51,409	48,456	31,976	48,105
Snohomish.....	4,589	37,596	41,983	59,542	38,827	36,406	21,152	7,124	28,156	58,502	95,609	54,276	86,434	23,044
Thurston.....	14,662	52,019	54,001	38,870	22,344	17,322	11,365	13,452	10,362	46,359	63,718	26,519	43,141	9,355
Wahkiakum.....	1,571	11,559	6,496	4,787	3,795	2,556	1,699	1,325	1,237	7,788	7,552	5,414	10,805	2,040
Whatcom.....	15,329	101,554	102,777	71,517	44,637	36,729	23,499	23,060	41,922	90,774	91,545	56,303	83,246	22,044
West District...	168,597	1,078,303	948,037	865,823	507,809	368,287	224,521	177,941	357,690	908,182	1,356,255	649,289	790,651	312,177
Benton ^③			18,649	395,139	260,664	28,051	5,843			2,890	1,290,696	976,050	121,769	22,687
Chelan ^④		47,483	431,809	1,502,182	1,091,065	826,124	639,632		27,353	543,757	6,300,380	8,314,033	6,267,425	8,936,287
Kittitas ^⑤	2,768	32,723	38,244	71,105	92,136	16,168	9,723	3,062	11,539	23,641	90,181	200,511	102,087	72,111
Klickitat ^⑥	12,787	62,108	50,548	236,602	89,506	39,335	13,068	4,497	23,179	18,894	342,006	157,626	86,050	48,792
Okanogan ^⑦	100	27,280	33,243	562,967	401,377	485,102	419,744		3,056	3,563	1,354,540	2,034,266	3,468,601	5,468,531
Yakima ^⑧	9,491	177,310	386,537	1,907,642	1,763,981	1,200,600	1,108,413	10,385	57,345	321,546	6,249,950	8,971,905	10,501,754	10,098,953
Central District	25,146	346,804	949,030	4,675,637	3,698,729	2,593,380	2,191,723	17,834	122,472	947,281	15,627,753	20,654,411	20,547,636	24,642,361
Ferry ^⑨		1,235	5,857	16,536	5,810	1,390	2,486		575	970	23,703	10,226	12,460	10,744
Pend Oreille ^⑩				10,379	3,736	2,134	889				9,185	4,585	1,511	
Spokane.....	18,379	431,701	418,556	1,118,814	209,575	94,609	58,455	6,688	58,892	209,817	1,771,581	514,885	408,701	164,935
Stevens ^⑪	396	74,253	135,884	195,369	90,189	16,416	11,003	209	7,946	90,117	233,249	198,490	31,346	28,138
N. E. District...	18,775	507,189	560,297	1,341,098	809,310	114,549	72,833	6,897	67,413	300,904	2,027,718	726,985	452,042	205,328
Adams.....	260	23,884	28,873	16,512	797	45	100		2,568	1,319	5,615	507	56	421
Douglas ^⑫	92	24,806	32,141	387,355	353,763	244,678	156,897		7,007	28,631	1,209,651	2,384,853	1,418,957	2,432,269
Franklin.....		1,051	2,233	13,541	908	417	73		210	516	13,708	1,355	178	86
Grant ^⑬			10,534	244,249	150,046	21,630	2,543			2,500	345,927	684,221	233,645	19,877
Lincoln.....	2,452	98,220	84,402	54,737	15,436	342	1,009	262	22,847	22,240	76,598	33,579	1,329	1,002
East District...	2,804	147,988	158,183	716,394	520,945	267,112	160,122	262	32,632	55,206	1,741,499	3,104,515	1,654,165	2,453,655
Asotin.....	2,411	17,984	18,344	25,979	15,034	9,639	8,797	1,729	3,102	29,435	25,968	77,506	63,352	57,262
Columbia.....	28,279	66,957	40,621	57,514	37,358	20,894	19,401	20,634	15,138	50,654	192,053	225,023	81,511	126,901
Garfield.....	10,782	37,495	14,251	4,281	2,202	444	378	9,195	4,446	22,126	3,763	2,438	979	550
Walla Walla.....	32,709	144,512	52,806	153,302	61,037	20,393	8,758	46,744	35,076	46,430	505,653	300,793	52,926	41,274
Wahitan.....	25,976	381,611	267,768	124,139	41,147	7,442	5,251	13,290	85,750	251,882	88,029	41,292	13,950	5,156
S. E. District...	100,157	648,559	398,790	365,215	156,778	58,812	42,585	92,262	143,512	400,527	815,466	647,052	211,823	231,143
State ^⑭	315,479	2,735,824	3,009,337	7,964,167	5,193,571	3,404,140	2,691,784	295,196	728,978	2,672,100	21,568,691	25,782,252	23,656,317	27,844,664

^① Grays Harbor County was named Chehalis County in 1890, 1900, and 1910.

^② Benton County was divided between Klickitat and Yakima in 1890 and 1900.

^③ Chelan County was divided between Kittitas and Okanogan in 1890.

^④ Included part of Chelan County in 1890.

^⑤ Included part of Benton County in 1890 and 1900.

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^⑧ Included Ferry and Pend Oreille Counties in 1890 and Pend Oreille in 1900.

^⑨ Included Grant County in 1890 and 1900.

^⑩ Part of Douglas County in 1890 and 1900.

^⑪ Includes Indian Reservations. Not allocated by county.

^⑫ Census reports production as of previous year.

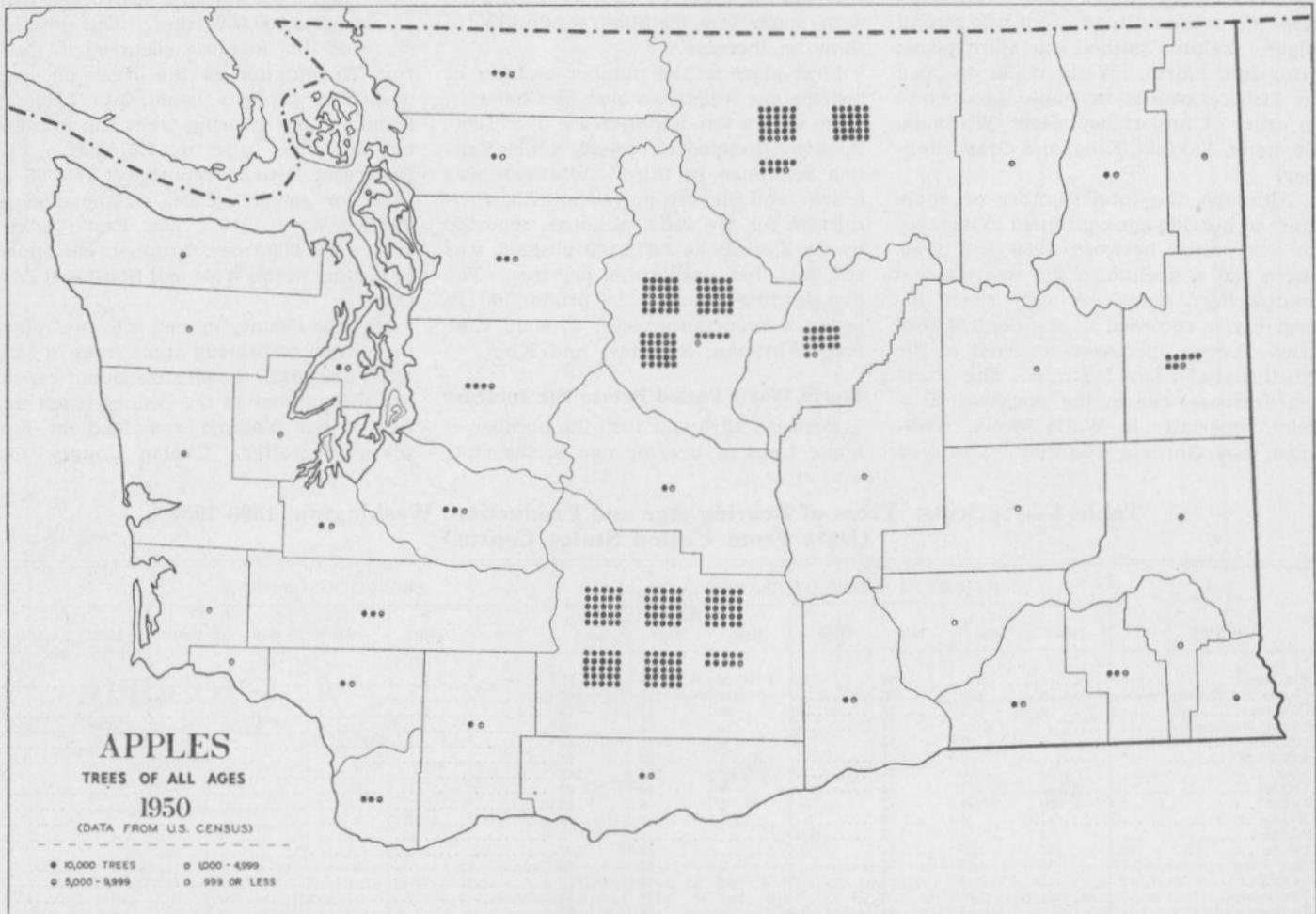


Figure 3. Yakima led all Washington counties in the number of apple trees of all ages at the time the United States Census was taken in 1950. The number in Yakima County was almost as great as the combined total for Chelan and Okanogan Counties, which ranked second and third respectively. Douglas was fourth in apple tree numbers. Spokane, in eastern Washington, is the only county outside the central portion of the state to have any sizeable number of apple trees. King County had more apple trees than any other county west of the Cascade Mountains. Every county in Washington had some apple trees in 1950.

APPLES

Apples illustrate the fact that fruit was an essential part of pioneer agriculture in the State of Washington. In 1890—40-45 years after immigrants began to move north of the Columbia River in "Oregon Country"—the number of trees of bearing age reflected the pattern of agricultural settlement. There were two major concentrations of population at that time. Largest was the west coast area which had flourished because of the ease of access by water. Next in importance was the southeast area centering around the state's then second-largest city, Walla Walla. Railroads had only begun to open central Washington by 1890, and the population there was small and scattered.

According to the 1890 Census of the United States there were 315,479 apple trees of bearing age in the entire state. Interestingly, there were only 295,196 bushels of apples recorded by that census, less than one bushel per tree. There

were more bearing apple trees west of the Cascade Mountains than in all of the rest of the state combined. However, the southeastern counties did have 100,157 apple trees of bearing age compared with 168,597 for the counties west of the Cascades.

Walla Walla led all counties with 32,709 apple trees of bearing age in 1890. It was also the leading county in production—46,744 bushels. Columbia County was second with 28,279 trees, and Whitman was fourth with 25,976 bearing trees. Clark County in western Washington, site of some of the earliest settlements, ranked third in trees but second in production. Spokane in eastern Washington was fifth in tree numbers, but was far down the list in production. Only 9,491 bearing apple trees were recorded in Yakima County in 1890. Chelan County did not exist in 1890, but Okanogan and Kittitas combined (which included Chelan) had only 2,868 apple trees.

Period of Rapid Expansion 1890-1900

The 10-year period from 1891 to 1900 was marked by great expansion in apple culture in Washington. Bearing tree numbers increased from 315,479 at the beginning of the period to 2,735,824 reported in 1900. Western Washington remained as the most important single area both in number of apple trees of bearing age and in production. Southeastern Washington was in second place. Greatest percentage gains occurred in the central, eastern, and northeastern counties. Production in 1899 was only a meager 728,978 bushels for the entire state.

Spokane County took over first place in the number of apple trees of bearing age in 1900. Undoubtedly some of this was due to the fact that the Northern Pacific Railroad reached Spokane in 1881, providing an outlet for production. The first rail shipment of apples from the state was reported from Spokane in the 1890's. Whitman County, which also

had been subjected to a flood of immigration due to the railroad, went into second place. Yakima pushed into third place; King into fourth. Walla Walla dropped to fifth. Leaders in apple production in order of importance were: Whitman, Spokane, Yakima, King, and Grays Harbor.

Although the total number of apple trees of bearing age continued to increase in the period between 1900 and 1910, there was a decline in the western and southeastern areas. A very sharp increase was recorded in the Central District. Lesser increases occurred in the Northeast and East Districts. The greatest decrease was in the Southeast District, especially in Walla Walla, Whitman, and Garfield Counties. The drop

was not so great in the West District, with some few counties continuing to show an increase.

First place in the number of trees of bearing age was taken over by Chelan in 1910, with a ten-fold increase over 1900. Spokane dropped to second, while Yakima remained in third. Whitman was fourth, and Stevens moved to fifth. Production for the state, although reported by the Census as 2,672,100 bushels, was still less than one bushel per tree. The five leading counties in production in order of importance were: Chelan, Yakima, Whitman, Spokane, and King.

World War I Period Brings Big Increase

Between 1910 and 1920 the number of apple trees of bearing age in the state

rose from 3,009,337 to 7,964,167—a gain of almost 5,000,000 trees. The greatest share of this increase occurred in Central Washington as the trees on new irrigation projects came into bearing. From 949,030 bearing trees the number in that area rose to 4,675,637. The Northeast District reported 1,341,098 in 1920 for second place, an increase of 800,000 over 1910. The East District gained 550,000 trees. Numbers continued to decline in the West and Southeast Districts.

