DEVELOPMENT OF A HISTORIC CONTEXT FOR THE AGRICULTURE THEME IN MANAGEMENT REGION #2: 1893-1930

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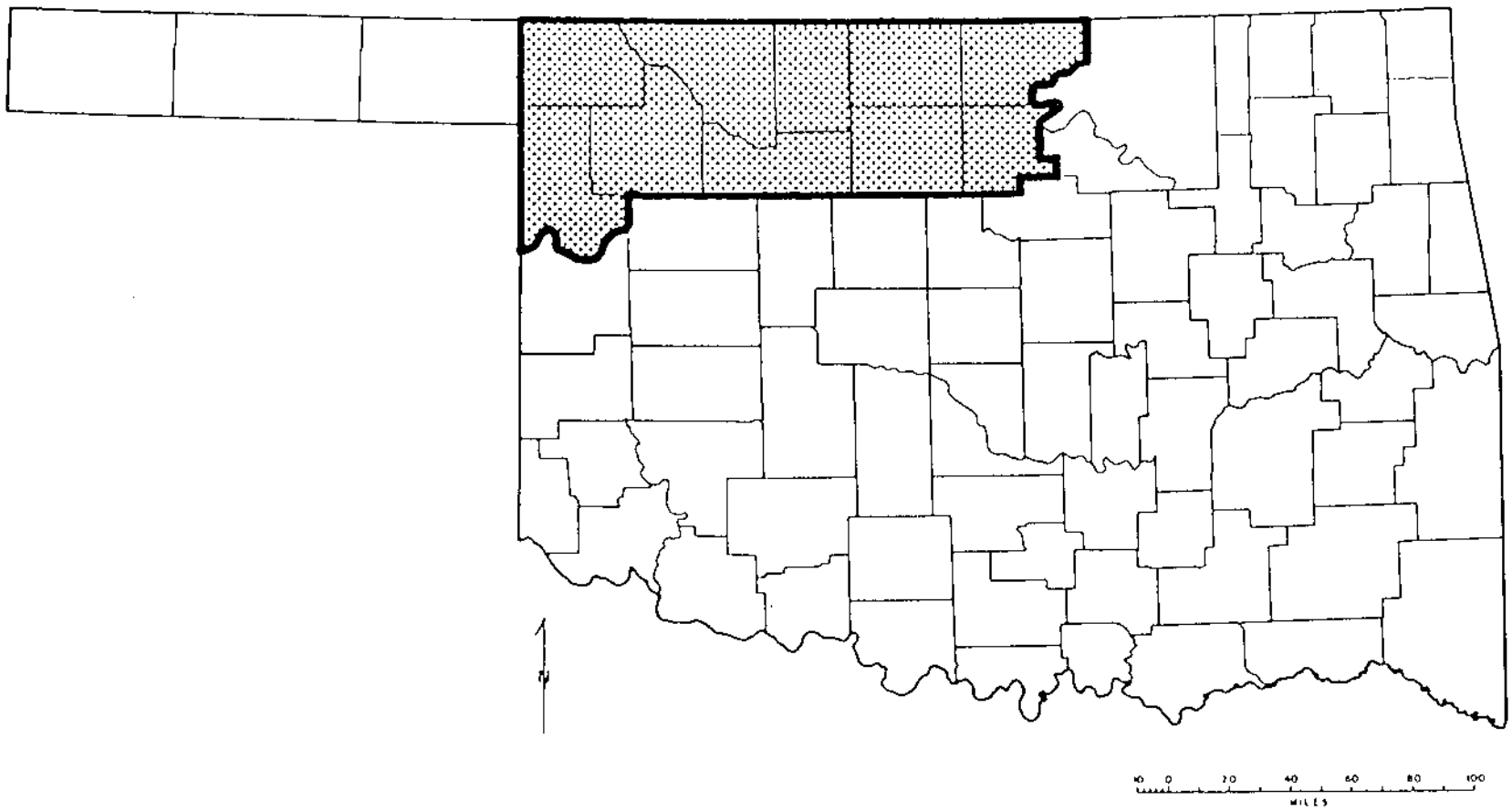
Regional Overview

Management Region #2

Management Region #2 consists of ten counties in northwest Oklahoma (See Map 1). All but the southern portion of Ellis County were in the Cherokee Outlet established on December 29, 1835 in an agreement between commissioners of the United States and leaders who spoke on behalf of the Eastern Cherokees. The Treaty of New Echota, named so because it was signed at New Echota, Georgia, provided in Article 2 an assurance to the Cherokee Nation of a "perpetual outlet west" to be known as the Cherokee Outlet, an area of some seven million acres. In addition, Articles 15 and 16 specified that friendly tribes were to be settled on surplus Cherokee lands. The Kaw (also called Kansa or Kansas), Ponca, Tonkawa, and Oto-Missouri were settled in the extreme eastern end of Managment Region #2 near the 97th meridian and Arkansas River.

Several cattle trails ran through Management Region 2 in the mid-nineteenth century on their way from Texas to the railroad terminals in Kansas. The West Shawnee Trail ran from Colbert's Ferry on the Texas-Indian Territory border, north to near present-day Shawnee, crossed the Cimarron near the present site of Cushing, and continued to the Kansas border, passing near the site of Ponca City, located in Region 2. Eighty miles of Colbert's Ferry, the Chisholm Trail crossed the Red River, and extended north to the Kansas line. Roughly paralleling the 98th meridian, this famous route passed through the Enid Stage Stand, also in Region 2. The Great Western Trail, crossed the Red River near Doan's Store, and ran almost due north to Cedar Springs, then northwest to the crossing of Beaver Creek and to the Kansas border just north of the Sherman Ranch; the latter three sites in Region 2. The Great Western was relatively free of timber, and the Indians were willing to exchange pasture for beeves.

Agricultural Theme in Management Region # 2



MAP 1

The almost 7,000,000 acres of unoccupied Cherokee land was partially used by the Cherokee Strip Live Stock Association, organized by a group of cattlemen during the years 1880 to 1883. Its principal purpose was to obtain from the Cherokees a lease that would exclude nonmembers from grazing cattle on the Cherokee Outlet. In 1883 the organization succeeded in obtaining a five-year lease at the price of $100,000 a year--less than 2¢ an acre. The lease of 1883 was renegotiated at a more reasonable price of $200,000 per year for the entire unoccupied area. However, the legal right of the Cherokees to lease their western lands was flatly denied by two Attorney Generals of the United States in President Grover Cleveland's cabinet and Benjamin Harrison's administration. In the meantime, the Cherokee Strip Live Stock Association, numbering more than 100 members, obtained definite grazing lands within the area leased. The holdings were surveyed, and each member had fenced his ground, built corrals, and built shelters for line-riders. It is estimated that more than 22,000 cattle occupied for a brief time the Cherokee Outlet during the early 1880s.

Pressure for opening of unoccupied land to white settlement grew steadily from the end of the Civil War until the first run in 1889. The fourth land run was the opening of the Cherokee Outlet on September 16, 1893. Approximately 100,000 persons made this run. The year 1893 was thus selected as the beginning point for the chronological period for the agricultural theme in Region 2.

In 1904 and 1906 the lands of the Ponca, Kay, and Oto-Missouri tribes were distributed among the tribal citizens. These reservations, which occupied the eastern part of Region 2, were not opened to white settlement.

