

PART V

Crops

Major Crops

Wheat is the major crop in Douglas. Wheat accounted for 75 percent of all crops harvested during 1954. Another 16 percent was in barley. The third most important crop was oats with 5 percent of the harvested cropland. Fruit orchards and vineyards occupied 6,800 acres, slightly under 3 percent of the harvested cropland. Alfalfa with 2,000 acres in 1954 ranked as the sixth most important crop but this was less than one percent of the cropland. Rye and small grains grown as a mixture were harvested from 1,500 acres. All other crops covered about 2,000 acres. This included some 300 acres of alfalfa seed plus wild hay, potatoes and vegetables.

Crop Trends

The crop history of any farming region reflects economic changes to a large degree. Orchards in Douglas County have declined somewhat since the late 1930's when the peak acreage was reached. In part, this indicates the invasion

Total Acres of Land Harvested, 1954: 249,888 Acres

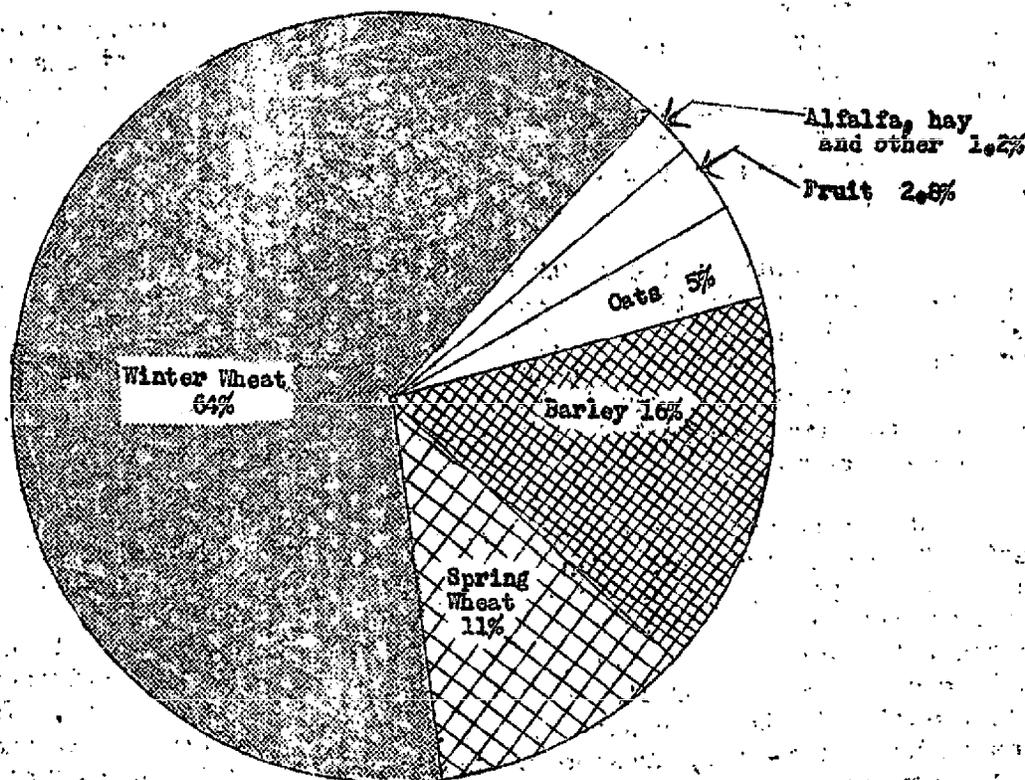


Figure 8.- Percent of Total Cropland in Leading Crops
Douglas County, 1954
(Based on U.S. Census of Agriculture, 1954)

of urban land uses in the East Wenatchee area. The limited orchard areas are all popular as home sites of nonfarm people.

Wheat has always been an important crop. An estimated 178,000 acres of wheat was harvested in 1939. Beginning in 1944 there was a great increase in wheat acreage. Other grains increased rapidly, too, with peaks during World War II and from 1954 to date. Total acreage planted to the major grains in 1939 was 180,700 acres. By 1955, according to estimates of the Washington Crop and Livestock Reporting Service, this had reached 236,900 acres which was an increase of about one-third. The comparative advantage of cash grains rather than other crops has become great since 1939. The increase in grain acreage accounts for approximately three-fifths of the amount added to the acreage in farms since that year. Barley and oats in recent years have been planted on wheat land. Wheat acreage has been curtailed by the Federal Wheat Acreage Allotment Program. As a result, the most recent trend has been to change the composition of the grain crop. Total grain acreage still has been cut back less than one-tenth but the crops raised on the acreage have changed.