Yakima County moved into first place in number of bearing apple trees in 1920 with 1,907,642. In no subsequent census did the number in the county reach this figure, but Yakima remained in first place thereafter. Chelan County, too,

Table 2.—Apricots: Trees of Bearing Age and Production, Washington, 1890-1950
(Data From United States Census)

COUNTY	NUMBER OF TREES OF BEARING AGE							PRODUCTION (TONS) [Ⓐ]						
	1800	1900	1910	1920	1930	1940	1950	1889	1899	1909	1919	1929	1939	1949
Challam			26	3	4	28	51							
Clark	70	64	106		554	145	494			2		5	1	6
Cowlitz	6	9	14		3	24	18							
Grays Harbor [Ⓐ]		8	11			2	3							
Island	1	20	15	1	8	46	41							
Jefferson		3	1		2	25	17							
King	19	50	31		21	204	269					1	1	3
Kitsap		772	15		1	49	69		14					
Lewis	30	42	7	5	1	5	49							
Mason		1	3			9	8							
Pacific	1	4	6				5							
Pierce	166	39	44	6		65	127							1
San Juan	14	46	38		3	14	10							
Skagit		9	22		19	55	36							
Skamania		55	9	1	5	28	70							
Snohomish		5	61	2	28	84	97			1			1	
Thurston	114		1			10	12							
Wahkikum		7				1	2							
Whateom	47	38	26		35	108	128	2				1	1	
West District	408	1,172	436	18	684	803	1,500	2	14	3		5	4	10
Benton [Ⓐ]			1,700	1,421	11,040	17,368	35,401				70	88	710	18
Chelan [Ⓐ]		2,533	14,207	19,980	48,771	77,024	68,048		20	58	802	1,756	3,384	2,845
Kittitas [Ⓐ]		75	360	28	105	172	343					9	5	6
Klickitat [Ⓐ]	306	1,120	479	9,905	1,840	2,065	1,004	11	24	2	453	24	20	15
Okanogan [Ⓐ]		1,529	550	575	15,015	6,484	2,851		8	16	40	319	236	92
Yakima [Ⓐ]	165	3,145	4,015	6,854	107,195	133,343	192,496		5	8	178	2,195	5,826	7,640
Central District	561	8,402	21,320	38,772	184,035	226,473	301,223	11	57	84	1,000	4,391	10,181	10,616
Ferry [Ⓐ]		1	14		214	29	95					2	1	
Pend Oreille [Ⓐ]						2								
Spokane	63	645	520	76	1,229	825	462			1	2	23	6	5
Stevens [Ⓐ]	2	973	582	4	396	319	631		1	4		21	10	18
N. E. District	65	1,619	1,116	80	1,852	1,173	1,188		1	5	2	46	17	23
Adams		671	1,285	96	49	69	47				2	1		1
Douglas [Ⓐ]		5,009	1,457	6,428	23,399	57,912	58,373		21	17	211	946	2,052	2,509
Franklin		144	315	16	415	605	1,186			2		10	14	10
Grant [Ⓐ]			563		2,732	4,984	6,855			7	19	99	207	620
Lincoln	22	4,374	1,583	181	415	28	105		6	5	9	15	1	2
East District	22	10,198	5,303	7,316	28,071	63,688	46,466		27	31	241	1,071	2,274	2,152
Asotin	304	1,167	1,786	673	3,229	2,928	2,554			9	49	161	122	60
Columbia	380	526	347	60	73	32	185		7		2	3	1	6
Garfield	1,469	1,729	908	2	1,989	2,441	982		41	29		69	106	46
Walla Walla	787	1,465	802	18	245	225	1,004	22	21	21	1	3	3	15
Whitman	1,155	4,820	4,110	669	6,292	9,638	6,530	8	6	72	13	340	332	331
S. E. District	4,086	9,707	8,013	1,422	11,828	15,264	11,854	78	27	133	65	576	584	467
State [Ⓐ]	5,142	31,129	36,088	47,608	226,470	317,491	301,737	91	127	256	1,017	6,080	13,090	14,368

[Ⓐ] Grays Harbor County was named Chehalis County in 1890, 1900 and 1910.

[Ⓑ] Benton County was divided between Klickitat and Yakima in 1890 and 1900.

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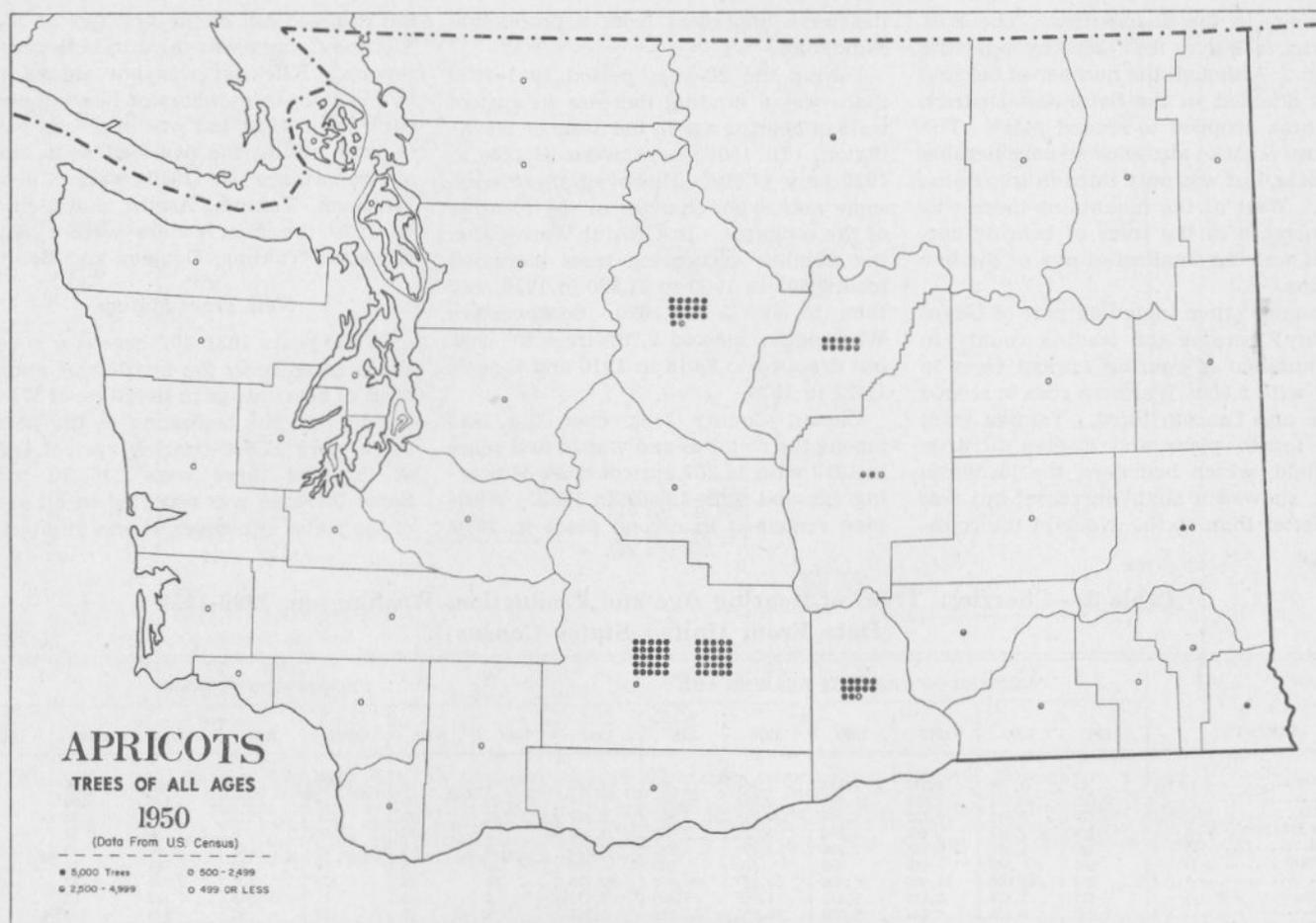


Figure 4. Apricot trees in the State of Washington are concentrated primarily in four counties. Yakima was the leading county in apricot trees of all ages, according to the United States Census of 1950. In fact, over one-half of all the apricot trees in the state were in that county. The Benton County apricot area is an eastward extension of the Yakima Valley, and Benton is the third-ranking county. Chelan is second in apricot tree numbers, while adjoining Douglas County is the fourth most important county.

showed a sharp increase, rising to 1,502,182 trees; while the number in Spokane County rose to 1,118,814 apple trees of bearing age. Okanogan took over fourth place with 562,967, and Benton moved into fifth with 395,139 trees. The five leaders in production in 1920 were Chelan, Yakima, Spokane, Okanogan, and Douglas in the order named.

Tree Numbers Decline

Following the high point in 1920, there was a decline in the number of apple trees of bearing age in the State of Washington. In 1930 the census showed 5,193,571 bearing trees, and in 1940 it was 3,404,140. The 1950 census reported only 2,691,784 bearing trees, a decline of 5,300,000 from the 1920 peak. All areas of the state—even the highly commercialized irrigated counties in Central Washington—showed a drop. In 1950 the Central District had 47 percent of its 1920 total; the West District had only one-quarter. There was only 22 percent as many apple trees of bearing age in the East District in 1950 as there were in 1920, only 12 percent as many in the Southeast, and only 5 percent as many in the Northeast.

Yakima County in 1950 had 1,103,413 apple trees of bearing age—41 percent of all bearing trees in the entire State of Washington. Chelan, in second place, had 24 percent; while Okanogan had 16 percent. Thus, these three counties had 81 percent of all the bearing apple trees in the state. Douglas, which could be included with these three, was the only other county with over 100,000 trees in 1950. Together these four counties constitute the great commercial area and together, according to the 1950 Census, produced 97 percent of the apples.

APRICOTS

A continuous increase in the number of apricot trees of bearing age and in production as shown by the United States Census characterizes apricot culture in Washington from 1890 through 1950. Each 10-year census report showed more bearing trees than in the previous decade. So did each census report of production, although production, because of its dependence upon weather, has shown considerable annual variation. Because of the continuous increase in tree numbers, the history of development differs sharply from that of other fruits in the

state. In addition, the pattern of development differs sharply from other fruits, especially apples and cherries.

Climatic advantages evidently had much to do with the early plantings of apricot trees. The Census of 1890 showed that four-fifths (80 percent) of the 5,142 apricot trees of bearing age were located in southeastern Washington. There the summers are hot and dry. Central Washington was a poor second. Western Washington, with a larger population at that time but with less favorable climatic conditions, was third in tree numbers in 1890.

About 1,500 bearing apricot trees were reported in Garfield County, which ranked first in tree numbers in 1890. Whitman was second and Walla Walla was third. Klickitat County reported 396 trees that year, but at that time included a goodly portion of Benton County. Columbia was fifth and Asotin sixth, so that five of the six leading counties were from the Southeast District.

Many New Plantings

Between 1890 and 1900 the number of bearing apricot trees rose from 5,142 to 31,129. With this six-fold increase came

a change in the distribution. The East District took over first place by a narrow margin. Although the number of bearing trees doubled in the Southeast District, this area dropped to second place. The Central District also showed considerable increase, but was only third in tree numbers. West of the mountains there was an increase in the trees of bearing age, but it was the smallest of any of the five regions.

Douglas (then including part of Grant County) became the leading county in the number of bearing apricot trees in 1900 with 5,000. Whitman rose to second place and Lincoln third. Yakima went into fourth place and Chelan to fifth. Garfield, which had been the leader in 1890, showed a slight increase; but was no better than sixth. None of the coun-

ties were important from a production standpoint.

During the 20-year period 1901-1920 there was a gradual increase in apricot trees of bearing age in the State of Washington. In 1900 there were 31,129; in 1920 only 47,608. However, there were some noticeable changes in the location of the orchards. In Central Washington the number of bearing trees increased from 8,402 in 1900 to 21,320 in 1910, and then to 38,772 in 1920. Southeastern Washington showed 9,707 trees in 1900, but dropped to 8,013 in 1910 and then to 1,422 in 1920.

Chelan County took over the lead among the counties and was in first place in 1910 with 14,207 apricot trees of bearing age and with 19,989 in 1920. Whitman remained in second place in 1910,

but dropped out of the first five in 1920. Yakima County was third in both census reports. Klickitat was not among the five leaders in numbers of bearing apricot trees in 1910, but was in second place in 1920. Thus, the five leaders in order of importance in 1910 were Chelan, Whitman, Yakima, Asotin, and Benton. In 1920 the five leaders were Chelan, Klickitat, Yakima, Douglas and Benton.

New Trees Mature

In the years 1921-30, there was a very sharp increase in the number of apricot trees of bearing age in the State of Washington. At the beginning of the period there were 47,608 bearing apricot trees; at the end there were 226,470 trees. Some increase was reported in all areas of the state. However, it was greatest in

Table 3.—Cherries: Trees of Bearing Age and Production, Washington, 1890-1950
(Data From United States Census)