The United States Congress gave the territory west of the Five Civilized Tribes a formal government by means of the Organic Act of May 2, 1890 to be known as Oklahoma Territory. After the opening of the Cherokee Outlet in 1893, six of the ten counties of Region 2 were established and were designated as Counties M, N, L, K, O, and P until names could be officially adopted. These counties were named by 1900 -- N (Woodward), M (Woods), L (Grant), K (Kay), O (Garfield), and P (Noble). By statehood in 1907, Woodward County was carved into two separate counties (Woodward and Harper) and parts of two others (western Woods and northern Ellis); Woods County was divided into two counties (Alfalfa and Major) and the eastern half of Woods was added to western half to make a new Woods County. The southern part of Ellis County was taken from northern Day County. Kay County was extended to Osage County to the east and took in all the Kaw tribal lands and added the north half of the Ponca reservation. The southern half of the Ponca reservation and all the Oto-Missouri reservation was added to Noble County. Grant and Garfield retained the same county boundaries of 1900 forming the ten counties of Region 2.

MANAGEMENT REGION 2

Table I

County	County Seat	Population of County Seat
Alfalfa	Cherokee	2,105
Kay	Newkirk	2,413
Grant	Medford	1,419
Noble	Perry	5,796
Garfield	Enid	50,363
Major	Fairview	3,370
Woods	Alva	6,416
Woodward	Woodward	13,610
Ellis	Arnett	711
Harper	Buffalo	1,381

Source: 1980 Census of Population

MANAGEMENT REGION 2

Table II

County	Land Area Sq. Miles	Population					
		Total	Per Sq. Mi.	% 65 & Over	Urban %	Black	Foreign Stock %
Alfalfa	864	7,077	8.2	23.7	-	.6	.6
Kay	921	49,852	54.1	16.2	76.6	1.9	1.3
Grant	1,004	6,518	6.5	22.8	-	-	.4
Noble	736	11,573	15.7	16.6	50.1	2.0	.6
Garfield	1,060	62,820	59.3	13.1	80.5	3.2	1.5
Major	958	8,772	9.2	16.7	38.4	-	.7
Woods	1,291	10,923	8.5	20.4	58.7	.5	2.4
Woodward	1,242	21,172	17.0	11.1	64.3	.2	1.1
Ellis	1,232	5,596	4.5	18.7	-	-	.9
Harper	1,039	4,715	4.5	18.3	-	.1	.7

County	Per Capita Income ($)	Median Family Income ($)
Alfalfa	7,175	17,537
Kay	7,333	18,862
Grant	7,092	16,965
Noble	6,476	17,212
Garfield	7,744	19,692
Major	7,120	17,200
Woods	7,441	17,532
Woodward	7,601	20,715
Ellis	6,817	16,591
Harper	7,646	20,045

Source: 1980 Census of Population

MANAGEMENT REGION 2

Table III

County	Housing, 1980		
	Total Units	Owner Occupied	% Units built between 1970-80
Alfalfa	3,254	2,312	15.9
Kay	21,266	14,473	18.0
Grant	2,982	2,100	16.5
Noble	4,870	3,308	27.3
Garfield	25,582	17,468	26.3
Major	3,567	2,622	30.4
Woods	4,922	3,227	15.3
Woodward	8,167	5,588	36.5
Ellis	2,465	1,758	22.0
Harper	2,138	1,559	18.0

Source: 1980 Census of Housing

County	Manufacturers, 1982				
	Total Establishments	20 or more Employees	New Capital Expenditures ($ mil.)	No. of Employees (1,000)	Value Added by Manufacture ($ mil.)
Alfalfa	7	-	.1	(Z)	.7
Kay	88	33	34.1	8.8	264.4
Grant	8	1	.1	.1	1.7
Noble	7	2	(D)	(D)	(D)
Garfield	71	17	13.0	2.3	142.0
Major	10	3	.2	.2	6.6
Woods	12	-	.3	.1	1.8
Woodward	23	4	.7	.4	19.3
Ellis	6	-	(Z)	(Z)	.4
Harper	2	-	(D)	(D)	(D)

Source: 1982 Census of Manufactures

(D) Withheld to avoid disclosure.
(Z) Less than half the unit shown.

MANAGEMENT REGION 2

Table IV

County	Wholesale Trade, 1982 Establishments	Total Sales ($1,000)
Alfalfa	18	46,422
Kay	99	343,048
Grant	26	61,040
Noble	20	48,373
Garfield	179	1,215,777
Major	25	58,229
Woods	26	40,128
Woodward	81	237,566
Ellis	10	19,469
Harper	8	10,704

Source: 1982 Census of Wholesale Trade

County	Retail Trade, 1982 Establishments	Top Three Retail Types: No. of Apparel and Accessory Stores	No. of Eating/Drinking Places	No. of Food Stores
Alfalfa	78	2	8	14
Kay	539	48	72	39
Grant	73	2	9	9
Noble	132	4	17	11
Garfield	682	60	105	62
Major	107	6	15	10
Woods	149	6	21	14
Woodward	267	25	40	14
Ellis	69	2	7	7
Harper	60	3	7	5

Source: 1982 Census of Retail Trade

MANAGEMENT REGION 2

Table V

Mineral Industries, 1977

County	No. of Mineral Industry Establishments	0-19 Employees	20-99 Employees	100-249 Employees	250+ Employees
Alfalfa	47	44	3	-	-
Kay	58	54	3	-	1
Grant	55	55	-	-	-
Noble	69	66	3	-	-
Garfield	143	125	18	-	-
Major	125	118	7	-	-
Woods	74	73	-	1	-
Woodward	126	113	12	1	-
Ellis	74	72	2	-	-
Harper	75	73	2	-	-

County	Oil and Gas Extraction	Non-Metallic Minerals Mining	Metal Mining
Alfalfa	46	1	-
Kay	58	-	-
Grant	55	-	-
Noble	69	-	-
Garfield	142	1	-
Major	124	1	-
Woods	74	-	-
Woodward	125	1	-
Ellis	74	-	-
Harper	75	-	-

Source: 1977 Census of Mineral Industries

MANAGEMENT REGION 2

Table VI

Mineral Industries, 1982

County	No. of Mineral Establishments	With 20 Employees or more	No. of Employees (1,000)	Value Added by Mining ($ mil.)
Alfalfa	83	3	.3	50.9
Kay	98	5	4.2	100.5
Grant	110	6	.5	218.6
Noble	119	5	.4	99.9
Garfield	269	41	3.0	398.5
Major	188	13	1.3	327.7
Woods	115	3	.3	97.0
Woodward	206	28	2.1	268.1
Ellis	139	7	.6	105.7
Harper	107	3	.4	106.1

Source: 1982 Census of Mineral Industries

MANAGEMENT REGION 2

Table VII

Agriculture, 1982

County	No. of Farms	Land in Farms (Acres)	Average Size of Farms (Acres)	Market Value of all Farm Products Sold ($1,000)
Alfalfa	859	515,387	600	75,975
Kay	1,025	501,344	489	50,357
Grant	903	569,695	631	60,811
Noble	751	399,524	532	32,522
Garfield	1,261	659,095	523	66,507
Major	869	495,056	570	33,003
Woods	819	735,500	898	47,063
Woodward	733	714,512	975	30,866
Ellis	612	661,929	1,082	22,841
Harper	529	598,517	1,131	51,931

