

PART V

Crops

Major Crops

Commercial crops in Benton County are well-diversified among irrigated and dryland types but not necessarily diversified on the individual farms. Dryland crops of wheat and barley, however, far exceed irrigated crops in terms of harvested acreage. There are at least a dozen commercial crops which are harvested from more than 1,000 acres. According to the Census of Agriculture in 1954 the five major crops were wheat, on over 113,000 acres, followed by barley on 24,540 acres, alfalfa on 10,130, tree fruits and grapes on 4,690 and potatoes on 3,925. Wheat alone accounted for 63 percent of all the harvested cropland. Other important crops were vegetables, sugar beets, alfalfa seed, corn, dry beans, mint and hops.

Crop Trends

Most crops in Benton County have increased in acreage since 1939. Wheat and barley acreages have been enlarged greatly. Other crops which are greater today than in 1939 are corn, potatoes, commercial vegetables, mint, hops, tree

Total Acres of Land Harvested, 1954
177,730 Acres

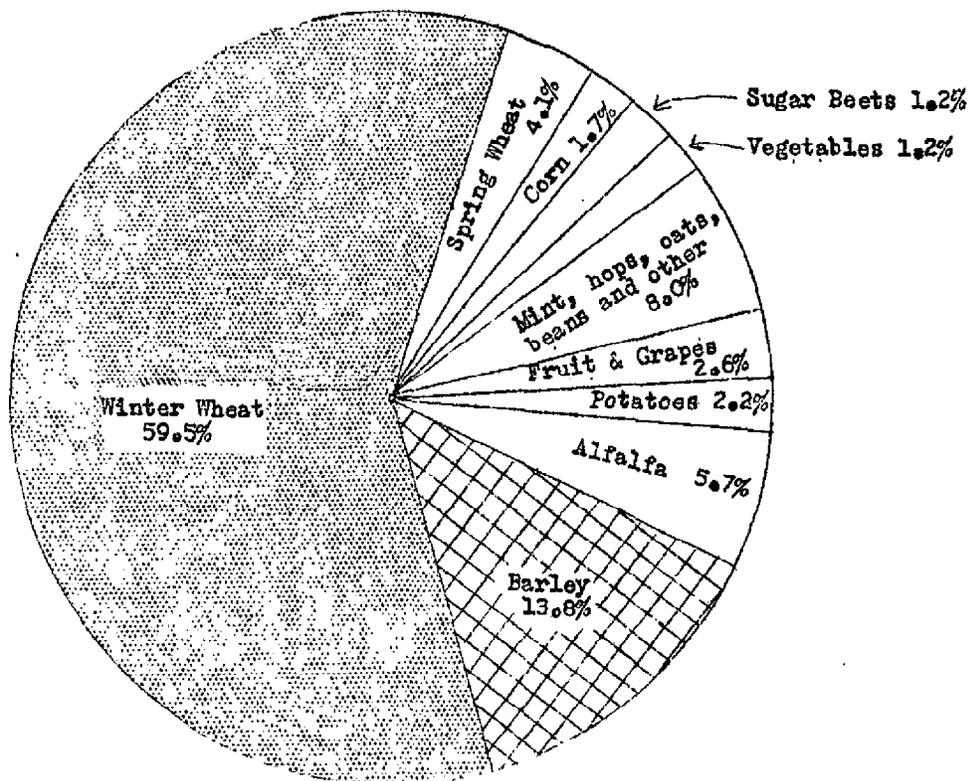


Figure 10.- Percent of Total Cropland in Leading Crops
Benton County, 1954
(Based on U.S. Census of Agriculture, 1954)

fruits and grapes. Much of the increased acreage resulted from the new additions in irrigated land in the Roza Division of the Yakima Valley project in the Prosser District. Decreases have only occurred in oats and some specialty crops such as lettuce, tomatoes, dry peas and berries. Expansion of irrigated crops and dryland grain crops resulted in a 122 percent increase in cropland harvested between 1930 and 1954. In 1939 there were only 80,628 acres harvested but by 1954 there were 177,730 acres harvested for crops. Most of this increase has been in wheat and barley. Summer fallow acreage was only 79,300 acres in 1939, whereas, by 1954 fallow land was up to 143,490 acres. A vast area of idle land was put into wheat production during the late 1940's and early 1950's.