COUNTY	NUMBER OF TREES OF BEARING AGE							PRODUCTION (TONS)®						
	1890	1900	1910	1920	1930	1940	1950	1889	1899	1909	1919	1929	1939	1949
Clallam.....	25	1,398	1,242	1,374	1,465	2,989	1,095	4	6	23	36	22	45	14
Clark.....	2,500	10,651	9,052	10,235	9,289	10,892	7,395	57	50	176	266	133	102	84
Cowlitz.....	1,575	6,542	6,435	6,566	4,618	3,630	2,654	41	24	177	119	190	58	29
Grays Harbor①.....	228	2,044	1,617	1,656	1,629	3,511	2,343	1	32	17	8	30	31	5
Island.....	240	1,852	2,728	2,396	3,296	4,347	1,382	2	5	49	37	56	41	16
Jefferson.....	207	572	460	485	570	946	603	6	5	10	12	14	13	4
King.....	891	15,928	15,509	26,296	63,385	105,274	80,738	11	84	470	635	2,275	2,087	574
Kitsap.....	231	1,179	3,413	8,441	5,028	7,493	2,710	3	4	71	218	142	52	33
Lewis.....	1,220	6,252	6,424	9,030	29,886	13,288	9,256	8	24	114	96	240	124	56
Mason.....	452	7,016	1,785	1,041	1,048	1,524	841	9	9	41	5	13	16	7
Pacific.....	207	700	420	462	529	566	382	3	2	2	3	3	3	2
Pierce.....	921	11,268	12,343	17,708	50,233	46,821	16,579	17	57	305	491	1,710	919	218
San Juan.....	307	3,555	3,417	2,280	4,935	4,521	1,019	1	15	22	26	88	24	8
Skagit.....	510	5,534	5,499	8,154	14,445	11,942	3,312	7	49	259	168	594	214	24
Skamania.....	206	1,364	942	1,382	2,158	1,378	508	8	7	26	24	73	21	4
Snohomish.....	569	3,633	4,929	10,162	30,332	29,691	9,927	15	84	189	208	606	309	83
Thurston.....	979	2,014	4,530	8,056	23,656	20,228	8,404	28	10	90	187	280	94	19
Wahkiakum.....	233	649	584	373	544	424	228	.....	1	9	6	2	6	1
Whatecom.....	610	9,289	13,713	18,779	22,701	24,884	9,947	18	121	360	568	946	339	78
West District.....	12,171	90,840	94,933	134,871	270,247	293,779	159,923	240	590	2,430	2,913	7,507	4,558	1,259
Benton②.....	.....	.....	3,918	17,594	21,627	50,777	47,577	.....	.....	1	314	376	1,021	2,459
Chelan②.....	.....	.....	2,017	23,693	20,994	43,247	24,989	.....	.....	45	685	2,123	3,429	5,568
Kittitas②.....	105	2,004	2,411	1,788	814	455	395	1	16	47	37	11	5	5
Klickitat②.....	692	2,552	4,645	5,052	6,803	8,194	8,256	3	21	17	83	209	177	300
Okanogan②.....	.....	1,281	1,594	5,279	5,016	8,562	5,021	.....	.....	5	43	112	349	587
Yakima②.....	157	6,904	10,892	45,922	80,774	149,690	155,377	1	60	132	1,027	3,237	6,595	12,651
Central District.....	954	14,708	39,907	90,328	136,028	260,925	241,615	5	147	408	2,268	6,305	11,514	21,326
Ferry③.....	.....	70	460	902	317	86	597	.....	.....	.....	19	5	1	28
Pend Oreille③.....	.....	.....	.....	410	163	141	77	.....	.....	.....	5	3	1	1
Spokane.....	1,120	18,691	25,140	32,367	11,928	4,500	4,681	6	64	195	714	310	77	160
Stevens④.....	7	3,789	7,737	9,549	2,974	936	1,052	.....	.....	87	211	116	25	23
N. E. District.....	1,127	22,550	33,337	43,178	15,382	5,663	6,407	6	73	283	940	434	104	212
Adams.....	2	2,398	3,597	1,019	85	9	30	.....	.....	5	11	2	.....	.....
Douglas⑤.....	.....	2,620	1,851	4,117	3,926	9,890	13,086	.....	.....	18	35	82	323	650
Franklin.....	.....	108	303	157	459	1,381	280	.....	.....	.....	3	15	47	9
Grant⑥.....	.....	.....	1,010	2,429	788	1,309	954	.....	.....	.....	6	53	21	39
Lincoln.....	333	8,244	7,278	4,489	831	24	223	.....	.....	52	46	83	44	3
East District.....	335	13,370	14,039	12,211	0,086	12,613	14,573	.....	.....	76	92	232	405	736
Asotin.....	312	10,053	23,179	13,578	17,162	20,341	9,207	.....	.....	19	127	486	876	570
Columbia.....	1,771	3,063	2,765	1,287	528	87	204	.....	.....	18	54	37	15	5
Garfield.....	1,514	7,607	3,108	1,135	1,587	1,633	1,518	.....	.....	16	73	57	23	29
Walla Walla.....	3,067	16,462	6,803	6,505	4,780	3,864	2,326	.....	.....	46	193	81	116	112
Whitman.....	1,901	21,748	22,965	17,104	9,684	4,373	3,765	.....	.....	6	276	295	227	144
S. E. District.....	8,265	68,533	58,822	39,599	33,741	30,298	17,020	86	615	597	874	1,440	820	1,062
State⑦.....	22,852	210,516	241,088	320,187	461,484	603,278	439,538	337	1,516	3,810	7,226	16,091	18,032	25,427

① Grays Harbor County was named Chehalis County in 1890, 1900 and 1910.

② Benton County was divided between Klickitat and Yakima in 1890 and 1900.

③ Chelan County was divided between Kittitas and Okanogan in 1890.

④ Included part of Chelan County in 1890.

⑤ Included part of Benton County in 1890 and 1900.

⑥ Part of Stevens County in 1890.

⑦ Part of Stevens County in 1890 and 1900.

⑧ Included Ferry and Pend Oreille Counties in 1890 and Pend Oreille in 1900.

⑨ Included Grant County in 1890 and 1900.

⑩ Part of Douglas County in 1890 and 1900.

⑪ Includes Indian Reservations. Not allocated by county.

⑫ Census reports production as of previous year.

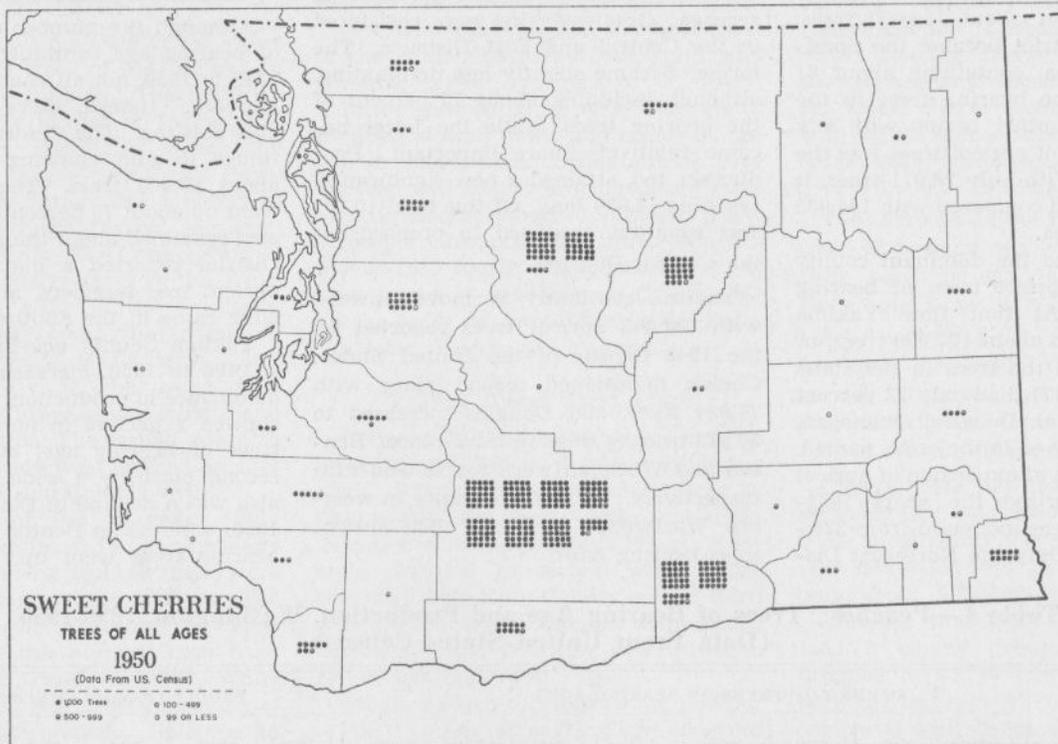


Figure 5. The bulk of the sweet cherry trees in Washington were located in central Washington, according to the United States Census for 1950. Yakima had far more sweet cherry trees than any other county in the state. Benton County, which adjoins Yakima on the east and which contains a portion of the Lower Yakima Valley, was second in cherry tree numbers. Chelan was a close third, and Douglas was fourth. King County, in western Washington, was fifth in number of sweet cherry trees of all ages. Of less importance were Asotin, Klickitat, Whatcom, Snohomish, and Clark Counties.

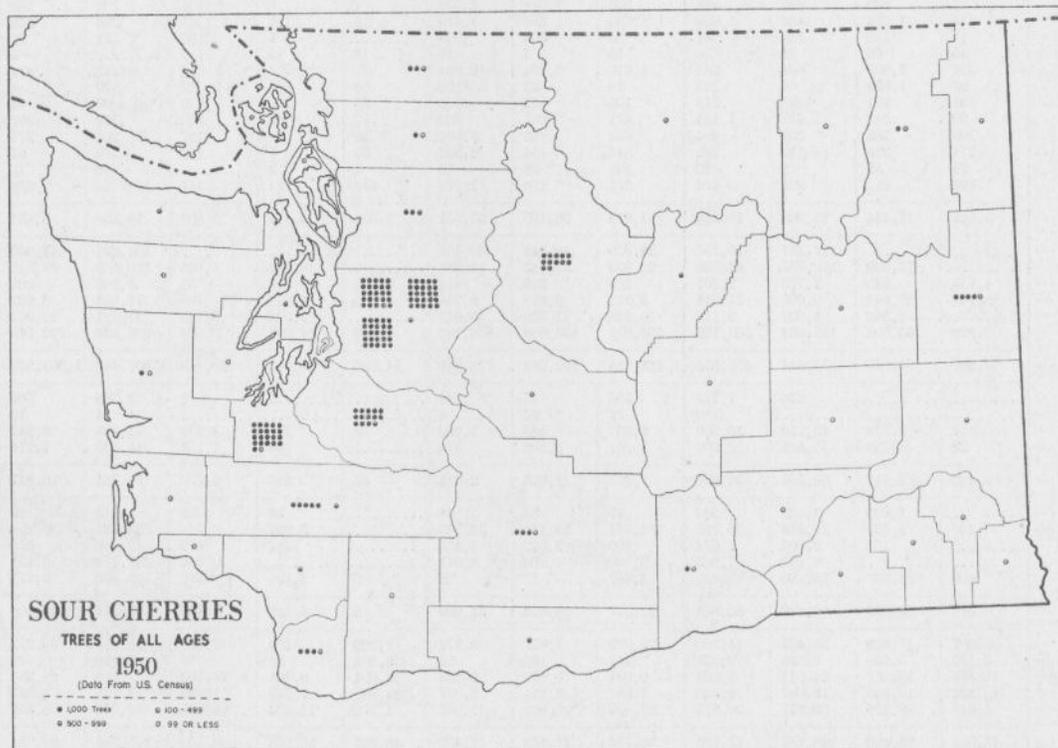


Figure 6. Sour cherry trees, in contrast with sweet cherries, are raised principally in counties west of the Cascade Mountains. Despite a very sharp decline in tree numbers after 1930, King County still was the outstanding county in numbers of sour cherry trees of all ages in 1950, according to the United States Census. Thurston County was second in sour cherry trees in 1950, and Pierce was third. Lewis County was fifth. Chelan in central Washington ranked fourth among the 39 counties. Spokane County had more sour cherry trees than Yakima in 1950.

the Central District where the Census showed a gain of about 150,000 trees. The Central District became the dominant apricot area, containing about 81 percent of all the bearing trees in the state. The only other region with any sizeable number of apricot trees was the East District. With only 28,071 trees, it was a poor second compared with 184,035 in the central area.

Yakima became the dominant county in number of apricot trees of bearing age in 1930. At that time Yakima County alone had about 107,000 trees, or 47 percent of all the trees in the state. Chelan, with 48,771, had only 22 percent of the state's total. Douglas, Okanogan, and Benton followed in the order named.

Another period of expansion of apricot culture characterized the years 1931-1940. Bearing trees increased from 226,470 to 317,491. Only the Northeast Dis-

trict showed any decline in bearing acreage. Greatest gains were registered in the Central and East Districts. The former became slightly less dominating, although including about 75 percent of the bearing trees, while the latter became relatively more important. Production, too, attained a new significance, reaching 13,060 tons. Of this total 10,181 was reported produced in orchards of the Central District.

Yakima continued to move upward with 133,343 apricot trees reported by the 1940 Census of the United States. Chelan maintained second place with 77,024 trees, and Douglas increased to 57,912 bearing trees in third place. Benton and Whitman were fourth and fifth respectively. In 1940 no county in western Washington had over 300 apricot trees bearing fruit.

Increase Continues Through 1950

Although the number of apricot trees of bearing age continued upward from 1940 to 1950, not all counties shared the increase. Indeed, there was considerable shifting. The Central District continued to gain, showing an increase of about 65,000 trees. The West District went up about 70 percent and the Northeast remained about the same. The East District reported a marked decline in apricot tree numbers, and a lesser decline came in the Southeast District.

Yakima County bearing trees rose to 192,496 in 1950, increasing the county's dominance in production. Chelan County showed a decline in number of apricot trees of bearing age, but remained in second place by a wide margin. There also was a decline in Douglas County in 1950, whereas in Benton the number of bearing trees went up.

Table 4.—Peaches: Trees of Bearing Age and Production, Washington, 1890-1950 (Data From United States Census)