Source: 1982 Census of Agriculture

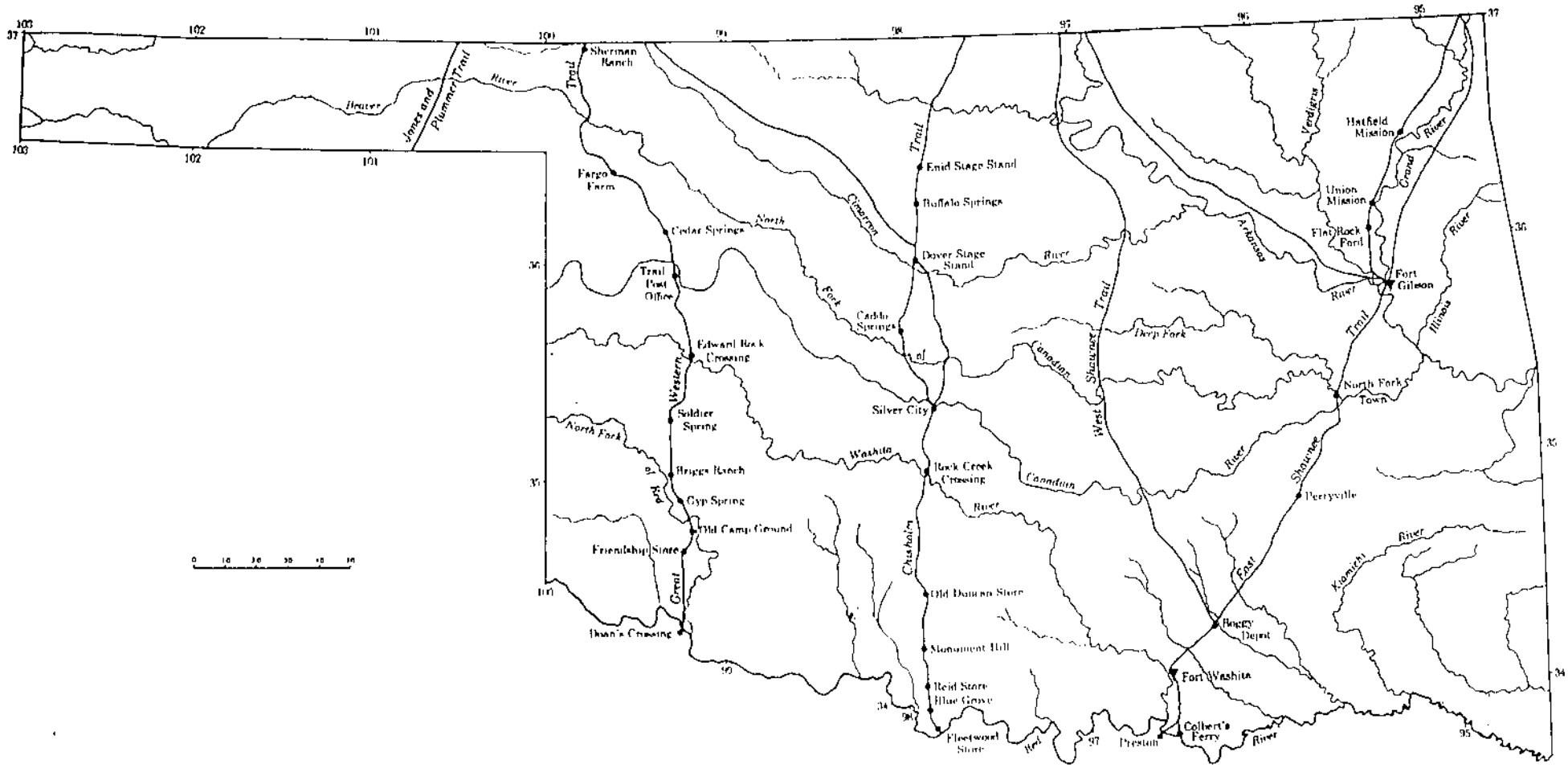
Historical Narrative

Management Region #2

Agricultural history in Management Region 2 began in the late nineteenth century with the cattle drives to Kansas railheads. One of the most famous of these trails ran in a north-south direction through Region 2. The Chisholm Trail roughly paralleled the 98th meridian and the line later followed by the Rock Island railroad and U.S. Highway 81. Two stops were located in Region 2: Buffalo Springs and Enid Stage Stand, both in what is today Garfield County. This great artery of the northern cattle drives from Texas was named for Jesse Chisholm, a trader who hauled provisions south from Caldwell, Kansas to supply crews on the drives.(1) (See Map 2)

A series of new treaties agreed upon in Washington, D.C. in 1866 with each of the Five Civilized Tribes likewise created activity in Region 2, especially the one concluded with the Cherokees. Their treaty provided that friendly Indian tribes might be settled on the Cherokee Outlet at a price agreed upon by the Cherokees and the purchasers. The Cherokee Strip and the Neutral Lands were to be sold to the highest bidder for the benefit of the Cherokees, at an average price not lower than $1.25 per acre. The Cherokee Outlet, composed of more that 6,000,000 acres, was not occupied by any Indian groups.