Small Grains: Wheat, Barley, Oats, Rye

Cash grain farming on a large area of dryland soils is a major activity in Benton County agriculture. Wheat and barley are the two largest crops. There are less than 200 cash grain growers but they utilize over 60 percent of all the harvested cropland in the county.

Grown by 197 farmers, wheat is the major cash crop harvested with over 130,000 acres cut in recent years. Wheat acreage and production have increased greatly since 1930. In 1939 there were only 170 growers and total acreage harvested was only 52,100 acres. Wheat reached a peak of 141,800 acres by 1953 with a record harvest of 3,093,400 bushels. The major portion of the wheat is grown by less than 75 large dryland farms located in the Horse Heaven Hills and the Rattlesnake Hills. In 1954 there were only about 4,000 acres of irrigated wheat compared with about 107,000 acres of dryland wheat.

Table 18.- Varieties of Wheat Grown
in Benton County, 1955

Classes and Varieties of Wheat	Production (bushels)	Percent of Total Crop
<u>White Club Wheats</u>		
Elmar-----	19,500	.8
<u>Common-White Wheats</u>		
Requa-----	451,000	20.6
Pilcrow-----	263,500	12.0
Rex-----	59,100	2.7
Baart-----	19,400	.9
Brevor-----	15,200	.7
Marfed-----	12,500	.6
<u>Hard-Red Winter Wheats</u>		
Turkey & Rio-----	1,297,500	59.2
Triumph-----	46,400	2.1
Comanche-----	6,700	.3
Total all classes and varieties	2,191,200	

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

Table 19.- Wheat and Barley: Acreage, Yield and Production
Benton County, 1939-1956

Year	All Wheat			Barley		
	Acreage (acres)	Yield (bushels per acre)	Production (bushels)	Acreage (acres)	Yield (bushels per acre)	Production (bushels)
1939	52,100	13.1	683,400	330	25.5	8,400
1940	61,500	12.5	769,000	650	27.5	17,900
1941	77,000	29.2	2,248,200	750	32.0	24,000
1942	72,500	24.4	1,770,500	2,300	35.0	80,500
1943	77,000	17.4	1,338,000	2,180	34.0	74,100
1944	97,600	21.0	1,986,100	760	30.0	22,800
1945	95,700	20.7	1,980,300	400	33.0	13,200
1946	99,500	23.2	2,312,000	370	33.0	12,200
1947	123,000	22.8	2,804,300	400	33.0	13,200
1948	132,500	27.4	3,637,000	550	38.5	21,200
1949	125,000	10.0	1,246,500	650	36.0	23,400
1950	135,400	8.7	1,182,900	6,800	33.5	227,800
1951	138,900	28.4	3,951,000	1,900	42.0	79,800
1952	134,300	19.9	2,673,500	1,100	40.0	44,000
1953	141,800	21.8	3,093,400	1,000	50.0	50,000
1954	113,400	23.7	2,688,900	25,000	22.5	562,000
1955	112,300	19.7	2,212,000	36,400	21.1	768,000
1956	127,400	17.8	2,270,000	17,100	21.8	372,000

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

Table 20.- Spring Wheat and Winter Wheat
Benton County, 1939-1956

Year	Spring Wheat			Winter Wheat		
	Acreage (acres)	Yield (bushels per acre)	Production (bushels)	Acreage (acres)	Yield (bushels per acre)	Production (bushels)
1939	17,900	10.6	189,300	34,200	14.4	494,100
1940	19,000	8.5	161,000	42,500	14.3	608,000
1941	14,600	24.5	358,200	62,400	30.3	1,890,000
1942	11,900	17.9	212,800	60,600	25.7	1,557,700
1943	43,200	20.5	886,000	33,800	13.4	452,000
1944	34,300	29.9	716,870	61,100	21.3	1,301,400
1945	36,000	17.1	616,000	59,700	22.9	1,364,300
1946	20,200	23.8	480,700	86,200	23.0	1,872,600
1947	28,600	20.5	586,300	94,400	23.5	2,218,000
1948	27,600	21.2	585,000	104,900	29.1	3,052,000
1949	80,000	10.8	864,000	45,000	8.5	382,500
1950	37,200	12.0	446,400	98,200	7.5	736,500
1951	30,900	30.0	927,000	108,000	28.0	3,024,000
1952	20,300	25.0	507,500	114,000	19.0	2,166,000
1953	57,800	23.0	1,329,400	84,000	21.0	1,764,000
1954	8,000	26.5	212,000	105,400	23.5	2,476,900
1955	5,800	51.0	295,800	106,500	18.0	1,917,000
1956	35,900	25.0	897,500	91,500	15.0	1,372,000