COUNTY	NUMBER OF TREES OF BEARING AGE						PRODUCTION (BUSHELS)@							
	1890	1900	1910	1920	1930	1940	1950	1889	1899	1909	1919	1929	1939	1949
Clallam.....		17	294	79	49	24	90		1	55	17	27	10	1,079
Clark.....	1,595	7,488	3,275	6,388	4,238	7,703	8,967	584	2,613	2,024	4,802	2,308	10,247	6,853
Cowlitz.....	225	742	657	1,151	561	255	985	34	23	533	820	206	328	595
Grays Harbor①.....	36	23	631	214	117	57	101		40	65	411	146	84	4
Island.....	11	45	17	204	187	130	163	4	4	236	47	50	35	
Jefferson.....	8	19	21	30	43	47	91		12		28	16	50	17
King.....	234	1,327	942	2,397	2,335	4,859	16,300	21	94	803	2,304	1,123	4,338	11,354
Kitsap.....	13	500	285	413	260	1,024	2,705	2		166	166	182	651	1,288
Lewis.....	218	1,176	430	1,080	669	386	4,425	16	116	241	393	312	355	1,338
Mason.....	15	152	129	61	85	106	203		1	100	14	31	87	80
Pacific.....	55	66	24	10	16	3	21	12	15			9	4	8
Pierce.....	316	1,809	894	764	1,010	3,794	12,904	27	778	696	273	474	3,372	16,967
San Juan.....	93	1,336	60	223	28	31	105	30	256	17	170	8	22	28
Skagit.....	191	891	294	218	106	52	166	30	277	219	60	63	56	55
Skamania.....	89	542	1,475	1,134	471	291	200	77	48	183	769	300	469	124
Snohomish.....	100	165	330	454	692	782	3,494	22	31	127	295	371	1,143	3,658
Thurston.....	211	213	459	292	342	454	2,332	60	1	126	110	97	292	765
Wahkiakum.....	21	39	5	26	138	28	16	1	3		6	15	31	7
Whatcom.....	196	844	981	402	374	179	1,772	146	123	444	74	216	196	980
West District.....	3,627	17,444	11,303	15,550	11,819	20,195	55,101	1,056	4,448	5,803	10,858	5,851	21,785	45,184
Benton②.....			22,331	75,101	28,820	48,528	59,483				154,091	17,000	165,444	90,177
Chelan③.....		15,680	113,294	64,108	22,939	31,443	41,386		14,952	5,866	179,559	68,511	105,061	94,789
Kittitas④.....		4,734	845	1,773	1,401	409	210	414	5,246	355	2,390	203	410	252
Klickitat⑤.....		19,700	17,541	8,092	17,944	5,113	6,878	6,134	5,945	4,210	798	17,683	3,637	9,766
Okanogan⑥.....		7,389	4,607	9,112	10,128	11,515	10,641		1,506	5,182	21,121	20,069	42,069	14,204
Yakima⑦.....		2,893	43,092	165,637	303,152	358,915	403,508	600,791	2,904	14,024	7,526	926,629	892,549	1,109,638
Central District.....	27,307	84,547	315,644	470,818	426,324	502,682	778,849	14,065	35,047	19,425	1,301,483	1,001,969	1,431,788	1,391,723
Ferry⑧.....			276	1,713	295	35	554			2	2,088	565	42	969
Pend Oreille⑨.....			132	132	31	39	4				44	15	24	5
Spokane.....	157	5,319	13,770	16,200	3,397	585	1,192	55	185	1,582	17,532	2,847	388	406
Stevens⑩.....	38	2,330	11,521	12,609	3,951	1,396	875		65	1,193	15,890	7,414	1,878	608
N. E. District.....	195	7,640	25,567	30,654	7,674	2,046	2,625	55	250	2,777	35,484	10,841	2,332	2,018
Adams.....		1,220	1,483	549	39	35	44		38	10	475	16	25	340
Douglas⑪.....		390	8,691	13,543	26,761	16,071	32,120	46,561	3,097	2,464	34,381	35,856	95,983	122,131
Franklin.....		728	2,901	2,674	490	2,042	4,455		237	425	5,540	615	3,984	1,975
Grant⑫.....			2,493	7,863	3,120	4,465	2,941		509	21,172	6,451	11,564	3,791	
Lincoln.....		156	12,837	15,190	22,031	3,857	17	58	5	1,737	942	33,950	6,471	8
East District.....	546	23,486	35,610	59,878	23,577	38,679	54,059	5	5,100	4,350	95,518	49,409	111,574	128,301
Asotin.....	1,697	17,349	53,457	14,206	25,979	7,057	9,173	2,209	410	7,458	29,915	39,219	20,717	13,801
Columbia.....	7,125	5,658	5,869	2,588	451	139	570	6,528	26	16	5,640	412	110	408
Garfield.....	11,488	15,267	24,911	9,608	9,397	9,579	9,338	14,034	9,744	18,150	7,652	26,984	18,435	17,613
Walla Walla.....	15,374	16,286	13,697	9,220	1,967	2,234	5,027	24,336	7,319	1,620	15,291	667	4,584	9,619
Whitman.....	5,342	28,520	50,817	36,613	25,909	28,609	17,302	1,179	18,404	24,895	43,018	28,452	48,682	34,351
S. E. District.....	41,026	93,080	148,751	72,185	63,103	47,618	41,409	48,286	35,903	52,139	101,516	95,684	92,528	75,822
State⑬.....	72,701	220,630	536,875	640,085	532,497	610,620	932,043	63,497	80,990	84,494	1,544,859	1,163,754	1,660,007	1,643,048

① Grays Harbor County was named Chehalis County in 1890, 1900 and 1910.

② Benton County was divided between Klickitat and Yakima in 1890 and 1900.

③ Chelan County was divided between Kittitas and Okanogan in 1890.

④ Included part of Chelan County in 1890.

⑤ Included part of Benton County in 1890 and 1900.

⑥ Part of Stevens County in 1890.

⑦ Part of Stevens County in 1890 and 1900.

⑧ Included Ferry and Pend Oreille Counties in 1890 and Pend Oreille in 1900.

⑨ Included Grant County in 1890 and 1900.

⑩ Part of Douglas County in 1890 and 1900.

⑪ Includes Indian Reservations. Not allocated by county.

⑫ Census reports production as of previous year.

CHERRIES

The 1890 Census reported 22,852 sweet and sour cherry trees of bearing age in the State of Washington. The majority of the trees were located on farms west of the Cascade Mountains where the majority of the people then lived. However, the concentration was greatest in the smaller Southeast District centering around Walla Walla. The Census showed 12,171 bearing cherry trees in the West, compared with 8,265 in the Southeast District. Leader among the individual counties was Walla Walla with 3,067. Columbia County in the same area ranked third, Whitman was fourth, and Garfield was sixth. The second and fifth place counties were west of the Cascades—Clark, second; and Cowlitz, fifth.

At the end of the 10 years 1891-1900, there were almost 10 times as many cherry trees bearing fruit as there were at the beginning of the period. The greatest expansion came in the West District, where the number rose from 12,171 to 90,840 trees. However, Whitman ranked first, Asotin was second and Walla Walla was fourth. Spokane in

the Northeast was in third place. King, Pierce, and Clark, all in the area west of the mountains, were fifth, sixth, and seventh.

In the succeeding 10 years, the rate of planting slowed down and removals began in many areas. Spokane took over the lead with 25,140 bearing cherry trees in 1910. Asotin remained in second place. Whitman dropped to third. Chelan moved into fourth place, gaining 14,000 trees in the 10-year period. Other leaders in order of importance were King, Whatcom, Pierce, and Yakima.

Yakima Takes First Place

Between 1910 and 1920 there was an increase of 88,000 in number of bearing trees. Yakima came into first place in 1920 with 45,922 cherry trees, four times as many as in the previous report. Spokane dropped to second with 32,267 bearing trees. King County gained third with 26,296 trees, Chelan with 23,693 was fourth, and Whatcom was fifth with 18,779 bearing trees.

Another sharp increase in the number of cherry trees of bearing age occurred

between 1920 and 1930. Yakima County gained enough to keep first place with 80,774 bearing cherry trees, but King showed a greater increase, reaching 63,385 trees. Pierce went into third place with 50,233 trees, Snohomish went into fourth with 30,932 trees, and Lewis took over fifth with 29,886 trees.

The increase in the number of cherry trees of bearing age continued through 1940, reaching 603,278 trees. Yakima alone rose from 80,774 trees in 1930 to 149,690 trees in 1940. Benton and Chelan more than doubled in that 10-year period. King led the way in the West District with an increase from 63,385 to 105,274 bearing trees.

Cherry trees declined in Washington between 1940 and 1950. Only two districts showed any increase, and in those (the Northeast and East) the gain was only about 2,700 trees. Yakima's rise continued, the 1950 Census reporting 155,377 cherry trees. King County dropped to 80,738 trees, and in Pierce only 16,579 bearing trees were reported compared with 46,821 ten years earlier.

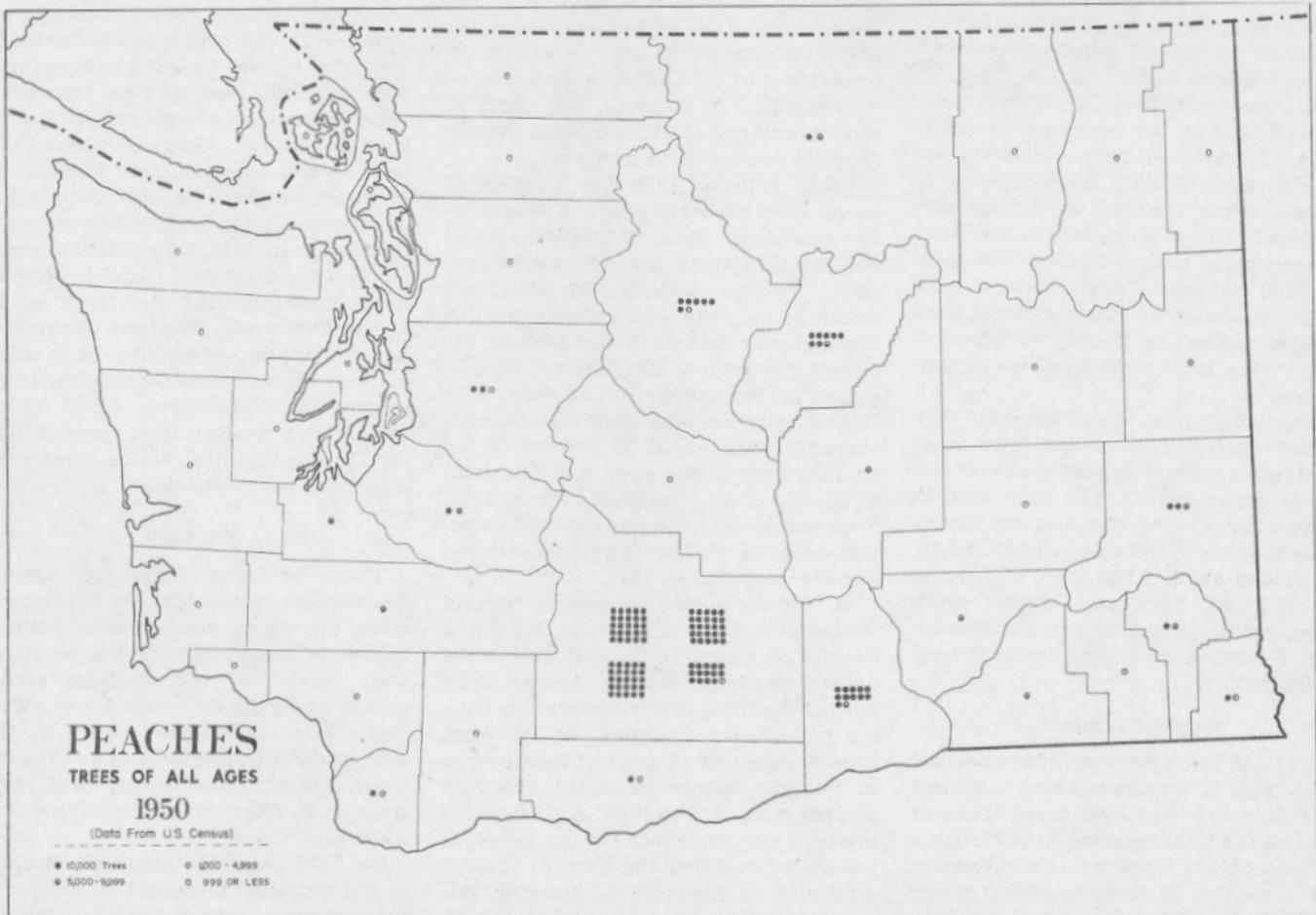


Figure 7. Washington peach production is concentrated primarily in the Yakima River Valley. According to the United States Census of 1950, Yakima County alone had almost two-thirds of all the peach trees in the state at that time. Benton County, containing part of the Lower Yakima River Valley, was second in peach tree numbers. The census showed Douglas with slightly more peach trees than Chelan—the former ranking third and the latter fourth in peach tree numbers. No other counties were important in tree numbers, although all 39 counties had some peach trees in 1950.

PEACHES

Washington peach production has shown a rather spectacular increase during the short space of 60 years (1890-1950). By 1950 peach trees of bearing age had expanded to a number almost thirteen times as great as the Census totals for the state in 1890. In the same period production rose to a level almost twenty-six times greater than 1890, indicating the development of better strains and improved cultural practices. As tree numbers and production increased there were several marked shifts in the areas of production. In part, these changes followed the pattern of settlement, but they also resulted from the development of irrigation within the state.

In 1890 production was concentrated in southeastern Washington, which was also important in the production of prunes and pears. The largest numbers of peach trees were located in Walla Walla and Garfield Counties. These two counties accounted for about 37 percent of the bearing trees in the entire state at that time. Southeastern Washington as a whole was credited with about 57 percent of the total bearing trees in the state during the early period.

Within the Central District, there were approximately 27,000 mature trees by 1890. This total then constituted about 37 percent of all the bearing trees in the state. Klickitat County accounted for some 27 percent, with the remaining 10 percent being credited to Kittitas and Yakima Counties. Klickitat County, however, included part of Benton County in the 1890 and 1900 United States Census totals. Probably a large number of trees credited to Klickitat County were located in the area later established as part of Benton.

Elsewhere within Washington the 1890 United States Census indicated that plantings were widely scattered and relatively insignificant. The only area in western Washington showing any appreciable number of trees was Clark County, which had about 1,600 trees of bearing age in 1890. However, almost every county within the state had some peach trees, reflecting the early interest in fruit by the settlers.

Expansion Rapid

In the 10 years between 1891 and 1900 peach trees of bearing age rose to around 226,600, which was over three times as great as the total reported in 1890. During this period there was an expansion in the number of trees in almost every county in the state. The relative importance of the Central District was unchanged from 10 years earlier, while the eastern counties showed a notable gain.

At the same time, although the total trees of bearing age almost doubled, there was a decline in the relative importance of the Southeast District counties.

The number of bearing peach trees in Yakima County rose from about 2,900 in 1890 to approximately 43,000 by 1900. Chelan County reported about 15,700 trees in the latter year. In 1890 Chelan was divided between Kittitas and Okanogan, but a total of only 4,700 trees of bearing age was reported in the two counties, so the gain was very substantial. In Asotin County the number rose from about 1,700 to 17,000, and in Whitman County from 5,300 to 38,500. Clark County in western Washington recorded about 1,600 trees in 1890 and close to 7,500 in 1900.

Yakima and Chelan Take Lead

It was evident by 1910 that Yakima and Chelan Counties were becoming the centers of production within the state. The growth in the number of trees in Yakima County between 1900 and 1910 was phenomenal. From about 43,000 trees the total rose to over 165,000. The expansion in Chelan County was also very rapid. Due to the growth of the peach industry in the above counties, the importance of the Central area increased very rapidly. At the same time, the relative importance of the Southeast District counties continued to decline.

From 1910 to 1920 the number of peach trees of bearing age in Washington rose from about 537,000 to around 649,000; this was a gain of over 20 percent. Yakima became the dominant county in the state with a production five times greater than in Chelan County, the closest competitor. The Central District gained a very commanding lead with Benton, Chelan, and Yakima Counties accounting for about 78 percent of the bearing trees in the state, and for about 82 percent of the total production in 1920. Tree numbers in the southeastern counties declined to less than one-half the number recorded in 1910.