Wheat Farming

For many years the most important crop from the acreage standpoint has been wheat. Grown on the dry land of Douglas County, wheat was the first important commercial crop grown by the pioneer farmers. Most of the wheat has been grown on the summer-fallow dry-farming system. Also the great portion of the crop has always been sown in the fall to take advantage of the winter moisture and protective snow cover. In recent years spring wheat acreage has been very small.

Douglas County is the fifth most important wheat producing county in Washington. According to 1957 estimates, a total of 144,200 acres produced 3,669,400 bushels, or about 26.7 bushels per acre. Variations in climatic conditions and fertilization practices have resulted in yields ranging from a peak of 27 bushels per acre in 1948 to a low of 16 bushels per acre in 1955. Acreage was decreased in 1954 and 1955 as a result of the Federal Acreage Allotment Program.

Both spring and winter wheat are planted, but the acreage devoted to each varies from year to year. Winter wheat is generally preferred by growers because of its higher yields. During the period 1939 to 1955 only in 1943 was spring wheat acreage larger than that of winter wheat. In most years fall moisture is favorable for germination, and snow cover is sufficient for protection of the wheat sprouts against extreme cold temperatures. In dry years some planting is deferred until spring. Fields of winter wheat that are damaged by winter-kill, erosion or other climatic causes are usually reseeded in the spring.

Douglas County farmers have experimented with a number of varieties in an effort to obtain better yields. According to the Washington Crop and Livestock Reporting Service, 89 percent of the 1955 crop was common white wheat. Beart, with three-fourths of the total crop, was the most important variety. Idaed was also important with about one-tenth of the crop being this variety. The only white club variety reported was Elmer which accounted for only a trace of the crop. Only half a percent of the total production was in hard-red winter

Table 17.- Wheat and Barley: Acreage, Yield and Production
Douglas County, 1939-1957

Year	All Wheat			Barley		
	Acreage (acres)	Yield (bushels per acre)	Production (bushels)	Acreage (acres)	Yield (bushels per acre)	Production (bushels)
1939	178,000	17.2	3,053,000	520	19.0	9,900
1940	125,000	18.9	2,364,000	1,050	12.0	12,600
1941	170,000	24.7	4,199,000	2,100	20.0	42,000
1942	239,500	24.0	3,348,000	11,400	26.0	296,400
1943	174,000	22.1	3,851,000	9,000	22.0	198,000
1944	203,500	23.6	4,812,000	3,170	21.5	68,100
1945	211,500	21.0	4,450,200	2,700	22.0	59,400
1946	231,000	26.2	6,041,000	1,150	27.0	31,100
1947	235,000	20.0	4,695,000	1,000	19.0	19,000
1948	231,000	26.8	6,148,000	1,050	19.0	20,000
1949	225,000	17.0	3,830,000	760	14.5	11,000
1950	218,500	21.1	4,604,100	6,700	27.0	180,900
1951	238,000	22.8	5,419,000	600	26.0	15,600
1952	251,000	20.8	5,229,000	700	30.0	21,000
1953	247,000	25.5	6,311,900	1,600	32.0	51,200
1954	185,700	22.4	4,150,400	40,500	26.5	1,073,000
1955	167,700	15.7	2,626,200	49,000	16.0	784,000
1956	173,700	21.9	3,810,600	54,700	29.0	1,584,000
1957	137,200	27.6	3,789,800	80,400	32.5	2,613,000

Source: U.S.D.A., AMS, Agric. Estimates Division
State of WashingtonTable 18.- Spring Wheat and Winter Wheat
Douglas County, 1939-1957