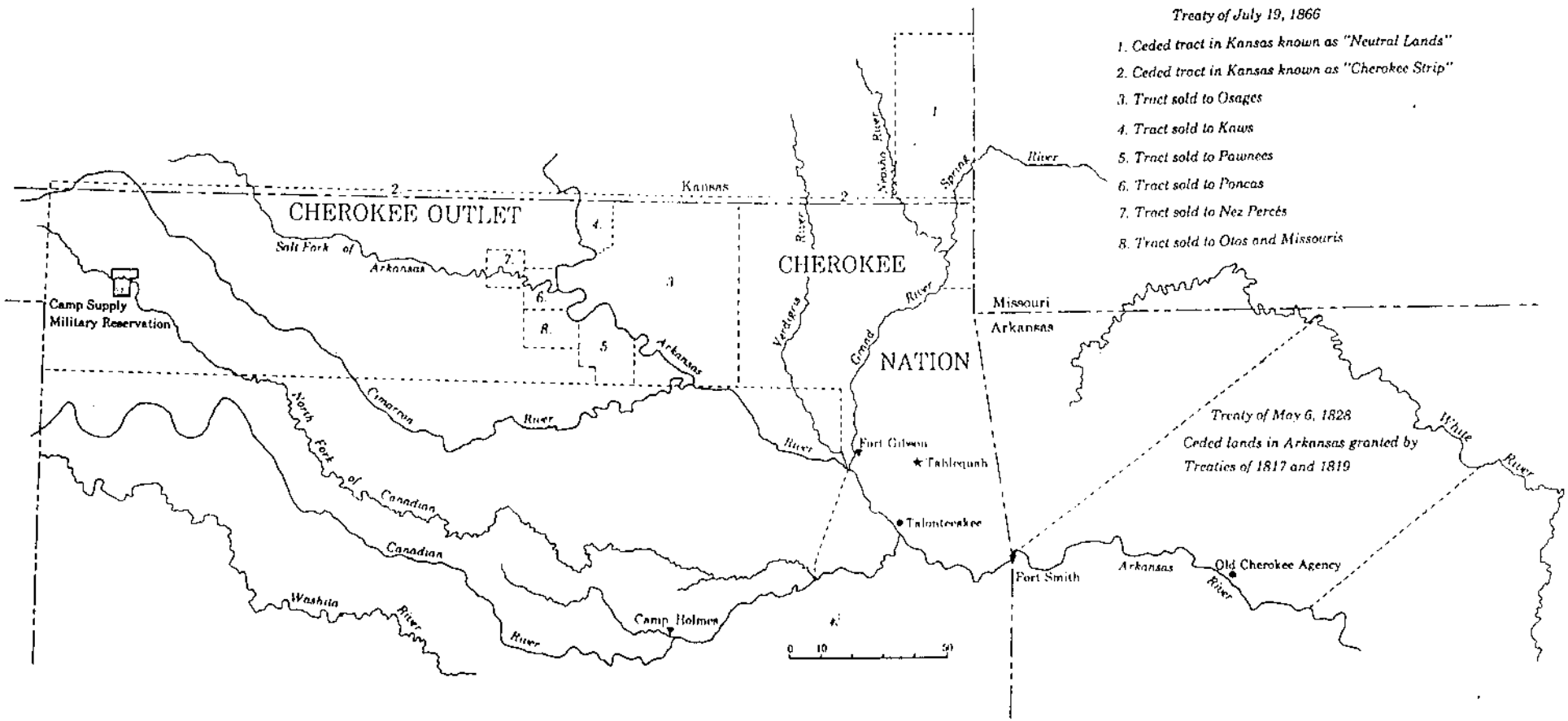
By the terms of Articles 15 and 16 of the Treaty of Washington, the Osage and Kaw tribes were settled in the portion of the Cherokee Outlet lying between the Arkansas River and the 96th meridian. Other tribes settled on Cherokee lands were the Pawnee, Ponca, Nez Perce, and the Oto-Missouri. In 1885 the Nez Perce moved back to their earlier home in Idaho, and their lands were occupied by a remnant of the Tonkawas from Texas (See Map 3).(2)



MAP 2

CATTLE TRAILS

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MAP 3

CHEROKEE LANDS IN THE WEST

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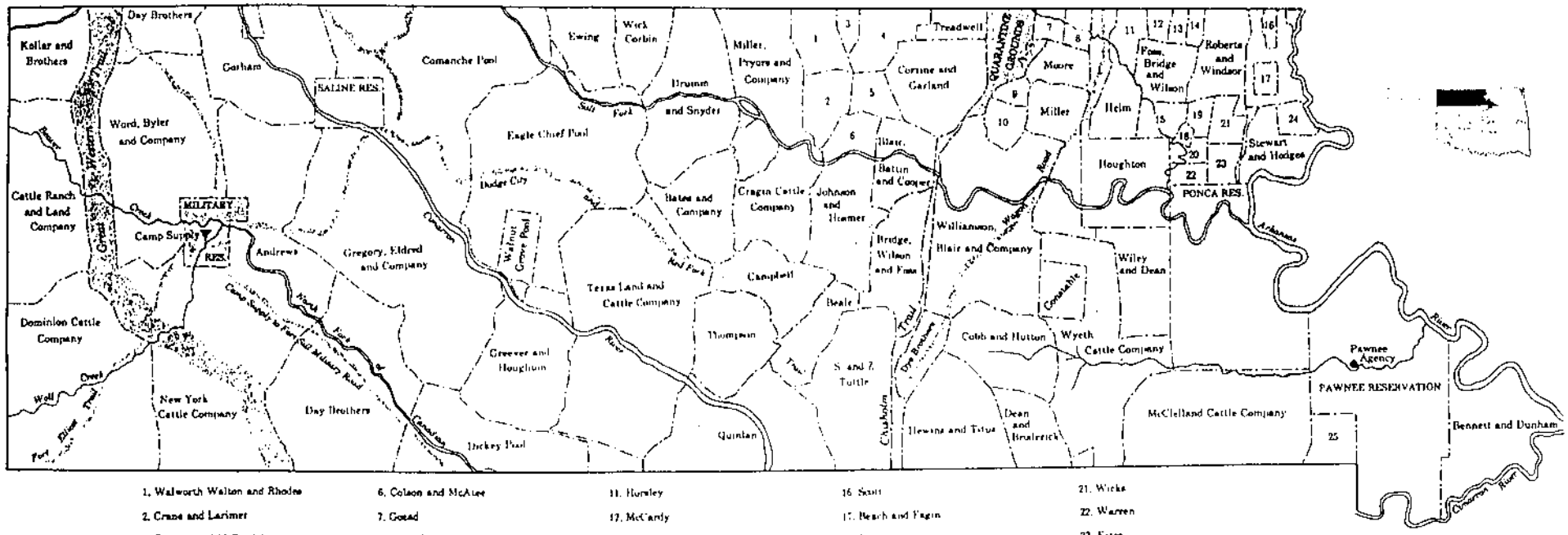
These tribes, which purchased lands in the eastern part of Region 2, were primarily agriculturists and, therefore, played a role in the early development of agricultural history in Region 2. During these early days, members of the tribes were engaged principally in raising livestock, with small farming operations. The Ponca were identified with cattle-ranching interests and leased large pastures on their reservation for grazing purposes. Fully two-thirds of the Pawnee lands was rough country--rocky hills, ravines, and scrub timber. Poor crops and epidemics caused a great decline in their population in the 1890s. During the 1880s, leasing of Kaw reservation lands to outside cattlemen for grazing purposes began. Surplus lands--those acres not cultivated or otherwise used by members of the tribe--were divided into fourteen pastures of from 500 to 10,500 acres each and leased annually to cattlemen by the tribal council, the income being credited to the tribe.(3)

After the Plains Indians had moved to reservations on the Cherokee Outlet, there still remained 6,344,562 acres of unoccupied Cherokee land west of the 96th meridian. This vast acreage was partially used by the Cherokee Strip Livestock Association, organized by a group of cattlemen during the years 1880 to 1883. Its principal purpose was to obtain from the Cherokees a lease that would exclude nonmembers of the Association from grazing cattle on the Cherokee Outlet. In 1883 the organization succeeded in obtaining a five-year lease at the price of $100,000 a year--less than 2 cents an acre. The lease of 1883 was renegotiated at a more reasonable price of $200,000 per year for the entire unoccupied area. However, the legal right of the Cherokees to lease their western lands was flatly denied by two Attorney Generals of the United States in President Grover Cleveland's cabinet and Benjamin Harrison's administration. In the meantime, the

Cherokee Strip Livestock Association, numbering more than 100 members, obtained definite grazing lands within the leased area. The holdings were surveyed, and each member had fenced his ground, built corrals, and constructed shelters for line-riders. It is estimated that more than 22,000 cattle occupied for a brief time the Cherokee Outlet during the early 1880s.(4) (See Map 4)

Despite these early agricultural activities, the bulk of Region 2 was not settled until the fourth land run which opened the Cherokee Outlet to white settlers on September 16, 1893. Approximately 100,000 persons made this run.(5) The year 1893 was thus selected as the beginning point for the chronological period for the agriculture theme in Region 2. Agriculture continued to grow and prosper in Region 2 until 1930 when the Great Depression began to take its toll on farmers in the area and the drought years of the 1930s, commonly called the "Dust Bowl" era, caused thousands of farmers to leave Region 2 for California. Therefore, 1930 is a logical break point for culmination of the chronological period for the context.