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

Winter wheat grown under the summer fallow system of dryland farming generally far exceeds spring wheat which is grown under irrigation. Climatic and ground moisture conditions in the uplands are generally unsuited for reliable production of wheat sown in the spring.

Hard-red winter wheat varieties are the most preferred in the cash-grain agriculture of Benton County. In the crop of 1955 the variety, Turkey and Rio, accounted for 1,297,500 bushels or 59 percent of all wheat. Hard-red winter wheat made up over 61 percent of the total crop while soft common white wheat made up about 39 percent. Requa was the main soft white wheat in that year.

Barley has become the second major crop in recent years. Acreage and production has gone up many times over the level of the late 1940's. Barley reached a peak of 36,400 acres yielding 768,000 bushels in 1955. It is a secondary dryland crop grown by wheat farmers and most of it is grown as winter barley using the same summer fallow system as wheat. In recent years when farmers agreed to reduce acreages of wheat under the federal wheat price support program, barley was planted on the land taken out of wheat.

Oats and rye are minor grain crops grown mainly for local livestock feed and some cash grain sales. Oats were grown on about 60 farms in 1954 and total acreage has ranged from 480 to 890 acres per year but there has been a slight downward trend since the late 1940's. Rye has increased greatly as a local use and cash crop, being grown on land taken out of wheat in recent years. It went up from 350 acres in 1939 to a peak of 9,350 acres in 1955 and has become the third most-important small grain crop.

Table 21.- Oats and Rye: Acreage, Yield and Production
Benton County, 1939-1955

Year	Oats (grain)			Rye (for grain)		
	Acreage (acres)	Yield (bushels per acre)	Production (bushels)	Acreage (acres)	Yield (bushels per acre)	Production (bushels)
1939	650	42.0	27,300	350	6.0	2,100
1940	710	38.0	27,000	360	6.6	2,360
1941	560	55.0	30,800	470	11.0	5,160
1942	750	54.0	40,500	530	10.0	5,300
1943	660	56.0	36,970	560	8.0	4,500
1944	700	48.5	33,950	500	6.6	3,300
1945	680	54.0	36,720	660	9.5	6,300
1946	790	50.0	39,500	450	9.1	4,100
1947	720	53.0	38,150	480	5.0	2,400
1948	880	48.0	42,220	910	8.0	7,300
1949	830	44.0	36,520	1,240	15.4	19,100
1950	890	50.0	44,500	2,740	9.5	26,000
1951	750	53.0	39,750	3,180	12.5	39,700
1952	750	50.0	37,500	2,330	9.4	22,000
1953	680	57.0	38,800	2,790	10.5	29,300
1954	480	52.0	28,340	7,000	12.0	84,000
1955	720	55.0	39,600	9,350	10.2	95,800

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

Field Corn

Benton County is the second in the state in field corn. Field corn grown under irrigation for feed grain and silage has recently regained its earlier importance in the crop pattern. Corn was being grown on about 2,000 acres in 1939 but dropped to 1,000 acres or less in the years 1945 to 1952. By 1954 it was back up to 2,230 acres with a record production of 169,500 bushels. In 1954 there were 194 farms growing field corn harvested as grain and their grain corn harvest was second to Yakima County. Corn was an important trade item with 105,000 bushels being sold to the livestock and poultry feed market. In addition, nearly 9,800 tons of corn silage was put into storage.