In 1930 the number of bearing trees in Washington State dropped to 532,500, a decline of about 18 percent below the 649,000 recorded in 1920. A very large part of this drop was registered in Benton and Chelan Counties. At the same time the number of trees of bearing age in Yakima County increased about 12 percent from 1920 to 1930. Although this increase did not offset all the losses in the major counties, the Central District continued to show ever-increasing importance. This area accounted for 80 percent of the bearing trees in the state in 1930 and had about 86 percent of the total production for that year. Yakima

County alone accounted for 67 percent of the trees and for 77 percent of the total state production in 1930.

Second Period of Increase Begins

By 1940 bearing peach trees in the state totaled over 610,500. This figure was 15 percent greater than the number recorded in 1930. Plantings in Yakima County continued to expand, and in 1940 that county had over 403,000 trees in production. During the 10-year period 1931-1940 tree numbers increased in Benton and Chelan Counties, but the total number of bearing trees in 1940 was still far below the total reported for those counties by the 1920 Census.

Peach trees continued to decline in southeastern Washington until, in 1940, this district had only about 8 percent of the total bearing trees in the state, compared to 41 percent in 1900. From 1930 to 1940 the western counties began to show some gain as they had in earlier years—most of the increase in King, Pierce, and Clark Counties.

A total of 932,000 peach trees were of bearing age in the State of Washington in 1950. From 1940 to 1950 the total number of bearing trees increased about 53 percent. Yakima County far exceeded any other area in the state with approximately 661,000 bearing trees reported in 1950, an increase of over 250,000 bearing trees from 1940. Gains of about 10,000 trees were reported for Benton and Chelan Counties. Douglas County also developed rapidly and ranked second in production in 1949. The relative importance of the Southeast District continued to decline following the trend of the previous 50 years. Western Washington, which has the advantage of a ready market, showed considerable expansion in the years 1940-1950. Much of the gain in this western area came in King and Pierce Counties where some other soft fruits were declining.

PEARS

There were only 32,513 pear trees of bearing age in the State of Washington when the census was taken in 1890. In this early period most of the pear trees were located at the southern border, mainly along the Columbia River. Walla Walla was the leading county in 1890 with a total of 5,006 trees of bearing age. Clark County was second with 4,241 trees, and Garfield ranked third with 2,982 pear trees.

By 1900 pear tree numbers (310,597) in the state had increased 10 times over the previous census period. Counties bordering the southern part of Washington no longer held the lead over other sections of the state. However, Whit-

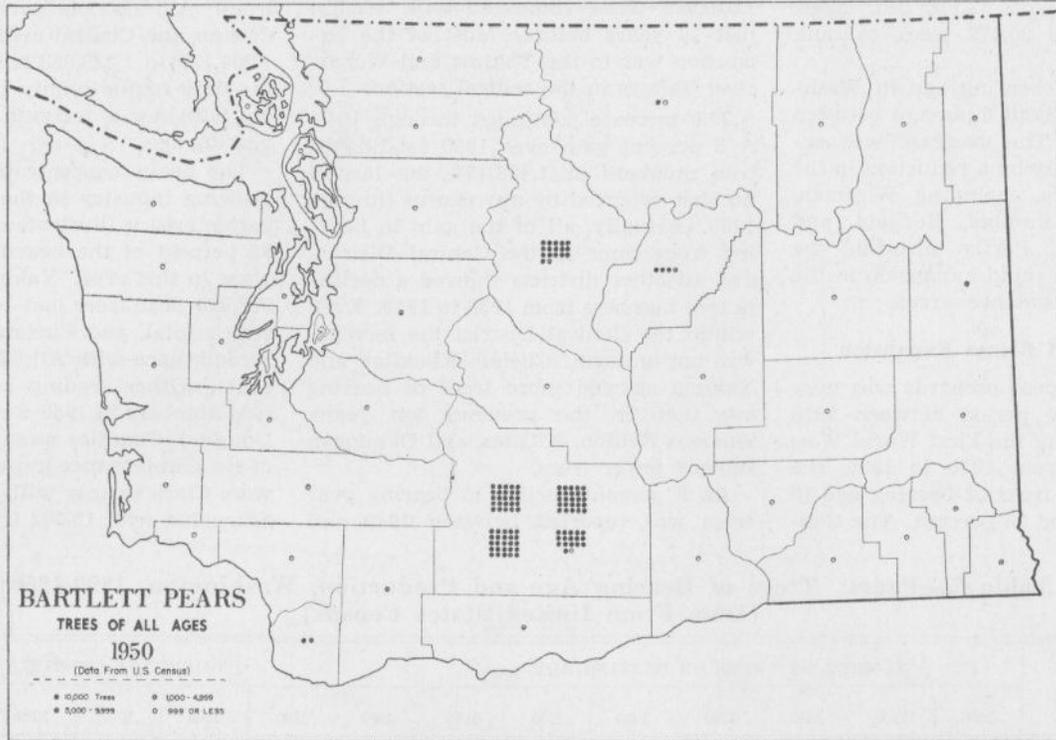


Figure 8. Bartlett pear production in Washington is mainly from the irrigated valleys in Yakima and Chelan counties. Yakima was by far the most important county in Bartlett pear trees in 1950. The fact that Benton County was not important indicates that the trees are concentrated principally in the Upper Yakima Valley and in the upper part of the Lower Yakima Valley. Chelan County, in second place, had less than one-fifth as many Bartlett pear trees as Yakima. Douglas was the only other county with any sizeable number of Bartlett pear trees. Clark was the only western Washington county with 10,000 or more Bartlett pear trees.

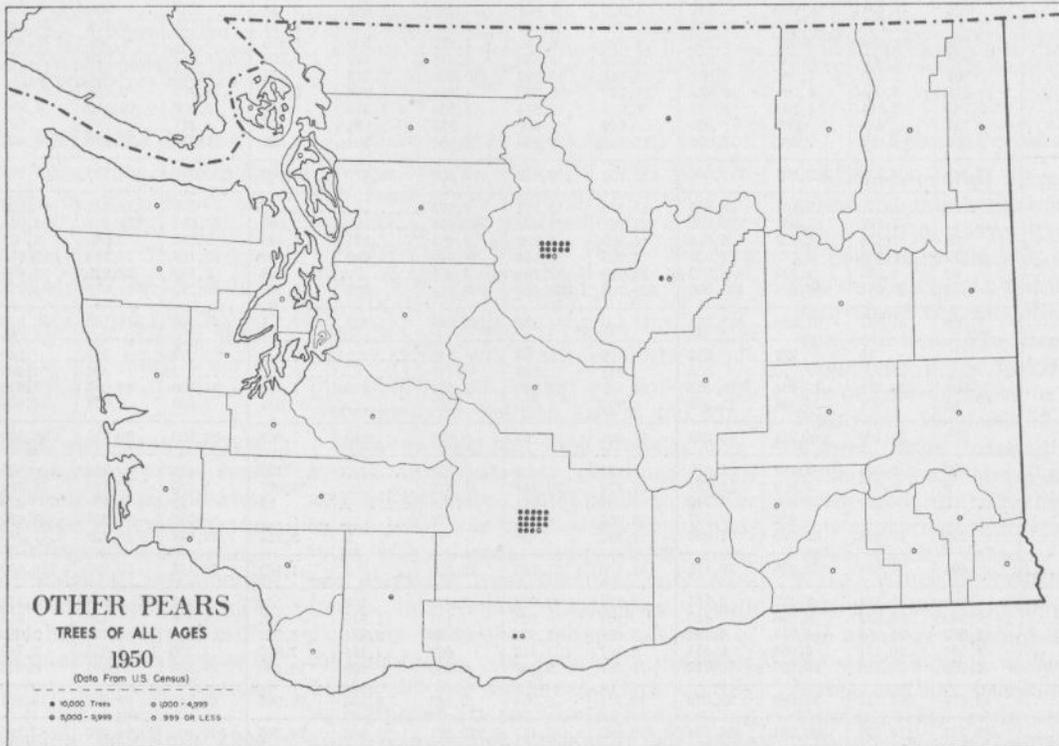


Figure 9. Yakima and Chelan are the only two important counties in the State of Washington in the production of pears other than Bartlett. Yakima was first in the number of pear trees of all ages in 1950, according to the United States Census. Chelan, in second place, had about one-half as many D'Anjou trees as did Yakima. Douglas and Klickitat were the only other two counties in the entire state in which there were over 10,000 pear trees other than Bartlett in 1950. All counties in the state had some of these "other pears" in 1950, but on many farms the production was principally for home use.

man replaced Walla Walla as the leading county by 1900 with 52,116 pear trees. Walla Walla had 30,477 trees, to rank second.

Pear trees of bearing age in Washington declined about 6 percent between 1900 and 1910. The decrease was accounted for mainly by a reduction in the southeastern area, including Whitman, Walla Walla, Columbia, Garfield, and Asotin Counties. Partly offsetting the decrease was the rapid expansion in the Yakima and Wenatchee areas.

World War I Brings Expansion

Expansion of pear orchards was very rapid during the period between 1910 and 1920, covering the First World War. In the period from 1920 to 1930, the number of pear trees of bearing age in the state increased 58 percent. The Cen-

sus of 1930 showed Washington with 1,370,983 trees, compared with 866,634 just 10 years before. Most of the expansion was in the Yakima and Wenatchee Valleys in the central section.

The increase continued through 1940. A 5 percent gain over 1930 established tree numbers at 1,438,457, the largest number reported by any census through 1950. Actually, all of the gain in bearing trees came in the Central District, and all other districts showed a decline in tree numbers from 1930 to 1940. Even within the Central District the increase was not uniform. Chelan, Klickitat, and Yakima showed more trees of bearing age than in the previous ten years, whereas Benton, Kittitas, and Okanogan showed fewer trees.

An 8 percent decline in bearing pear trees was reported between 1940 and

1950, with the total dropping to 1,329,521 trees. All districts participated in this decline, the Central area dropping from 1,264,120 to 1,225,058 trees. Chelan was the only major county in the state that did not show a decrease in pear trees of bearing age.

The heavy concentration of the pear-growing industry in the Central Washington area is illustrated by the fact that 92 percent of the bearing trees in 1950 were in this area. Yakima County with 988,870 pear trees had 74 percent of the state's total, and Chelan County was in second place with 201,966 trees (15 percent). Other leading counties in pear tree numbers in 1950 were Klickitat and Douglas. Counties west of the Cascades of some importance in pear tree numbers were Clark County with 17,258 trees and Skamania with 15,302 trees.

Table 5.—Pears: Trees of Bearing Age and Production, Washington, 1890-1950 (Data From United States Census)

COUNTY	NUMBER OF TREES OF BEARING AGE							PRODUCTION (BUSHELS)@						
	1890	1900	1910	1920	1930	1940	1950	1890	1899	1909	1919	1929	1939	1949
Clallam.....	1	2,044	1,335	1,387	857	1,167	912	.....	384	1,542	1,899	1,329	2,436	1,480
Clark.....	4,241	22,740	17,153	17,016	20,029	26,364	17,358	3,935	4,791	14,466	16,070	18,707	58,993	24,340
Cowlitz.....	1,118	8,790	7,336	6,375	4,667	3,055	2,177	2,029	2,128	12,369	4,971	5,872	8,045	2,360
Grays Harbor①.....	908	3,284	2,721	2,386	2,203	3,022	1,787	335	4,988	2,891	1,791	5,330	7,821	1,300
Island.....	553	1,724	1,438	1,831	1,799	1,953	1,220	1,496	833	1,915	2,315	1,954	2,913	1,000
Jefferson.....	283	825	629	535	477	1,960	515	209	329	993	606	528	2,012	800
King.....	691	13,455	13,217	18,717	17,434	11,428	6,125	329	3,525	17,156	14,992	16,038	17,299	3,560
Kitsap.....	261	1,317	3,479	4,121	3,320	3,730	2,049	173	266	3,545	3,080	3,113	6,223	2,000
Lewis.....	1,676	10,548	11,751	10,915	9,326	7,712	4,721	636	868	14,114	6,840	11,910	19,588	4,640
Mason.....	329	2,482	2,833	1,691	1,204	872	792	642	1,547	2,982	2,011	1,276	1,404	560
Pacific.....	336	1,454	780	957	1,036	1,083	533	564	88	337	596	1,558	3,333	640
Pierce.....	1,397	12,247	11,567	13,065	10,886	9,302	4,033	1,630	2,421	15,721	9,489	11,630	22,644	4,280
San Juan.....	699	4,886	5,657	8,724	8,809	6,020	1,821	500	1,856	8,937	7,503	16,700	5,480	1,000
Skagit.....	576	3,967	5,369	5,813	4,575	3,863	1,878	420	2,002	8,817	7,919	7,707	15,211	2,080
Skamania.....	154	2,103	1,247	5,568	8,941	13,994	15,302	243	464	2,022	2,808	11,917	35,982	54,840
Snohomish.....	319	3,081	4,004	9,914	21,137	9,299	4,744	256	2,174	5,409	8,310	25,747	26,392	3,280
Thurston.....	1,765	3,544	4,936	8,171	6,019	3,874	2,146	1,594	616	8,017	3,112	4,356	8,425	1,920
Wahkiakum.....	147	638	503	505	649	550	333	34	95	421	387	698	2,446	840
Whatcom.....	564	5,602	7,832	13,065	11,698	9,836	6,154	902	1,932	11,976	11,442	16,409	21,699	8,360
West District.....	15,388	104,731	103,807	130,696	135,756	119,093	74,500	15,877	30,867	133,640	106,120	161,779	268,346	119,080
Benton②.....	.....	.....	5,167	68,786	45,855	13,571	2,923	.....	.....	575	114,519	90,035	32,230	4,680
Chelan③.....	.....	7,327	25,957	75,807	141,231	201,359	201,966	.....	3,655	27,037	251,594	482,944	981,637	1,046,120
Kittitas④.....	258	2,833	3,167	5,016	4,380	1,326	1,431	331	1,548	3,392	5,946	8,801	8,070	1,120
Klickitat⑤.....	2,330	4,785	4,773	23,532	7,015	25,194	20,529	692	1,899	3,193	14,513	8,652	80,505	162,840
Okanogan⑥.....	30	2,985	1,940	8,322	39,149	22,004	9,339	.....	228	8,170	12,239	22,456	109,473	22,840
Yakima⑦.....	450	23,681	56,635	463,638	920,766	1,000,666	988,870	305	10,441	56,779	1,114,371	1,744,088	3,816,947	3,312,160
Central District.....	2,068	41,511	97,639	645,101	1,158,396	1,264,120	1,225,058	1,328	17,771	94,146	1,013,182	2,356,976	5,028,862	4,540,760
Ferry⑧.....	.....	15	237	813	179	98	149	.....	.....	17	532	146	355	440
Pend Oreille⑨.....	.....	.....	.....	565	244	201	17	.....	.....	.....	404	409	458	.....
Spokane.....	961	26,221	17,736	26,533	14,883	10,542	5,071	289	1,291	13,950	19,676	23,636	27,383	11,300
Stevens⑩.....	15	7,924	10,741	11,372	3,295	1,079	955	.....	571	7,693	8,701	4,838	2,920	1,320
N. E. District.....	976	34,160	28,714	39,283	18,601	11,920	6,192	289	1,562	20,800	29,313	29,049	31,116	12,960
Adams.....	100	2,524	5,192	1,618	197	9	13	.....	156	476	804	86	6	.....
Douglas⑪.....	8	4,617	3,809	11,401	26,472	30,748	18,312	.....	1,087	5,315	22,348	78,327	125,221	59,720
Franklin.....	.....	219	600	740	97	111	8	.....	28	72	1,107	230	172	.....
Grant⑫.....	.....	.....	982	7,847	10,069	6,314	172	.....	.....	388	12,550	28,449	59,600	80
Lincoln.....	296	17,493	12,293	7,860	4,641	58	23	9	3,211	12,224	18,358	11,578	108	.....
East District.....	404	24,853	22,936	29,475	41,476	37,240	18,528	9	4,482	18,475	55,227	118,660	185,107	59,800
Asotin.....	326	5,161	3,437	2,174	3,374	1,222	1,429	159	134	2,062	5,241	5,444	4,952	3,360
Columbia.....	2,540	6,849	2,886	840	391	258	161	1,848	466	4,385	1,430	315	312	400
Garfield.....	2,982	19,109	4,547	6,494	3,625	1,374	753	2,351	4,257	7,218	2,700	1,000	4,508	1,720
Walla Walla.....	5,006	39,477	6,068	2,415	2,167	1,643	667	4,724	7,929	7,200	5,055	2,249	4,901	3,880
Whitman.....	1,823	52,116	20,650	10,156	7,287	2,187	2,233	283	10,180	22,878	10,491	6,823	2,850	4,660
S. E. District.....	12,677	104,712	37,588	22,079	16,754	6,084	5,243	9,365	22,966	43,743	24,917	15,831	17,523	13,960
State⑬.....	22,513	310,597	290,684	866,634	1,370,983	1,438,457	1,329,521	26,868	78,236	310,804	1,728,759	2,682,295	5,530,954	4,755,560