Year	Spring Wheat			Winter Wheat		
	Acreage (acres)	Yield (bushels per acre)	Production (bushels)	Acreage (acres)	Yield (bushels per acre)	Production (bushels)
1939	58,000	13.5	783,000	120,000	18.9	2,270,000
1940	70,000	11.6	811,000	125,000	18.9	2,364,000
1941	50,000	19.4	970,000	120,000	26.9	3,229,000
1942	32,500	19.0	617,500	107,000	25.5	2,730,500
1943	130,500	22.6	2,951,000	43,500	20.7	900,000
1944	77,800	21.8	1,698,100	125,700	24.8	3,113,900
1945	65,000	16.4	1,066,000	146,500	23.1	3,384,200
1946	89,000	24.0	2,136,000	112,000	27.5	3,085,000
1947	49,000	18.0	882,000	186,000	20.5	3,813,000
1948	71,000	24.0	1,704,000	160,000	28.0	4,480,000
1949	43,000	15.0	645,000	182,000	17.5	3,185,000
1950	62,500	21.0	1,312,500	156,000	21.1	3,291,600
1951	55,000	22.0	1,210,000	183,000	23.0	4,209,000
1952	14,000	18.0	252,000	237,000	21.0	4,977,000
1953	21,700	26.0	564,200	225,400	25.5	5,747,700
1954	30,000	24.0	720,000	158,700	21.0	3,332,700
1955	19,000	13.0	247,000	148,700	16.0	2,379,200
1956	171,000	22.0	3,762,000	2,700	18.0	48,600

Source: U.S.D.A., AMS, Agric. Estimates Division
State of Washington

varieties. Hard-red spring wheat totaled about one-tenth of the crop. Henry was the most important variety grown.

Table 19.- Varieties of Wheat Grown
Douglas County, 1955

Classes and Varieties of Wheat	Production (bushels)	Percent of Total crop
<u>White Club Wheats</u>		
Elmar-----	663,700	25.3
Elgin-----	87,200	3.3
Hymar-----	11,950	.4
<u>Common-White Wheats</u>		
Comanche-----	220,000	8.4
Brevor-----	194,000	7.4
Hybrid 128-----	4,500	.2
Marfed-----	2,970	.1
Rex-----	480	.02
Baart-----	141,800	5.4
Major Bluestem-----	22,450	.9
Idaed-----	70,700	2.7
Henry-----	9,600	.4
Federation-----	1,800	.07
Saunders-----	650	.02
<u>Hard-Red Winter Wheats</u>		
Riddit-----	396,500	15.1
Wasatch-----	117,700	4.5
Turkey-----	619,600	23.6
Rio-----	16,500	1.8
Tenmarq-----	12,900	.5
Yogo-----	1,200	.04
Total all classes and varieties	2,626,200	

Sources: U.S.D.A., AMS, Agric. Estimates
State of Washington

Barley, Oats and Other Small Grains

Barley has become an important crop in recent years. A total of 39,900 acres of barley was harvested in the county in 1954. Since 1951 and the Federal Acreage Allotment program, barley has become the second most important crop in acreage terms. Barley, like the other small grains, reached a peak in the World War II boom and then dropped off afterward. Over 11,000 acres of barley were harvested in 1942 and only 600 in 1951. In recent years, when cash-grain farmers limited wheat acreage under federal acreage allotment agreements, they followed summer-fallow with barley. Yields have ranged from a low of 12 bushels per acre in 1940 to a high of 32 bushels per acre in 1953. In recent years yields of all the small grains have tended higher except for 1955 which was a bad grain crop year.

Oat acreage was the third highest of all crops in 1954. A total of 13,000 acres were harvested. It has followed an acreage trend similar to barley.

Yields have been fairly good with a low of 17 bushels per acre in 1940 and a high of 38 bushels per acre in 1942. Oats are a more popular feed grain. Many small fields on part-time farms are grown for livestock feed. Only 70 percent of the oat crop was sold in 1954 compared with 85 percent of the barley crop.

Rye is grown on a few farms and acreage has fluctuated greatly. The top acreage was reached in 1941 with 3,000 acres. A total of 900 acres were reported in 1954 on 14 farms. Rye yields have varied greatly with climatic conditions.