Table 22.- Field Corn: Acreage, Yield and Production
Benton County, 1939-1955

Year	Field Corn		
	Acreage (acres)	Yield (bushels per acre)	Production (bushels)
1939	2,300	35.5	81,650
1940	1,990	41.0	81,590
1941	1,970	46.0	90,700
1942	1,910	45.9	87,650
1943	1,540	46.6	71,700
1944	1,050	47.0	49,350
1945	800	53.0	42,400
1946	810	56.8	46,000
1947	740	58.0	42,900
1948	700	55.0	38,500
1949	1,000	51.0	51,000
1950	830	56.0	46,500
1951	880	63.5	55,800
1952	810	76.0	61,600
1953	1,330	71.0	94,400
1954	2,230	76.0	169,500
1955	2,150	72.8	156,500

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

Hay: Alfalfa, Clover and Timothy and Silage

Benton County is the eighth ranking producer of alfalfa hay in Washington. About 700 farms grew alfalfa and 250 had surpluses for sale during 1954. Alfalfa acreage has gone down slightly since 1939 but yield and production have increased. In recent years acreage has exceeded 10,000 acres. While most of the production is consumed by Yakima Valley livestockmen and feeders, some baled alfalfa is trucked to dairy areas in western Washington. In 1954 over 19,000 tons of baled alfalfa worth \$380,000 was sold locally and within the state. Alfalfa seed is an important product of alfalfa growers. In 1954 the Census showed 28 growers with a total of 446,900 pounds of seed, which was the second highest seed output in the state.

Clover and timothy hay mixtures are minor secondary forage crops. This type of hay has been increased in recent years. Clover seed was produced on five farms, and 10,000 pounds were sold during 1954.

Grain hay and silage from small grains and field corn are harvested in large amounts for local livestock feed. Grain hay grown on over 700 acres was put up by 50 farms during 1954. Silage cutting, a recently adopted practice, utilized 140 acres of alfalfa, grasses and small grains. Corn silage was more important than grass silage and 700 acres of field corn was harvested as silage during 1954.

Table 23.- Clover-Timothy Hay and Alfalfa Hay
Acreage, Yield and Production
Benton 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	40	2.5	100	11,600	3.5	40,600
1940	30	1.7	50	11,000	4.3	47,200
1941	30	3.0	90	11,000	4.1	45,100
1942	30	2.7	80	10,100	4.1	41,400
1943	20	2.5	50	10,300	3.9	40,200
1944	20	1.5	30	8,900	3.4	30,000
1945	20	2.0	40	7,500	3.5	26,400
1946	20	2.0	40	8,000	3.5	28,000
1947	20	2.0	40	8,200	3.5	29,000
1948	30	2.3	70	7,600	3.8	28,700
1949	30	1.0	30	8,900	3.7	33,000
1950	40	1.8	70	10,300	2.8	28,800
1951	80	1.2	100	10,900	2.6	28,700
1952	100	1.6	160	10,500	2.3	24,300
1953	110	1.0	110	12,100	3.9	47,000
1954	120	2.5	300	10,300	3.8	39,400
1955	130	2.2	280	10,500	4.1	43,000

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

Tree Fruits and Grapes

Benton County is one of the leading tree fruit and vineyard areas of Washington. Over 540 farms had commercial orchards and vineyards in 1954. In the Prosser and Benton City districts and the Kennewick district recently irrigated lands have been planted to apricot, peach, cherry and prune orchards and grape vineyards. Peaches are the major tree fruit and Benton County was second in the state with over 69,500 bearing trees in 1954. Elberta is the leading variety and Hales are second. Apricot trees are fourth in the state with over 44,000 bearing trees. Moorpark is the main apricot variety. Prunes and plums have been planted in large numbers since 1948. By 1954 there were over 71,000 bearing prune and plum trees. Benton County orchardists reduced apple, pear

and cherry trees in favor of larger plantings of peaches, apricots and prunes. An increased market outlet to fruit canners in the Yakima Valley has encouraged expansion of orchards.

Grapes, mainly of the Concord variety, have been planted in large numbers in recent years. The Lower Yakima Valley has become a major juice-grape producing area of the Northwest. Processing plants at Sunnyside, Grandview, Kennewick and Prosser have stimulated vineyard plantings. Since 1939, bearing grape vines have gone up from 167,000 to 1,399,000 vines in Benton County. In 1954 Benton County had 300 farms with vineyards of commercial size. They produced over 16,975,000 pounds which was second to Yakima County's output of fresh market and juice processor grapes.