① Grays Harbor County was named Chehalis County in 1890, 1900 and 1910.
 ② Benton County was divided between Klickitat and Yakima in 1890 and 1900.
 ③ Chelan County was divided between Kittitas and Okanogan in 1890.
 ④ Included part of Chelan County in 1890.
 ⑤ Included part of Benton County in 1890 and 1900.
 ⑥ Part of Stevens County in 1890.
 ⑦ Part of Stevens County in 1890 and 1900.
 ⑧ Included Ferry and Pend Oreille Counties in 1890 and Pend Oreille in 1900.
 ⑨ Included Grant County in 1890 and 1900.
 ⑩ Part of Douglas County in 1890 and 1900.
 ⑪ Includes Indian Reservations. Not allocated by county.
 ⑫ Census reports production as of previous year.

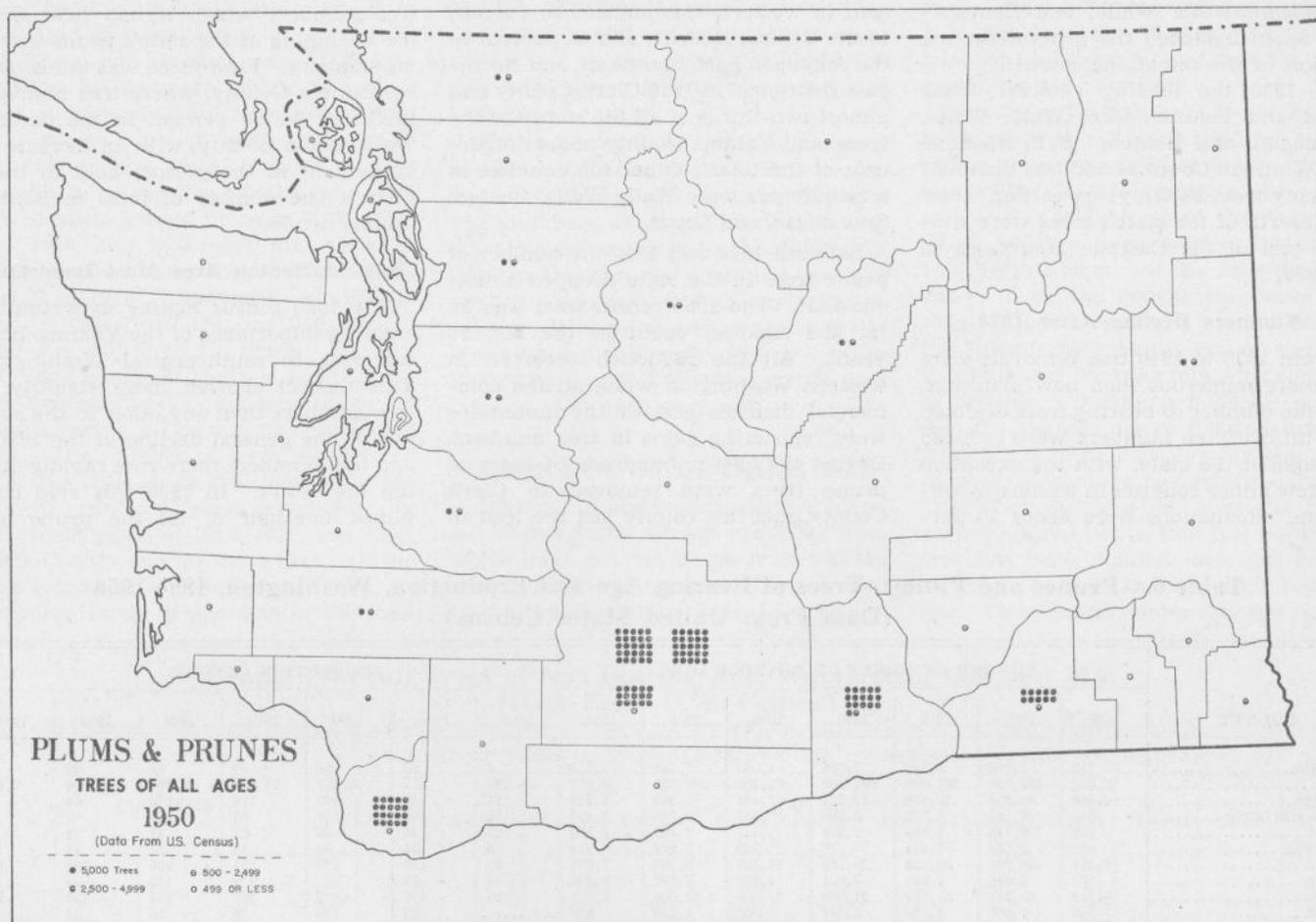


Figure 10. Washington plum and prune trees are located primarily in the southern portion of the state. As is true with most other tree fruits, production is concentrated in the Yakima River Valley. Yakima led all counties in plum and prune tree numbers in the 1950 Census reports, and Benton County was third. Despite a considerable decline in prune tree numbers after 1930, Clark County in western Washington was second among the 39 counties. Walla Walla County, which adjoins the Milton-Freewater area in Northeast Oregon, was fourth in plum and prune tree numbers in 1950. All counties had some plum and prune trees.

PRUNES AND PLUMS

Over the sixty years 1890-1950 there were many changes in the number and distribution of prune and plum trees in the State of Washington. The prune-growing industry was marked by periods of spectacular increase and sudden decline rather than by any orderly trend over the years. This was much truer of prunes than of any other fruit produced in the state.

When the Census was taken in 1890, there were two commercial prune areas in the state. One was in the southeastern counties and the other in southwestern Washington. This division, of course, reflected the then existing settlements. Clark and Walla Walla were the most important counties in prune tree numbers, and the state total was about evenly divided between eastern and western Washington.

During the decade following 1890, more prune trees were planted than in any other comparable period in the history of the state. The expansion was general, extending to every county. In

1900 there were 15 times as many trees of bearing age as there had been in 1890. The most phenomenal growth occurred in Clark County which showed a thirty-fold increase in the ten years. About a third of the state's trees were in Clark County, which had four times as many trees as the second most important county, which was Whitman. Other leading counties, in order of importance, were Spokane, Yakima, Lewis, and King.

Between 1900 and 1910 prune tree removals exceeded new plantings in all areas of the state. Total number of trees in the state was reduced by about one-third in this decade. However, the number of prune trees declined only one-fourth in western Washington, while dropping more than 50 percent east of the mountains. In spite of a moderate decline in tree numbers, Clark County strengthened its position as the leading prune county, and had almost half of the state total in 1910. Runner-up was Whitman County, followed in order by Spokane, Lewis, Walla Walla, King, and Yakima.

A Second Period of Increase

A small overall increase in plum and prune tree numbers occurred in the years from 1910 to 1920. Tree numbers rose 30 percent in Clark County to pass the half-million mark, and this increase more than offset the reductions in most western counties. The most significant development of the decade was the sharp rise of tree numbers in Yakima County. Whitman, Lewis, and King Counties showed large losses in tree numbers, while Spokane and Walla Walla registered moderate declines. In 1920 the state's leading counties ranked as follows: Clark, Yakima, Spokane, Walla Walla, Whitman, Lewis, and King.

The second major expansion in prune tree numbers occurred in the 1920's, with the state showing an increase of nearly half a million bearing trees. Largest gains occurred in the state's two leading counties. Clark County gained 360,000 trees for an increase of about 70 percent, while Yakima County added 102,000 trees for a gain of about 150 percent. Increases in a few other counties—chiefly

Okanogan, Walla Walla, and Benton—just about balanced the general decline in most of the remaining counties.

In 1930 the leading counties, after Clark and Yakima, were Walla Walla, Okanogan, and Benton. Both Spokane and Whitman Counties had less than half as many trees as ten years earlier. Over one-fourth of the state's trees were situated east of the Cascade Mountains as of 1930.

Numbers Decline After 1930

From 1930 to 1940 tree removals were far more numerous than new plantings, and the number of bearing trees declined one-third. Tree numbers were reduced throughout the state, with the exception of a few minor counties in western Washington. Reductions were about 30 per-

cent in western Washington, 35 percent in the Central District, and 57 percent in the combined East, Southeast, and Northeast Districts. In 1940 Clark County had almost two-thirds of all the state's prune trees, and Yakima County about 15 percent of the total. Other top counties in tree numbers were Walla Walla, Benton, Snohomish, and Lewis.

Between 1940 and 1950 the number of prune trees in the state dropped almost one-half. The 1950 census total was by far the smallest count in the last 60 years. All the reduction occurred in western Washington while all the commercial districts east of the mountains were registering gains in tree numbers. During the 1940's, hundreds of acres of prune trees were removed in Clark County, and this county lost the lead in

tree numbers which it had held from the beginning of the state's prune-growing industry. First place was taken over by Yakima County, where tree numbers increased by 50 percent in the decade. Walla Walla County, with an increase of 41 percent in the period, held to third place. The number of trees in Benton County tripled.

Yakima-Benton Area Most Important

The 1950 census figures show the increasing importance of the Yakima-Benton area in south-central Washington. This district showed more stability in tree numbers than any other in the state during the general decline of the 1930's, and tree numbers there rose rapidly during the 1940's. In 1950 this area contained one-half of all the prune and

Table 6.—Prunes and Plums: Trees of Bearing Age and Production, Washington, 1890-1950 (Data From United States Census)