Table 20.- Oats and Rye: Acreage, Yield and Production
Douglas County, 1939-1956

Year	Oats (for grain)			Rye (for grain)		
	Acreage (acres)	Yield (bushels per acre)	Production (bushels)	Acreage (acres)	Yield (bushels per acre)	Production (bushels)
1939	2,180	24.0	52,300	1,330	5.5	7,350
1940	3,500	17.0	59,500	2,150	5.0	10,800
1941	5,900	30.0	177,000	3,020	12.8	38,700
1942	13,100	38.0	497,800	2,800	6.5	18,200
1943	10,000	37.0	370,000	2,400	7.5	18,000
1944	2,660	30.5	81,130	700	13.1	9,200
1945	1,550	22.0	34,100	680	10.4	7,100
1946	750	32.0	24,000	340	11.5	3,900
1947	640	25.0	16,000	480	10.0	4,800
1948	600	21.5	12,900	640	12.5	8,000
1949	670	24.0	16,050	850	6.0	5,100
1950	8,000	35.0	280,000	2,500	14.0	35,000
1951	2,000	36.0	72,000	1,800	10.0	18,000
1952	1,050	34.0	35,700	160	8.5	3,900
1953	2,130	33.0	70,300	430	14.9	6,400
1954	13,100	32.0	418,900	900	13.0	11,700
1955	20,200	25.0	505,000	900	6.4	5,800
1956	22,200	23.5	521,700	700	10.0	7,000

Source: U.S.D.A., AMS, Agric. Estimates Divn.
State of Washington

Hay Crops and Silage

Hay crops are relatively unimportant in Douglas County. The most important hay crop has been small grains cut for hay. In 1949 a total of 10,700 acres were cut on 246 farms. By 1954 this had fallen to 6,200 acres on 191 farms. About 7,000 tons were harvested and almost none sold in 1954.

Alfalfa is the other major hay crop. The acreage in alfalfa has risen slowly from 840 acres in 1939 to about 2,200 acres in 1955. About three-fifths of the alfalfa land is irrigated. A total of 146 farms grew alfalfa in 1954, producing about 7,000 tons. Almost one-third of the alfalfa crop was sold from 39 of the producing farms in 1954. A few farms have started growing clover and timothy for hay in recent years. The peak was 80 acres in 1951 with only 40 acres harvested in 1954. None of the crop was sold. Several farms harvest

wild hay with 140 acres cut in 1954. Other hay (grasses and sweet clover) was harvested on 230 acres. Acreage in these minor hay crops has remained fairly constant. Silage harvesting is a new practice in the county and an increasing tonnage is being put up on livestock farms.

Table 21. Clover-Timothy Hay and Alfalfa Hay

Acreage, Yield and Production
Douglas County, 1939-1955

Year	Clover and Timothy Hay			Alfalfa Hay		
	Acreage (acres)	Yield (tons per acre)	Production (tons)	Acreage (acres)	Yield (tons per acre)	Production (tons)
1939	--	--	--	840	2.5	2,100
1940	--	--	--	990	2.0	2,000
1941	--	--	--	1,060	3.5	3,740
1942	--	--	--	1,020	4.0	4,100
1943	--	--	--	1,080	4.0	4,300
1944	10	2.0	20	950	2.6	2,500
1945	20	2.0	40	920	3.2	2,900
1946	30	2.0	60	1,140	3.1	3,500
1947	40	2.0	80	1,360	2.6	3,500
1948	50	2.0	100	1,590	3.0	4,700
1949	60	1.7	100	1,900	2.7	5,200
1950	70	2.3	160	1,820	2.2	4,000
1951	80	1.9	150	2,050	1.5	3,000
1952	60	1.7	100	1,840	1.5	2,800
1953	50	2.2	110	1,900	1.3	2,400
1954	40	2.2	90	2,060	3.5	7,200
1955	40	1.2	50	2,180	1.3	2,800

Source: U.S.D.A., AMS, Estimates Div.,
State of Washington.

Vegetables, Potatoes and Field Corn

Douglas County is not self-sufficient in the production of vegetable crops. Much of this is due to the lack of fertile bottom soil and a ready market. Some is because of the climate. In 1954 there were 22 farms producing vegetables for sale. About 53 acres of vegetables were harvested. Sweet corn was the most important, being harvested on 10 acres, followed by tomatoes harvested on 7 acres. Unspecified vegetables totaled 33 acres. The income to farmers from vegetable sales totaled only \$11,400 in 1954. About one-half or 498 of the county's farms reported harvesting some vegetables for home use.