The United States Congress gave the territory west of the Five Civilized Tribes a formal government by means of the Organic Act of May 2, 1890 to be known as Oklahoma Territory. After the opening of the Cherokee Outlet in 1893, six of the ten counties of Region 2 were established and designated as Counties M, N, L, K, O, and P until names could be officially adopted. These counties were named by 1900--N (Woodward), M (Woods), L (Grant), K (Kay), O (Garfield), and P (Noble). By statehood in 1907, Woodward County was carved into two separate counties (Woodward and Harper) and parts of two others (western Woods and northern Ellis); Woods County was divided into two counties (Alfalfa and Major) and the western half of Woods was added to a portion of old Woodward County to form a new Woods County. The



1. Walworth Walton and Rhodes
2. Crane and Larimer
3. Casteen and McDaniel
4. Hammers, Forlen and Company
5. Camp Lynch
6. Colson and McAtee
7. Goad
8. Forsyth
9. Bowers
10. Maloley
11. Horsley
12. McCurdy
13. Crocker
14. Holt
15. Richmond
16. Scott
17. Beach and Fagin
18. Burrows
19. Thompson
20. Michigan Cattle Company
21. Wicks
22. Warren
23. Estes
24. Tomlin and Webb
25. Berry Brothers

MAP 4

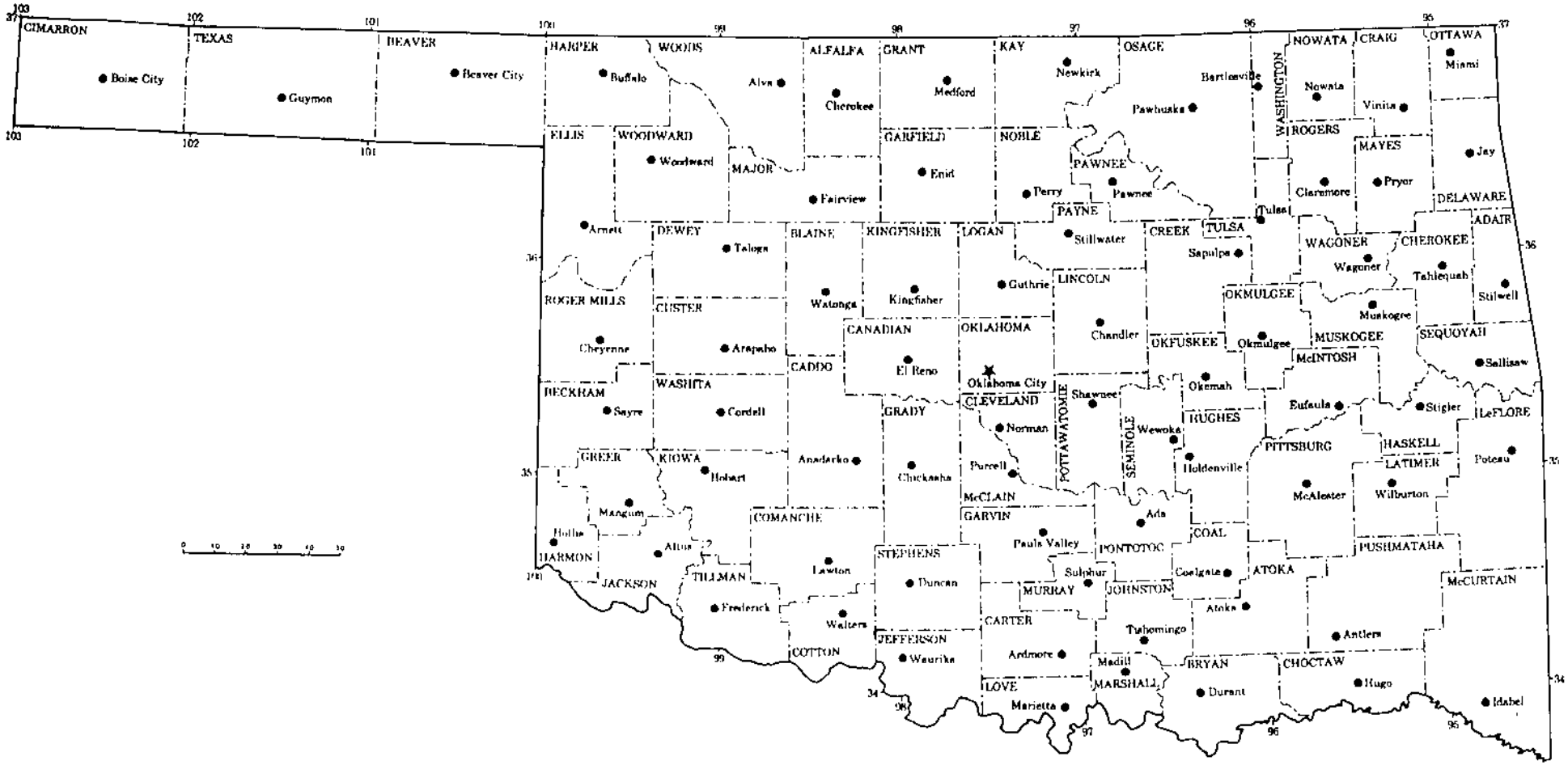
LEASES OF THE CHEROKEE OUTLET

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southern part of Ellis County was taken from northern Day County. Kay County was extended to Osage County to the east and absorbed all of the Kaw tribal lands and added the north half of the Ponca reservation. The southern half of the Ponca reservation and all of the Oto-Missouri reservation was added to Noble County. Grant and Garfield retained the same county boundaries of 1900 forming the ten counties of Region 2.(6) (See Map 5).

Within a few years after the Land Run of 1893, the agricultural frontier in Oklahoma Territory had essentially disappeared, and the adjustment of farm life to the challenges of the natural environment and the economy was under way. The new Oklahomans who migrated into Region 2 were primarily from the Midwest and upper Great Plains.(7) Regardless of their origin, they had to build some type of home, plant crops, and tend livestock on the 160-acre homestead. The first task, therefore, facing settlers in the new country was that of providing shelter for themselves and their families, and later, for their livestock and machinery. If wood was available, the settlers constructed cabins from timber. Single-pen, double-pen, saddlebag, and "dogtrot" style log cabins were most common. A variety of techniques were used in log preparation including dovetail, half-dovetail, and saddle notching of logs for corners of cabins. Small wooden "claim shanties" served as home for many settlers during their first year or two on their claims. These were constructed from board-and-batten milled lumber with wood shake roofs, and generally measured 12'X14'. Some dwellings were made of native stone, principally sandstone.