COUNTY	NUMBER OF TREES OF BEARING AGE							PRODUCTION (TONS) ^②						
	1890	1900	1910	1920	1930	1940	1950	1899	1909	1919	1929	1939	1949	
Clallam.....	115	8,286	3,180	2,125	1,965	1,798	1,175	4	28	67	59	54	29	10
Clark.....	13,074	435,186	387,942	507,762	865,405	582,538	98,177	283	819	10,887	11,058	29,266	10,094	2,078
Cowlitz.....	4,088	36,358	15,490	10,891	7,434	5,948	3,149	71	49	409	272	210	64	50
Grays Harbor ^①	642	12,545	5,719	5,180	3,551	4,395	2,494	10	495	197	91	134	62	30
Island.....	798	6,145	1,969	2,025	1,457	1,763	1,130	27	34	45	23	41	21	18
Jefferson.....	482	3,546	1,424	778	795	1,242	614	5	24	50	18	37	14	9
King.....	2,511	49,784	30,433	18,755	13,553	9,890	7,091	27	162	924	284	335	122	101
Kitsap.....	793	6,618	7,913	5,914	4,273	4,280	2,466	14	25	221	110	162	54	65
Lewis.....	4,442	52,941	33,729	21,969	15,069	12,590	7,701	25	127	939	467	451	137	124
Mason.....	206	7,865	4,424	2,642	2,565	1,418	899	.....	23	130	38	55	17	40
Pacific.....	1,977	4,425	2,164	1,366	1,643	2,128	1,189	13	5	44	19	38	15	20
Pierce.....	2,700	47,384	25,381	14,345	12,303	8,386	6,157	33	180	646	340	475	143	97
San Juan.....	1,640	23,429	8,404	5,772	2,673	1,951	922	17	159	58	43	56	18	19
Skagit.....	1,484	17,711	12,351	7,553	6,175	5,163	3,128	30	141	434	166	205	100	117
Skamania.....	689	15,870	7,871	6,969	11,932	8,607	2,046	19	20	238	261	590	52	67
Snohomish.....	2,563	12,777	10,254	13,219	12,060	12,768	7,055	176	164	369	270	540	213	134
Thurston.....	2,317	23,741	24,922	11,302	12,218	9,298	2,906	34	33	315	222	283	64	37
Wahkiakum.....	411	2,197	979	1,628	1,147	1,614	557	3	7	39	24	16	19	27
Whatcom.....	1,452	41,426	20,542	14,339	12,287	11,432	7,892	38	186	623	411	574	162	205
West District.....	42,394	808,324	605,091	654,041	968,805	685,959	157,258	819	2,681	22,045	14,076	33,522	12,000	3,857
Benton ^③.....	.....	.....	2,050	10,634	24,287	16,530	48,431	.....	.....	25	513	643	781	829
Chehalis ^④.....	.....	12,405	8,029	11,642	7,039	4,748	5,567	.....	.....	499	754	757	290	338
Kittitas ^⑤	1,019	8,550	4,441	2,014	830	676	438	31	79	96	57	24	8	5
Klickitat ^⑥	6,007	22,239	7,510	2,647	1,569	1,539	232	61	73	95	86	75	12	18
Okanogan ^⑦.....	.....	6,239	2,640	2,906	41,956	4,506	3,454	.....	.....	39	89	87	543	178
Yakima ^⑧	1,523	82,026	27,076	68,361	170,397	136,580	206,185	32	1,135	1,894	2,677	8,922	7,370	6,567
Central District.....	8,549	131,459	51,746	98,104	246,647	164,579	263,307	124	1,653	2,698	4,174	10,964	8,839	7,852
Ferry ^⑨.....	.....	108	645	862	201	72	184	.....	.....	5	17	6	2	20
Pend Oreille ^⑩.....	.....	.....	.....	709	280	168	98	.....	.....	.....	.....	.....	.....	.....
Spokane.....	2,624	106,578	37,018	33,608	12,121	6,387	8,654	18	397	814	754	337	166	200
Stevens ^⑪	37	15,844	12,430	8,843	2,804	771	1,483	.....	.....	72	276	296	123	34
N. E. District.....	2,661	119,530	50,093	44,022	15,406	7,398	9,819	18	470	1,095	990	470	191	317
Adams.....	75	4,051	5,128	919	109	17	26	.....	.....	7	15	8	.....	.....
Douglas ^⑫	22	11,201	2,865	3,715	4,416	1,839	2,667	.....	.....	74	64	138	195	88
Franklin.....	.....	558	472	383	482	408	93	.....	.....	3	1	9	6	14
Grant ^⑬.....	.....	.....	1,385	1,743	1,553	286	103	.....	.....	13	47	59	18	1
Lincoln.....	743	33,715	10,152	4,182	1,010	22	129	.....	.....	1	271	130	139	45
East District.....	840	49,525	20,092	10,942	7,570	2,572	3,018	1	355	223	341	307	112	103
Asotin.....	384	4,904	5,552	1,240	10,327	908	810	10	9	96	78	587	39	35
Columbia.....	6,553	9,763	2,857	1,676	752	262	162	167	28	51	48	50	4	2
Garfield.....	6,921	11,850	5,893	6,193	9,125	1,656	273	167	116	174	79	308	26	9
Walla Walla.....	11,654	47,578	32,403	31,299	58,689	35,849	50,454	502	391	377	1,727	3,416	1,763	1,870
Whitman.....	5,701	106,950	49,445	28,446	13,747	1,433	1,732	66	697	1,541	491	249	14	40
S. E. District.....	51,213	181,045	96,150	68,254	92,640	39,508	53,431	912	1,241	2,239	2,423	4,510	1,846	1,956
State^⑭.....	85,657	1,290,845	822,082	875,363	1,351,668	900,616	486,833	1,874	6,419	28,900	22,004	49,773	22,988	14,085

① Grays Harbor County was named Chehalis County in 1890, 1900 and 1910.
 ② Benton County was divided between Klickitat and Yakima in 1890 and 1900.
 ③ Chehalis County was divided between Kittitas and Okanogan in 1890.
 ④ Included part of Chehalis County in 1890.
 ⑤ Included part of Benton County in 1890 and 1900.
 ⑥ Part of Stevens County in 1890.

⑦ Part of Stevens County in 1890 and 1900.
 ⑧ Included Ferry and Pend Oreille Counties in 1890 and Pend Oreille in 1900.
 ⑨ Included Grant County in 1890 and 1900.
 ⑩ Part of Douglas County in 1890 and 1900.
 ⑪ Includes Indian Reservations. Not allocated by county.
 ⑫ Census reports production as of previous year.

plum trees in the state, and also had a wide lead in production.

Yakima and Benton were the only counties in the state which had more trees standing in 1950 than the record-high census year of 1930. Among all counties in the state, Yakima ranked seventh in prune tree numbers in 1910, moved up to second place in 1920, 1930, and 1940, and took over first place in 1950. Benton County moved from thirty-second in 1910 to fourteenth in 1920, to fifth in 1930, to fourth in 1940, and in 1950 was still in fourth place.

Clark County, in contrast to the Yakima-Benton district, appears to be on the decline as a major prune-producing area. The number of trees standing in 1950 was little more than one-tenth the number counted 20 years previously. In the census years of 1920, 1930, and 1940, Clark County had far more than half the state's total number of prune trees, as compared to about one-fifth of the total

in 1950. Wartime industrialization in the early 1940's and severe winter damage at the end of the decade hastened the decline of prune tree numbers in Clark County.

The state's third leading prune county in 1950 was Walla Walla. This county has a record of greater stability in prune tree numbers over the years than any other county in the state, the number of trees in the past six decennial censuses ranging between 31,000 and 59,000. Among all counties in the state, Walla Walla ranked second in 1890, seventh in 1900, fifth in 1910, fourth in 1920, and third in 1930, 1940, and 1950.

TREES NOT OF BEARING AGE

Trees not of bearing age as reported by the United States Census are those trees which have not yet borne fruit. There is no quantitative measure of the amount of fruit a tree must bear in order to

change from the non-bearing to the bearing classification. It does not include trees which bear fruit and then for some reason do not bear later.

Because of the nature of the data there is not much as comparability from census report to census report as there is in the number of trees of bearing age. Primarily this is because of the variation which can, and does, exist in the age of trees in this class. At the time the census is taken the non-bearing trees can range in age from those planted only a few months before enumeration to those that will bear fruit the following summer or autumn. During periods of expansion the average age of the non-bearing trees tends to be considerably less than in periods when removals are common.

Another factor which must be given some consideration is that just because a tree has been planted does not necessarily mean that it will reach bearing age. Disease and winter damage caused

Table 7.—Fruit Trees of Non-Bearing Age, Washington, 1920 and 1930 (Data From U. S. Census)

COUNTIES	NUMBER OF TREES OF NON-BEARING AGE 1920						NUMBER OF TREES OF NON-BEARING AGE 1930					
	Apples	Apricots	Cherries	Peaches	Pears	Plums & Prunes	Apples	Apricots	Cherries	Peaches	Pears	Plums & Prunes
Clallam.....	2,311	1	483	45	296	455	1,072	15	473	35	247	356
Clark.....	15,538	9	2,250	1,663	4,691	179,881	7,864	148	5,352	4,530	24,065	36,634
Cowlitz.....	5,449	.....	867	382	1,120	1,810	1,724	9	1,134	377	1,407	603
Grays Harbor.....	3,275	.....	663	44	624	835	2,408	11	2,087	54	497	620
Island.....	3,602	1	1,042	151	969	795	945	13	1,463	55	218	319
Jefferson.....	1,607	.....	154	30	84	141	727	.....	96	25	85	157
King.....	12,128	.....	5,612	642	6,122	2,352	5,044	28	34,773	729	2,739	1,784
Kitsap.....	7,739	8	1,701	533	1,388	1,413	1,473	1	1,800	189	410	580
Lewis.....	10,611	24	2,425	660	345	2,535	5,452	22	3,738	408	2,427	2,462
Mason.....	2,137	.....	267	91	519	335	1,021	2	530	81	734	581
Pacific.....	1,839	.....	236	6	299	423	925	.....	160	21	220	468
Pierce.....	9,489	5	11,321	377	3,845	1,827	5,307	17	27,964	759	1,504	2,241
San Juan.....	1,363	.....	71	6	4,082	55	329	.....	1,632	5	1,226	79
Skagit.....	5,918	6	1,716	160	1,345	1,237	2,421	85	6,477	103	716	963
Skamania.....	4,846	.....	274	140	2,299	6,745	1,783	1	1,472	550	1,699	190
Snohomish.....	8,948	7	3,141	411	15,690	2,425	5,126	46	11,693	533	12,049	2,389
Thurston.....	5,178	.....	2,564	359	6,171	250	3,114	4	10,400	302	886	2,283
Wahkiakum.....	599	.....	157	43	199	316	398	4	144	39	97	157
Whatcom.....	11,933	2	3,894	546	4,913	2,095	5,382	76	16,592	295	1,778	1,658
West District.....	114,510	63	38,838	6,289	55,001	205,925	52,520	432	127,980	9,000	53,004	54,524
Benton.....	25,066	1,334	5,521	1,770	2,579	6,722	8,378	14,920	39,874	24,282	14,725	2,499
Chelan.....	169,755	5,222	3,490	3,036	23,542	8,250	237,024	32,690	19,617	11,388	124,293	2,392
Kittitas.....	4,690	.....	189	131	1,168	157	6,130	16	101	154	843	102
Klickitat.....	27,777	217	2,078	2,495	6,238	1,297	11,864	2	8,843	864	5,616	126
Okanogan.....	45,358	823	1,056	1,156	5,733	1,082	179,737	14,652	4,567	5,857	27,196	2,252
Yakima.....	144,885	3,076	10,417	20,968	62,804	39,774	332,620	52,068	74,071	143,992	490,092	29,035
Central District.....	418,131	10,672	22,751	29,556	102,064	57,282	765,743	114,318	147,073	186,537	663,365	36,416
Ferry.....	2,954	.....	303	171	195	390	305	168	49	170	38	39
Pend Oreille.....	2,986	.....	265	193	225	615	370	.....	80	12	28	56
Spokane.....	89,273	10	2,816	1,373	2,710	2,634	31,175	758	1,761	890	4,232	1,590
Stevens.....	17,691	.....	697	1,170	851	581	5,547	150	439	706	569	348
N.E. District.....	112,904	10	4,081	2,817	3,981	4,120	37,397	1,076	2,329	1,778	4,867	2,033
Adams.....	886	15	156	42	115	91	95	4	27	28	14	15
Douglas.....	31,558	2,049	1,013	2,346	3,536	2,169	67,361	15,585	2,907	9,108	17,425	449
Franklin.....	5,650	.....	57	43	26	26	113	5	481	340	49	31
Grant.....	43,967	15	640	958	7,073	1,185	8,908	3,492	723	3,411	15,148	193
Lincoln.....	3,274	44	457	1,720	1,689	344	2,340	4	303	1,147	2,691	141
East District.....	85,344	2,123	2,323	5,109	12,439	3,815	78,817	19,000	4,441	14,084	35,327	829
Asotin.....	749	15	1,394	1,191	170	223	1,581	844	12,503	4,737	836	1,262
Columbia.....	4,919	12	121	451	51	1,563	6,381	14	196	110	34	63
Garfield.....	288	1	108	664	1,218	559	251	377	2,669	3,236	102	27
Walla Walla.....	12,913	76	2,279	2,107	2,720	30,785	2,339	86	3,912	862	315	3,081
Whitman.....	6,140	28	1,081	2,070	5,702	4,958	2,957	1,597	3,761	7,021	328	335
S.E. District.....	25,009	132	4,983	6,483	9,861	38,088	13,509	2,918	23,041	15,966	1,616	4,768
State.....	755,898	13,000	72,976	50,254	183,346	309,230	947,986	137,834	304,864	227,315	758,179	98,570

by prolonged low temperatures are among the factors causing mortality among young trees. Even economic conditions can cause the removal of very young orchards before they reach maturity.

There also is no comparability between fruits. Apricots and peach trees bear earlier than other fruits, and may be producing three to four years after planting. Apples, pears, cherries, and prunes require longer before bearing. There also is a difference when the tree is bearing sufficient fruit to be classed as commercial production. In many cases this does not occur until two to five years after the tree begins to bear fruit.

Variation in Census Reports

The number of non-bearing fruit trees in each United States Census report since 1920 has varied quite markedly. Heavy plantings of all fruits did not occur simultaneously even within the same

area. In general, however, plantings were heaviest prior to 1930 (considering only the four census periods 1920, 1930, 1940, and 1950) and tended to be much lighter thereafter.

A total of 947,986 apple trees not yet bearing was reported by the Census of 1930. This was almost 200,000 trees greater than the number shown in the previous report. With the depression of the early 1930's there was a sharp decline in the number of trees planted. Fruit prices were low. Growers could not afford to buy young trees. Costs involved in raising the tree to maturity were too great to encourage plantings. As a result, in 1940 there were only 271,934 non-bearing apple trees in the entire state of Washington. With World War II, fruit prices improved and fruit tree plantings expanded. The 1950 Census reported 697,470 apple trees not of bearing age in the state.

There was a very large number of

young pear trees reported by the Census of 1930. In fact, from 1920 to 1930 was a period of expansion for the pear industry as the number of bearing trees also rose sharply. A decline in plantings accompanied the depression after 1930, and in 1940 the Census showed only 119,309 young pear trees. Recovery during the 1940's was not as great as in the case of apples and peaches, although there were 302,960 pear trees too young to bear fruit in 1950.