Table 24.- Grapevines of Bearing Age, Grapes Harvested
Benton County, 1939-1954

Year	Vines of Bearing Age	Grapes Harvested (lbs.)
1939	167,378	2,585,829
1944	NA	9,718,450
1949	1,261,055	12,178,221
1954	1,399,425	16,975,668

NA - not available

Source: U.S. Census, Agriculture

Table 25.- Bearing Fruit Trees
Benton County, 1910-1954

Year	Numbers of Bearing Trees					
	Apples	Apricots	Cherries	Peaches	Pears	Prunes & Plums
1910	18,649	1,709	3,918	22,331	5,167	2,050
1920	395,139	1,421	17,594	75,101	68,786	10,634
1930	260,664	11,040	21,627	28,820	45,855	24,287
1940	28,051	17,385	50,777	48,528	13,571	16,530
1950	5,843	35,491	47,677	59,483	2,923	48,431
1954 ^{1/}	5,748	44,247	34,511	69,508	2,083	71,007

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

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

Commercial Vegetables

Since the completion of the Roza Division irrigation system in the lower Yakima Valley, Benton County has become one of the state's leading producers of vegetables for fresh market and for processors. A large variety of truck crops are grown under irrigation in the Prosser and Kennewick districts. In 1954

there were 273 farms growing commercial vegetables including melons. Truck crop acreage in 1954 was about 2,135, tenth highest acreage in the state. Over a dozen vegetable specialties are grown. Asparagus, green peas and sweet corn are major fresh market and processor crops.

Acreages of these crops have varied according to yearly contracts with processors. Asparagus has been over 1,200 acres and has been as high as 2,990 acres since 1940. Green peas, a more recent specialty, has ranged from 45 to 2,000 acres per crop year. Sweet corn has increased recently to over 500 acres per year. A variety of smaller crops mainly for fresh markets include rutabagas, turnips, carrots, lettuce, onions, lima beans, tomatoes, cantaloups and watermelons.

Table 26.- Vegetable Crops: Asparagus, Potatoes and Green Peas
Benton County, 1940-1956

Year	Asparagus		Potatoes		Green Peas	
	Acres	Prod. (tons)	Acres	Prod. (tons)	Acres	Prod. (tons)
1940	2,150	3,970	--	--	11 1/2	--
1941	2,600	4,935	2,000	11,000	NA	--
1942	3,000	5,515	1,600	8,000	NA	--
1943	2,990	6,675	2,200	15,000	NA	--
1944	2,900	5,800	1,500	9,000	NA	--
1945	2,975	5,300	1,140	8,000	8 1/2	--
1946	2,990	5,700	3,500	23,000	NA	--
1947	2,849	4,900	3,500	38,000	NA	--
1948	2,725	6,215	5,100	66,300	45	85
1949	2,900	5,220	5,000	62,000	65	145
1950	2,350	3,600	7,500	94,000	40	100
1951	2,100	1,925	7,100	97,000	1,200	1,400
1952	1,700	2,400	6,000	76,000	1,500	1,600
1953	1,600	2,000	5,100	68,000	2,000	2,100
1954	1,425	1,725	5,300	73,500	1,000	1,200
1955	1,400	1,600	3,800	54,000	1,400	1,500
1956	1,200	1,750	2,600	34,375	1,200	1,600

1/ U.S. Census of Agriculture. NA -- not available.

Sources: U.S.D.A., AMS, Agric. Estimates Divn.
State of Washington
Wash. State Dept. of Agriculture,
Horticulture Division

Potatoes

In recent years Benton County has ranked third behind Grant and Yakima Counties in commercial potato production. About 150 farms grew potatoes in 1954. Since reaching a peak production of 97,000 tons from 7,100 acres in 1951, the crop was decreased to 2,600 acres yielding 34,375 tons. One factor in decreased potato production has been increased competition from newer irrigated croplands in the Columbia Basin in Grant, Adams and Franklin Counties.