Settlers in Region 2 used locally available building materials from the natural environment and the sod house became the dominant house type. Homesteaders dug "bricks" of sod to form this type of



MAP 5

OKLAHOMA COUNTIES, 1980

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housing which generally measured 12'X14' to 16'X18'. The farm family soon discovered one disadvantage of these "soddies" after heavy rainfalls--they had to bail water from their dwellings. The "soddies" were warm in winter and cool in summer, but were ridden with spiders, bugs, and centipedes which crawled out of the sod. Another version of the sod house was the dugout. This type of shelter was made by digging into a hill or bank, then building up the front and side walls with sod. The roofs were made of poles covered with canvas and sod, or made from lumber, depending on the material the settler had available.(8)

The farm family made their crude houses as liveable as possible. They swept the earthen or puncheon (half-log) floors and covered them with rag rugs fashioned from odds and ends of old clothing. The windows were covered with gunny sacks or cheap print material. The furnishings of the home were usually a rough table and chairs, some cheap bedsteads, tin or earthenware kitchen utensils and dishes, a pail, a washstand and basin, and a cook stove.

With homes established, the settlers' thoughts turned to water and food. Initially water was hauled from creeks, rivers, or springs. Transported in barrels, creek water was adequate at first, but muddy runoff, disease, and seasonally low flow made this source unstable and dangerous. If good water could not be obtained, the farmer built a cistern and hoped for rain. If affordable, most early pioneers of Region 2 dug water wells as soon as possible. Fortunate farmers found water at 20 to 40 feet, while others either hit dry holes or found only "gyp water", which was too heavily saturated with minerals for human consumption.(9)

While water could be found in the new land, food was difficult to obtain. Settlers had to have sufficient provisions for at least one

year. These provisions came in the form of a milk cow, a hog or two, and some chickens or turkeys. From these livestock, the farmer had milk, butter, eggs, lard, and some fresh meat. The farm garden supplemented these food items with potatoes, melons, tomatoes, turnips, cabbage, and corn. The family diet was occasionally changed when the family was able to hunt wild game, fish, and gather wild fruit and nuts.

A combination of tough prairie grasses with deep root systems and substandard plows caused many farmers in Region 2 to take more than two years to clear the land. The two-horse walking plow was the implement most widely used in the area. The sod was turned to a depth of about four inches, and row crops such as corn, kaffir, and sorghums were planted. A settler could break about three acres of ground per day if he worked hard.

Many settlers survived the first year of two by leaving their farms to work elsewhere. The Federal government allowed homesteaders to vacate their claims for up to six months, during which time they could try to find jobs and earn enough money to remain on their farms the other six months. Some men joined railroad construction crews; others toiled for more prosperous farmers who could pay hired hands. Even if such jobs paid only one dollar a day, it helped buy flour, salt, coffee, and other staples.

By 1894 most farmers had cleared sufficient land to plant wheat, the most profitable cash crop. However, hard times persisted through the 1890s because of drought, low market prices, and economic recession. During this period the Santa Fe and Rock Island Railroad Companies provided seed to many Region 2 farmers on a loan basis. During 1895-1896 period the drought was broken, and by the end of the decade, wheat yields were increasing and the price rose to 76 cents a

bushel. The farmers were thus able to repay the railroad companies for the borrowed wheat seed.(10)

Wheat, the major cash crop of Region 2, benefitted from scientific research of the Oklahoma Agricultural Experiment Station in Stillwater. The development of hard Russian wheats--Turkey Red, Kharkof, and Kanred--varieties that would not "freeze out" in severe winters encouraged the farmers in Region 2, especially those in Alfalfa, Grant, Garfield, and Woods counties, to cultivate more of the crop.(11)

The outbreak of World War I caused a surge in price of wheat from 76 cents to $4.10 a bushel from 1913 to 1919. Acreage in Region 2 increased from 697,000 in 1910 to 1,858,000 in 1920. Production rose from 8.5 million bushels in 1910 to 24.6 million in 1920.(12) (See Tables II and III).

Wheat, a "cover" crop in that it completely covers the ground and is not cultivated after it is sown, was originally sown by hand or broadcasting seeders, operated by hand. By 1900, horse drawn mechanical seeders or "drills" were prevalent in Region 2. Earliest harvest was by hand with a scythe, but grain binders were soon common to cut the ripe wheat and oats, another popular crop in Region 2, for binding into bundles. These were placed in "shocks" for further drying of the grain and later threshed to separate grain from straw and chaff. In the early 1890's wheat and oats were threshed with a horse-powered separator. Such machines required 16 horses which traveled around and around in a circle to run the separator mechanism. By the mid-1890's steam engines were used to power the threshing machines. These were not self-propelled, however, and had to be pulled from location to location by horses. By 1900 self-propelled steam engines for threshers came into use. Pull combines were

introduced into Region 2 by 1915. There was no motor on these early models, the forward motion of the machine operating the combine. These first combines were pulled by teams of horses. By 1920 combines with motors to run the threshing mechanism were in use in Region 2. The self propelled combine was not developed until the 1930's.(13)

Plowing the wheat fields for planting also required new forms of mechanization. By 1894 slow-moving steam engines replaced teams of horses, mules, or oxen. One-and-two bottom plows were the most common. Gasoline powered tractors came into general use in Region 2 ca. 1915.

The tractor was an important piece of farm machinery in the wheat counties of Region 2. The tractor pulled all sorts of equipment including plows, discs, drills, and combines. Companies such as the Avery Company held free maintenance schools to help farmers keep their tractors in good operating condition. The number of tractors on Oklahoma farms rose from 5,789 in 1920 to 10,039 in 1925.(14)

Grain inspection was an early part of the wheat culture of Region 2. Prior to statehood, a Territorial grain inspector was created by the Territorial legislature. This office was responsible for the inspection and grading of wheat at all elevators and shipping points, which gave Oklahoma wheat a better standing on world markets and was of benefit to both wheat raisers and grain buyers alike.

Grain elevators in Region 2 established during the Territorial Period included: (15)

Town	No. of Elevators	Aggregate Capacity
Newkirk (Kay)	4	72,000 Bushels
Ponca City (Kay)	4	110,000 Bushels
Redrock (Noble)	1	12,000 Bushels
Perry (Noble)	4	125,000 Bushels
Waukomis (Garfield)	4	60,000 Bushels
Enid (Garfield)	4	80,000 Bushels
North Enid (Garfield)	2	30,000 Bushels
Kremlin (Garfield)	1	15,000 Bushels
Pond Creek (Grant)	1	20,000 Bushels
Jefferson (Grant)	1	20,000 Bushels
Medford (Grant)	2	35,000 Bushels
Nardin (Kay)	1	15,000 Bushels
Blackwell	2	35,000 Bushels
Totals	31	629,000 Bushels

Flour mills were also established during the Territorial Era in Region 2. These mills were usually operated by an 80 h.p. engine and were kept going day and night every day except Sunday. Daily capacities ranged from 50 to 300 barrels. The mills provided markets for Region 2 wheat and also ground corn into meal.