A total of 219 farms reported harvesting potatoes for home use or sale. There were 25 acres reported by the Census while in 1949 the total was 46 acres. Ten farms grew a total of 27 acres of field corn for all purposes in 1954. Eight acres were harvested for grain. This was less than one-fourth of the acreage harvested for grain in 1949. While no corn was cut for silage in 1949, there were 14 acres used in this way during 1954. The other five acres were used for livestock feed.

Nursery and Greenhouse Products

Nursery and greenhouse production has expanded during recent years. An increased rate of residential construction has caused the demand for plants and flowering ornamentals to greatly increase. The local fruit industry has also been a factor in this upward trend. Acreage in nurseries has increased almost eight times in the same period. Nurseries received \$250,000 for their products in 1954. Greenhouse space increased two-fifths between 1949 and 1954. Sales increased from \$2,700 during 1949 to \$8,000 during 1954.

Table 22.- Horticultural Specialties: Nursery Products, Greenhouse Products, Flowers, Plants, Bulbs, Seeds, Mushrooms and other Special Plants
Douglas County, 1939-1954

Census Year	Nursery Products (shrubs, trees and ornamentals)		Flowers and flowering plants, bulbs and seeds; vegetables, vegetable seeds, plants, mushrooms grown in fields and under glass for sale.		
	Acres Planted	Sales from Nurseries	Acres in open fields	Greenhouse space (square feet under glass)	Sales from farms during the year
1939	32	\$ 33,326	---	---	---
1944 1/	---	---	---	---	---
1949	61	88,064	1	10,000	\$2,720
1954	84	250,000	2	14,000	8,000

1/ No Census data are available for 1944.

Source: U.S. Census, Agriculture

Tree Fruits, Nuts and Grapes

Douglas County is the fourth most important county in the state in fruit production. Apples and peaches are the primary commercial fruits grown. There were 6,781 acres of orchards, vineyards and nut trees recorded by the 1954 Census. Of this total 6,644 acres, or 98 percent of the total, were irrigated. In 1954 Douglas County fruit growers received \$5,984,000 for sales from their orchards. This was the second most important source of income in the county's agricultural economy and it was over one-third of the total farm income. Most fruit orchards in the county are extensions of similar areas across the Columbia River in Okanogan and Chelan Counties. Most orchards are on the river benchlands in the East Wenatchee, Orondo and Bridgeport districts.

The number of bearing trees has declined over the years for some fruits. Peaches have recently become the most important fruit grown in terms of tree numbers. Douglas County ranks third in the state in peach production. There were 55,400 bearing peach trees in the county in 1954. This is the peak number reported up to that time. Pears along with prunes and plums reached peaks about 1940 and then declined. Douglas is third in pear production. Cherries in 1954 were down slightly from a peak number of bearing trees reached about 1950. Apricots, while up from 1950 numbers, were still much below the 1940 peak of 58,000 bearing trees. Douglas County ranks fourth in the state in apple production. Although apple trees are fewer than in 1920, apples are still the major fruit crop and in monetary value, apples usually rank second only to wheat.

Grapevine plantings in the Bridgeport, Orondo and East Wenatchee districts have been increased in recent years. In 1954 there were 60,000 vines on 77 farms in the county with a total production of 889,000 pounds. Douglas County was the third most important county in Washington grape production in 1954.

Table 23.- Bearing Fruit
Douglas County, 1890-1954

Year	Number of Bearing Trees					
	Apples	Apricots	Cherries	Prunes & Plums	Peaches	Pears
1890	92			22	390	8
1900	24,803	5,009	2,620	11,201	8,691	4,617
1910	32,111	1,457	1,851	2,865	13,513	3,809
1920	387,355	6,428	4,217	3,715	26,761	11,401
1930	358,763	23,399	3,926	4,416	16,071	26,472
1940	214,678	57,912	9,890	1,839	32,120	30,748
1950	156,397	38,273	13,086	2,667	46,561	18,312
1954	114,072	42,704	12,873	3,429	55,398	28,532

1/ 1954 figures are for trees in orchards of 20 trees or more.

Sources: Washington Tree Fruits, Washington Crop and Livestock Reporting Service, U.S.D.A., and Wash. State Dept. of Agric., Cooperating, 1952.
U. S. Census of Agriculture.