Table 27.- Vegetable Crops: Carrots, Lettuce, Sweet Corn,
Rutabagas and Turnips
Benton County, 1948-1956

Year	Carrots		Lettuce		Sweet Corn		Rutabagas & Turnips	
	Acres	Prod. (tons)	Acres	Prod. (tons)	Acres	Prod. (tons)	Acres	Prod. (tons)
1948	90	1,300	20	85	---	---	75	1,150
1949	40	500	---	---	---	---	40	500
1950	50	675	---	---	---	---	50	600
1951	20	315	---	---	---	---	40	525
1952	30	400	---	---	20	75	---	---
1953	25	375	---	---	15	45	---	---
1954	20	400	25	250	450	2,000	45	275
1955	25	600	25	250	140	600	40	250
1956	20	400	10	250	525	2,200	---	---

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

Table 28.- Vegetable Crops: Cantaloups, Tomatoes and Watermelons
Benton County, 1948-1956

Year	Cantaloups		Tomatoes		Watermelons	
	Acres	Prod. (tons)	Acres	Prod. (tons)	Acres	Prod. (tons)
1948	20	150	50	250	60	750
1949	25	200	40	100	30	350
1950	25	175	20	160	25	200
1951	30	185	10	95	25	200
1952	25	110	10	100	30	250
1953						
1954	15	90	10	85	25	150
1955	10	50	5	20	20	100
1956	5	25	5	20	10	100

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

Mint

Peppermint and spearmint grown in irrigated fields to produce mint oil is one of the newer commercial specialty crops. Mint farming was introduced into the Prosser district during the late 1930's. In 1954 there were 102 mint growers who had about 2,000 acres yielding 185,000 pounds of distilled mint oil. Benton has become the state's second mint growing county and its mint oil production was worth over \$800,000 in 1956. Mint oil was at a peak of 242,000 pounds from 2,900 acres in 1952. Growers are located mainly in the Prosser and Benton City areas.

Table 29.- Mint: Acreage and Production
Benton County, 1939-1956

Year	Acres Harvested	Mint Oil Produced (pounds)
1939 1/	186	7,375
1949 1/	1,061	66,500
1950	Unavailable	Unavailable
1951 2/	2,400	185,000
1952	2,900	242,000
1953	2,100	189,000
1954	2,000	185,000
1955	2,100	190,000
1956	2,200	200,000
1957 3/	2,111	192,000

1/ U.S. Censuses of Agriculture, 1939, 1949.

2/ Data for 1952-1957 from U.S.D.A., Agric. Est. Divn. and Wash. State Dept. of Agric., Divn. of Horticulture.

3/ Preliminary.

Hops

Benton County is the second-leading-hop growing area of the state. Hops were adopted as an irrigated crop on a few farms in the late 1930's in the Roza Division irrigated district near Prosser. Hop yards and production increased rapidly during the 1940's. By 1954 there were over 10 growers with a total of 695 acres in hops. The harvest of 1,153,248 pounds in 1954 made up over 5 percent of the state total for that year.

Table 30.- Hops: Acreage and Harvested Production
Benton County, 1939-1954

Year	Acres	Hops Harvested (pounds)
1939	23	19,949
1944	656	755,280
1949	660	781,474
1954	695	1,153,248

Source: U.S. Census, Agriculture

Sugar Beets

Sugar beet acreage has increased in Benton County since 1939. Before 1950 acreage was generally low. Since 1948, acreages have varied in accordance with yearly contracts between growers and processors and quotas allowed growers under the Federal Sugar Act of 1948. With a new beet sugar mill at Moses Lake and an increased quota for beets in east central Washington, Benton County growers have been authorized larger acreages. Over 2,000 acres per year have been harvested since 1953. Since the beginning of the Sugar Act marketing

regulations, Benton County acreage went up from 50 in 1948 to 4,400 in 1956. The 1954 Census showed that there were 65 sugar beet growers in Benton County.

Table 31.- Sugar Beet Acreage Harvested
Benton County, 1948-1956

Year	Acreage Harvested Under Sugar Beet Quota
1949	59
1950	546
1951	702
1952	1,490
1953	2,069
1954	2,450
1955	4,100
1956	4,400

Source: U.S. Census, Agriculture