There were in operation in Region 2 in the 1890s eleven flour mills with an aggregate daily capacity of more than 1800 barrels of flour: (16)

Operator	Location	Capacity Per Day
Perry Milling Co.	Perry (Noble)	250 Barrels
Newkirk Milling Co.	Newkirk (Kay)	200 Barrels
B. Walkentine	Blackwell (Kay)	300 Barrels
Alva Milling Co.	Alva (Woods)	50 Barrels
Farmer's Mill & Elevator	Enid (Garfield)	80 Barrels
Enid Mill & Elevator	Enid (Garfield)	300 Barrels
Garfield Milling Co.	Enid (Garfield)	100 Barrels
Pond Creek Mill & Elevator	Pond Creek (Grant)	125 Barrels
Medford Mill & Elevator	Medford (Grant)	150 Barrels
Cross Brothers	Lamont (Grant)	50 Barrels
Ponca Mill & Elevator	Ponca City (Kay)	200 Barrels

As Region 2 farmers produced more wheat, they faced several problems including lower prices, the need for more elevators to store

grain, reduced manpower resulting in increased mechanization, and the need for cooperative marketing. Prices fluctuated during the 1920s. The 1920 price was $1.42 a bushel which dropped to 85 cents a year later. Moving upward the price reached $1.61 in 1926, then dropped again. The farmers of Region 2 responded with co-op elevators and a central marketing agency, the Oklahoma Wheat Grower's Association, organized in 1921. With a membership of 3,000, this agency controlled nearly one-fourth of Oklahoma's wheat crop in the 1920s.(17)

Circumstances dictated the trend toward large wheat farms of more than 320 acres run by little manpower and sophisticated machinery. But the drought and depression of the 1930's finished the small wheat farmer and severely hurt the larger wheat farmers of Region 2.

Prior to the emergence of wheat as the main cash crop in Region 2, broomcorn was considered a better money crop. At the railroad it took 168 bushels of 25 cent wheat to equal in value one ton of $70 broomcorn, and the wheat weighed over eight tons. A single broomcorn crop frequently sold at harvest time for more than the purchase price of the land that produced it.(18)

Broomcorn defied mechanization. The process of harvesting was as follows:

> The brush (head) was pulled from the stalk and placed in piles. As soon as it was dry enough, it was picked up, placed on a wagon, hauled to a stack-yard, and placed in racks to complete the curing process, and to await the seeding crew.(19)

Broomcorn proved to be an excellent drought resistant crop in the western counties of Region 2. Woodward County, for example, raised more than 5,000 acres of the crop in 1902. It was sold for about $75 per ton. Shattuck in Ellis County became the largest broomcorn market in the world.(20)

Additional farm crops in Region 2 included oats, corn, kaffir corn, potatoes, and alfalfa. Kaffir corn seemed especially adaptable to the soil of Region 2. It was used primarily as fodder for farm animal consumption. Production in 1910 ranged from 38,000 bushels in Kay County to more than 320,000 bushels in Ellis County.(21)

A fire which swept over a large portion of Region 2 in 1893 ruined most of the trees in the area. The early settlers from the Midwest were unaccustomed to treeless lands and early on began to plant trees, especially fruit varieties, such as peaches, apples, plums, and cherries.

In 1904 Garfield County in Region 2 ranked first in Oklahoma Territory in the number of bearing orchard trees with over 3,000. By statehood in 1907, Garfield was first in the number of acres of blackberries. In the same year, Woods and Garfield both produced more than 400,000 pounds of grapes. In 1906, Garfield produced more wine than any other county in Oklahoma Territory--more than 13,000 gallons. (22)

Because of the arid conditions in the western counties of Region 2, irrigation methods were attempted as early as 1895 when a company of farmers formed the Ditch Valley irrigation project along the Cimarron River in northeast Harper County. Large irrigation ditches were built in that part of the county for use by subscribers in the company. A competent engineer was employed to lay out the system which covered approximately 4,000 acres of land. Each farmer was required to help in maintaining the main ditch and diverting water from the Cimarron into the main ditch which was cleaned out about every two years. A sand dam was built in the Cimarron to rechannel the amount of water desired. The size of the main ditch averaged about ten feet wide and a depth of about two feet in midstream. The

amount of water flowing in the ditch, when running at its capacity, was about 12 cubic feet per second.(23)

From the main ditch, the water was spread over the fields by using laterals or small ditches. There was no regular time for irrigation since the rains were depended upon for an adequate supply of water in the Cimarron River. The amount used was also generally uncertain because there were no gates or measuring boxes in the main ditch or laterals. In some cases, a few farms received too much water, while others got too little.

The farmers which used the irrigation system in Harper County produced wheat and alfalfa. They would harvest from four to six crops of alfalfa each season. It was the largest irrigated area in Oklahoma Territory, and the only area devoted almost exclusively to wheat. The tracts of irrigated wheat land ranged from half sections upward.(24)

The number of livestock raised by farmers in Region 2 expanded prior to statehood in 1907. Earliest settlers in the area made every effort to have at least one team of horses and/or mules, a milk cow, one or two hogs, and some chickens. Some settlers used oxen for draft animals.(25)

Since horses were the prime source of power for travel other than railroads, as well as for cultivation of land, they were among the greatest assets of any farm family. The Percheron breed of draft horse was most common in Region 2. There were serious efforts to upgrade the stock through importation of registered stallions of superior quality. Mule production was likewise important. Region 2 farmers exported horses and mules to buyers for the British Army during the Boer War and to contractors during the building of the Panama Canal, both events occurring in the early part of the twentieth century. Production of draft animals declined rapidly after the

introduction of farm tractors in ca. 1915 in Region 2. By 1920 the horse/mule era in farming had drawn to a close. The animals were sold and removed from the area in large numbers.

Most cattle on farms during the 1890s were dairy or dual-purpose breeds (either dairy or beef). Dairying was an important component of Region 2 agriculture in these early years, not only for milk production for farm families, but also as a source of cash income as farmers separated cream from milk and either produced butter for sale themselves or sold cream to creameries. Several cheese factories, cream stations, and creameries operated in Region 2 prior to 1930. Sale of cream for butter production became more important as more farm families increased their dairy herds. Most of the county seats in the region had several places buying cream and eggs. Most smaller towns also had cream buyers who shipped their cream into Oklahoma City. Cream from the farm was brought into town, usually on Saturdays, in 5 or 10 gallon milk cans. In addition to the cream buying stations, most large towns in Region 2 boasted of at least one creamery which manufactured butter for sale.(26)

Serious efforts were made during the 1920s to upgrade the Region 2 dairy industry with many herds being entered in the Oklahoma Dairy Improvement Association testing program. The dairy industry reached its heyday in the region ca. 1928, the same year Oklahoma reported its peak milk production. That year, there were 6,000 cream buying stations in Oklahoma. After 1930, the effects of the depression were experienced, and the serious drought conditions of the 1930's curtailed production.

The poultry segment of Region 2 agriculture went together with dairying as a source of "butter and egg money," a mainstay on most farms from 1893 to 1930. Cream stations bought eggs and live poultry

from farm families. Eggs were commonly purchased for about 5 cents a dozen in 1900. Eggs were shipped to Kansas by rail. Live poultry was graded, then killed and dressed, and shipped to Oklahoma City for market.

Improvement in farm flocks was desirable. In 1903 the Oklahoma Plymouth Rock Company was formed in Crescent. The organization sought to promote a pure-bred strain of this popular meat-and-egg breed of chickens.