Peaches Expand in Yakima Area

Peaches, like pears, showed a great expansion in the ten years 1921-1930. The Census of 1930 reported 227,315 trees not yet of bearing age, compared with only 50,254 in 1920. Peaches showed the smallest decline in plantings of any fruit during the depression. Non-bearing trees numbered 189,411 in 1940, only about 38,000 less than in 1930. A large expansion in young trees occurred between

Table 7-A.—Fruit Trees of Non-Bearing Age, Washington, 1940 and 1950
(Data From U. S. Census)

COUNTIES	NUMBER OF TREES OF NON-BEARING AGE 1940						NUMBER OF TREES OF NON-BEARING AGE 1950					
	Apples	Apricots	Cherries	Peaches	Pears	Plums & Prunes	Apples	Apricots	Cherries	Peaches	Pears	Plums & Prunes
Clallam.....	1,073	29	767	59	276	353	923	50	421	167	248	277
Clark.....	3,891	239	1,930	3,286	1,737	3,477	3,109	308	3,854	4,803	5,851	4,234
Cowlitz.....	1,862	63	976	434	507	851	1,279	45	609	882	492	588
Grays Harbor.....	1,026	12	907	129	489	1,082	835	21	381	203	206	296
Island.....	364	84	243	97	114	216	661	82	327	481	232	330
Jefferson.....	594	14	228	21	149	156	347	37	119	196	83	98
King.....	3,322	387	9,969	7,558	874	1,364	9,392	375	8,833	7,390	1,923	1,542
Kitsap.....	1,888	183	1,292	1,716	371	682	1,716	137	897	1,364	650	622
Lewis.....	2,712	32	1,492	1,399	866	1,409	2,490	111	1,003	4,827	748	1,388
Mason.....	709	26	485	249	223	356	435	25	306	722	152	196
Pacific.....	338	①	139	26	92	242	447	7	150	79	130	182
Pierce.....	4,357	228	3,792	7,426	841	2,561	3,773	169	2,970	3,683	1,908	3,543
San Juan.....	167	14	37	34	52	41	373	34	190	130	102	166
Skagit.....	1,346	110	1,514	243	359	748	1,307	55	512	346	407	469
Skamania.....	379	70	177	235	4,682	110	672	24	49	42	3,895	291
Snohomish.....	3,501	163	3,048	946	1,228	2,063	3,261	177	1,426	1,484	1,250	65
Thurston.....	2,327	104	4,248	956	722	1,144	2,415	66	15,897	3,773	501	1,365
Wahkiakum.....	289	7	159	13	83	188	161	5	65	33	62	620
Whatcom.....	2,252	149	1,778	367	682	1,191	1,606	156	606	1,611	490	632
West District.....	32,488	1,864	33,072	25,185	14,347	19,234	35,292	1,884	38,445	32,126	19,323	16,873
Benton.....	2,328	6,771	4,603	21,370	1,650	25,150	6,730	24,532	12,390	56,679	825	26,689
Chelan.....	71,358	8,555	29,669	10,643	29,509	806	161,112	13,575	29,993	22,556	89,577	3,237
Kittitas.....	366	52	106	254	131	67	3,125	282	127	626	472	91
Klickitat.....	5,129	299	2,375	5,650	2,588	89	1,736	199	2,365	7,222	3,608	261
Okanogan.....	45,489	799	1,291	3,744	394	848	163,624	1,223	1,650	6,857	7,633	1,469
Yakima.....	77,371	15,484	19,943	83,359	66,195	29,048	298,549	59,956	34,296	231,337	142,689	121,558
Central District.....	262,641	31,961	48,986	125,230	99,867	65,708	574,767	99,867	81,694	325,198	245,104	162,330
Ferry.....	241	31	665	425	67	78	349	46	145	401	62	70
Pend Oreille.....	151	①	82	19	26	79	230	20	64	24	35	63
Spokane.....	13,567	677	2,109	811	559	2,985	15,966	322	3,060	2,267	2,857	1,620
Stevens.....	1,293	443	1,129	1,691	358	548	2,140	308	1,899	2,357	484	579
N.E. District.....	15,252	1,151	3,985	2,946	1,010	3,690	18,685	696	5,166	5,049	3,438	2,291
Adams.....	18	9	10	5	10	4	54	30	32	55	18	71
Douglas.....	15,633	11,889	3,919	15,083	3,052	1,091	56,809	11,445	10,816	29,306	32,029	5,417
Franklin.....	134	231	290	1,064	76	151	356	2,409	371	5,023	32	1,548
Grant.....	423	2,390	292	3,938	172	36	1,126	3,926	804	4,283	110	347
Lincoln.....	131	22	42	81	22	72	612	63	126	106	40	67
East District.....	16,329	14,541	4,463	20,171	3,332	1,354	68,967	17,876	12,079	36,770	32,229	7,450
Asotin.....	484	749	1,639	2,788	254	471	689	493	1,129	4,641	1,970	2,340
Columbia.....	2,603	27	48	318	24	36	4,683	58	92	801	74	56
Garfield.....	249	658	369	3,014	38	67	128	308	122	9,336	418	545
Walla Walla.....	531	41	100	624	53	6,716	3,527	198	793	1,404	182	3,189
Whitman.....	1,956	773	6,850	9,135	354	591	1,823	544	968	11,902	212	218
S.E. District.....	5,814	2,249	8,746	15,879	753	7,881	9,869	1,601	3,064	28,084	2,856	6,268
State.....	271,934	51,762	99,292	189,411	119,309	86,867	697,470	121,924	140,438	427,327	302,960	195,182

① Less than 3 farms reporting, data included in State totals only.

1940 and 1950, especially in the Yakima area; and the Census of 1950 reported 427,227 peach trees of non-bearing age in the state, with 231,257 in Yakima County alone.

A total of 304,864 cherry trees too young to bear fruit was reported in 1930. Numbers were large in central Washington where sweet cherry plantings were expanding. There also were large numbers of young sour cherry trees reported in western Washington. In the Census of 1940 only 99,252 non-bearing cherry trees were reported, the bulk of them again in western and central Wash-

ington. The number of young trees in 1950 was 140,438, with 58 percent in central Washington and 27 percent in the counties west of the Cascades.

Only 13,000 apricot trees of non-bearing age were reported in 1920 by the Census. In the succeeding 10 years there was a marked increase in apricots in central Washington, 83 percent of the non-bearing trees being in that area. The lack of planting during the depression brought young tree numbers down in 1940. On the whole there was not a sharp increase during World War II al-

though the 1950 total was 121,924, over twice the previous report.

Plantings of young plum and prune trees did not follow the same pattern as other fruits. The number of non-bearing trees in 1920 was greater than in any of the three succeeding Census reports. Most of the young trees were located in western Washington, that area having 67 percent of the total. In 1930 there were 98,570 plum and prune trees too young to bear fruit. Western Washington was still first, but the central area was a close second. A total of 86,867 young trees was reported in 1940, with

Table 8.—Production and Value of Production of Major Fruits, Washington, 1889—1951

	PRODUCTION						VALUE OF PRODUCTION					
	Tons						Thousand Dollars					
	Apples	Apricots	Cherries	Peaches	Pears	Prunes	Apples	Apricots	Cherries	Peaches	Pears	Prunes
1889.....	7,080											
1890.....	12,258											
1891.....	16,632											
1892.....	14,664											
1893.....	19,704											
1894.....	19,656											
1895.....	27,504											
1896.....	23,328											
1897.....	40,800											
1898.....	49,392											
1899.....	17,496			1,944								
1900.....	46,800			4,560								
1901.....	44,880			4,800								
1902.....	55,200			4,080								
1903.....	62,400			5,040								
1904.....	64,800			6,000								
1905.....	60,000			4,560								
1906.....	72,300			4,800								
1907.....	91,200			5,760								
1908.....	76,800			6,480								
1909.....	64,128			2,016	7,775		4,392			118		
1910.....	139,200			7,152	10,200		6,264			322		
1911.....	84,000			6,264	10,175		3,920			308		
1912.....	184,800			9,144	14,125		4,466			411		
1913.....	165,600			10,704	14,600		8,703			660		
1914.....	234,960			14,976	18,500		5,678			636		
1915.....	234,768			22,560	22,100		9,007			649		
1916.....	397,440			19,488	26,125		16,736			877		
1917.....	440,640			25,752	33,150		22,300			1,159		
1918.....	470,208			22,848	40,950		31,347			1,523		
1919.....	607,080			37,080	43,225	22,000	49,325			2,626	3,331	2,388
1920.....	439,200			14,256	40,150	21,400	31,298			1,723	2,695	1,533
1921.....	756,000			25,200	46,875	14,100	46,305			1,522	3,071	964
1922.....	658,776			31,488	56,000	21,800	28,821			1,640	2,378	1,082
1923.....	792,600			32,640	68,200	26,600	34,320			2,244	4,187	961
1924.....	528,000		4,800	11,016	48,675	25,600	36,520			1,079	3,617	1,424
1925.....	688,800		8,400	19,200	62,100	20,200	38,745		708	1,344	1,920	3,959
1926.....	826,680		10,500	32,256	90,000	35,700	34,094		1,290	1,357	3,653	1,326
1927.....	598,560	1,700	4,100	7,128	50,400	23,900	42,897	116	656	688	3,613	709
1928.....	908,160	4,200	9,700	25,088	103,500	21,700	41,624	267	1,630	1,667	5,042	725
1929.....	720,000	6,500	15,500	29,400	83,050	50,300	42,000	488	2,632	1,890	6,504	1,689
1930.....	912,000	3,600	15,500	16,512	117,925	38,800	39,520	184	1,800	1,080	3,756	979
1931.....	744,000	6,000	10,500	25,200	99,400	27,800	19,825	195	480	798	3,529	626
1932.....	768,000	4,800	16,500	31,680	107,675	29,100	15,950	129	502	507	1,420	509
1933.....	701,760	2,300	18,500	6,120	127,100	30,300	21,779	140	800	372	2,615	828
1934.....	763,824	11,800	19,500	35,280	128,600	38,800	22,206	512	1,275	1,229	3,929	990
1935.....	748,092	9,800	18,200	24,960	152,275	45,200	19,143	507	1,492	1,279	2,831	1,077
1936.....	628,656	7,200	19,300	44,544	153,225	24,700	28,551	461	1,320	1,633	4,563	762
1937.....	701,088	11,800	16,000	28,464	165,000	18,600	16,361	708	1,692	1,351	4,436	609
1938.....	683,040	14,500	26,700	45,288	178,925	25,700	22,459	465	1,404	1,087	3,472	621
1939.....	594,432	14,300	26,800	39,888	155,900	32,900	16,244	547	2,077	1,413	4,206	611
1940.....	615,456	16,300	30,100	50,256	160,500	18,900	18,807	629	2,698	1,508	4,015	514
1941.....	643,296	14,600	29,700	48,000	173,850	22,300	30,249	612	3,004	2,320	7,882	731
1942.....	656,136	21,600	30,900	52,692	166,875	23,500	30,542	1,686	3,801	3,509	12,397	1,533
1943.....	552,000	15,400	30,500	49,248	131,650	23,000	58,880	3,080	6,463	6,012	14,148	2,603
1944.....	758,400	23,700	27,000	60,936	216,625	25,800	78,368	3,118	6,835	4,284	17,098	2,453
1945.....	636,720	22,500	36,600	57,120	192,500	26,000	80,651	3,195	9,075	4,641	16,752	2,270
1946.....	785,040	27,300	36,500	60,012	222,250	29,100	91,588	3,085	9,836	4,924	20,729	2,647
1947.....	803,520	28,000	29,800	61,560	207,625	23,100	67,260	2,700	7,429	4,360	16,709	2,077
1948.....	618,240	20,800	23,100	46,992	138,875	19,100	71,915	1,513	5,762	3,759	14,740	1,064
1949.....	763,680	26,400	38,900	60,072	166,925	23,700	51,000	881	4,754	1,692	7,630	626
1950.....	852,768	1,600	19,400	3,240	142,575	13,600	57,595	251	4,033	591	14,448	1,537
1951.....	458,592	4,800	16,200	19,440	138,850	13,600	58,379	763	4,294	2,106	15,415	1,195
10 year av. 1941-50.....	706,980	20,020	30,240	50,071	175,975	22,920	63,805	2,018	6,101	3,600	14,343	1,762

central Washington having 64 percent. The expansion in the years 1940-1950 also was in the central counties. Non-bearing trees in 1950 numbered 195,182 for the entire state, with 162,330 in the central area.

PRODUCTION OF THE MAJOR TREE FRUITS

Apples are the most important fruit produced in Washington. In the 10 years 1941-50 apples accounted for 70.2 percent of the total tonnage of the important tree fruits grown in the state. Average production in those years was 706,980 tons. Pears were second with about 176,000 tons or 17.5 percent of the total. Peaches were third with 5.0 percent, cherries fourth with 3.0 percent, plums and prunes fifth with 2.3 percent, and apricots were sixth with 2.0 percent of the production.

There have been two years since estimates began in 1889 that apple production exceeded 900,000 tons. The peak

year was 1930, when 912,000 tons were on the trees before harvest. In most years thereafter apple production ranged between 600,000 and 800,000 tons. Pear production began to attain real significance in the 1920's.

The high point in peach production came in 1947, but the total of 61,560 tons was well below the tonnage of apples and pears. Cherry production hit its high point in 1945 and apricots in 1947. Because of the very sharp decline in tree numbers, the production of plums and prunes in recent years is not as great as in the past. From records beginning in 1919, the year of peak production appears to be 1929 when 50,300 tons were produced.

VALUE OF THE MAJOR TREE FRUITS

During the 10-year period 1941-50, the value of the six major tree fruits produced in Washington averaged almost \$92,000,000 per year. Apples accounted for about 69.6 percent of the total. Pears

accounted for 15.7 percent, indicating the value per ton was below average since pears comprised 17.5 percent of the tonnage. The high value per ton of cherries brought them into third place with 6.7 percent of the total value. Peaches, which constituted 5.0 percent of the tonnage, were only 3.9 percent of the value. Apricots were above the average value per ton and provided 2.2 percent of the value, while plums and prunes were below average and accounted for only 1.9 percent.

Value of production in the State of Washington was greatest in 1946 when production was large and prices were high. In that year the value of production was estimated as \$132,809,000 and the value of the apple, cherry, and pear crops was the highest ever recorded. Peaches, plums and prunes hit their high point in 1943, but 1946 was the second highest on record. Only in 1944, 1945, 1946, and 1947 did the total value of fruit production exceed \$100,000,000.