Later, more and more improved breeds of chickens were introduced such as Rhode Island Red and Leghorns. Poultry husbandry was a significant segment of Home Demonstration Clubs. Poultry and eggs shows were held, financed and promoted by county poultry improvement associations.(27)

Interest in pure-bred cattle used for beef purposes began to emerge by 1915. The Shorthorn and Hereford breeds were most prominent in Region 2. Garfield and Grant Counties reported many breeders of registered Shorthorn cattle and herds of Hereford were found in Kay County. Most counties had organized breeder associations in order to improve the quality of the beef breeds, and several counties reported that registered bulls had been imported to upgrade their herds.(28)

By the mid-1920s, Oklahoma was divided into two general types of farming areas commonly called the "cotton belt" and the "wheat belt". The cotton section comprised the southern half of the state and the wheat section the northwestern quadrant. The northeastern quarter was devoted more to mixed farming. Between the general areas were counties in which various combinations of farming types were found. Approximately half of Region 2 (Alfalfa, Grant, Garfield, western Kay and Noble, and eastern Major and Woods) were in Area 2 dominated by wheat production. Southeastern Noble County was in a transitional

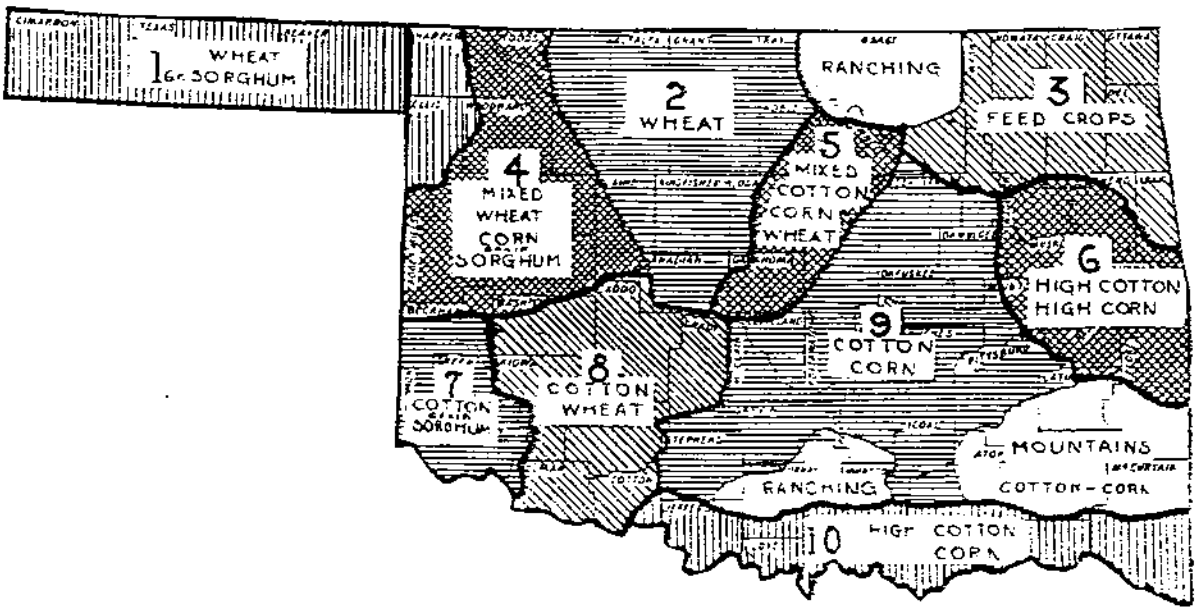
zone which, consisted of mixed cotton, wheat, and corn production, or Area 5. Eastern Kay County fell into the ranching area. Western Woods and Major, eastern Harper, and most of Woodward were located in Area 4, a mixed wheat, corn, and grain sorghum section. Finally, western Harper and Ellis were found in the wheat and grain sorghum region, or Area 1 (See Map 6).

According to O.A.E.S. bulletins of the 1920s, cotton was produced in only one county of Region 2-Noble. Approximately 5,000 acres of cotton were under cultivation in this southeastern county of Region 2.(29) (See Map 7)

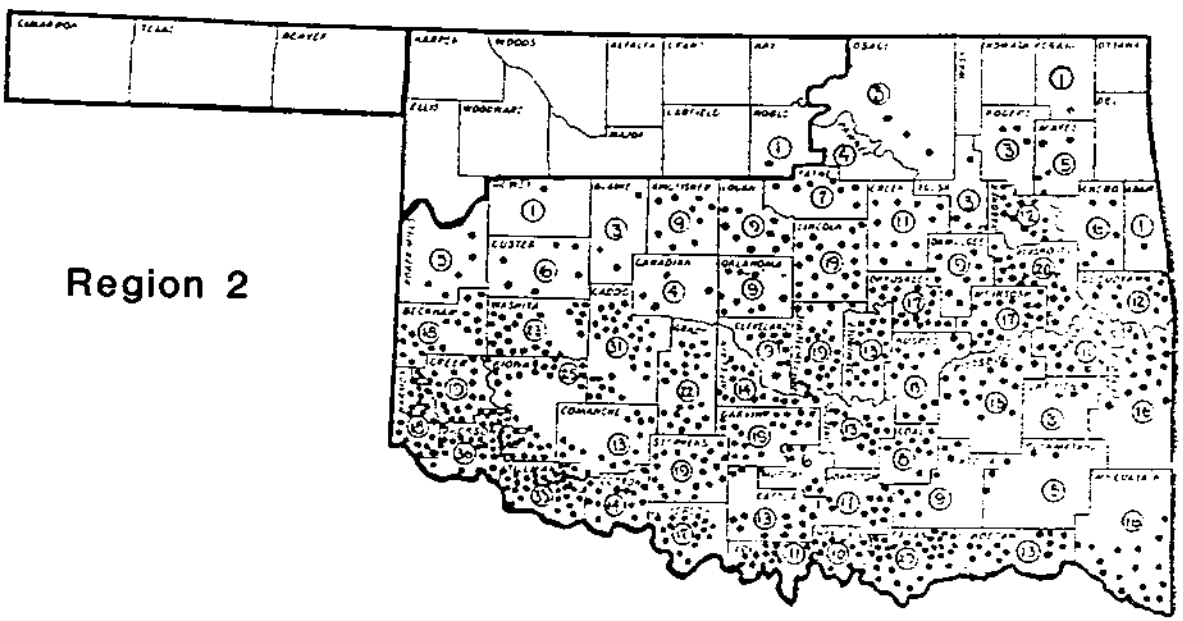
On the other hand, wheat was produced in every county of Region 2 by the mid-1920s. Alfalfa led all counties in Region 2 with approximately 229,000 acres planted in wheat with a production of more than 4.5 million bushels. Garfield was second with approximately 257,000 acres yielding more than 4.0 million bushels. Grant was third with 233,000 acres producing more that 3.5 million bushels. Woods County was fourth with 192,000 acres producing approximately 3.1 million bushels. The remaining six counties in Region 2 all produced over 1 million bushels in 1925 (See Map 8 and Table IV).(30)

Trends in wheat farming in the 1920s included increased usage of mechanical devices, such as the tractor and combine, which increased the concentration of production to areas adapted to the use of large machinery. Size of farms was also an indicator of concentrated wheat growing with the average size of farms reaching from 200 to 400 acres in the Region 2 wheat counties.

Corn in the 1920s was produced almost exclusively for grain for feeding livestock. It was grown in all counties of Region 2, however, the region was not considered a part of Oklahoma's corn belt.(31) Only one of the ten counties in Region 2 reached the 1 million bushel

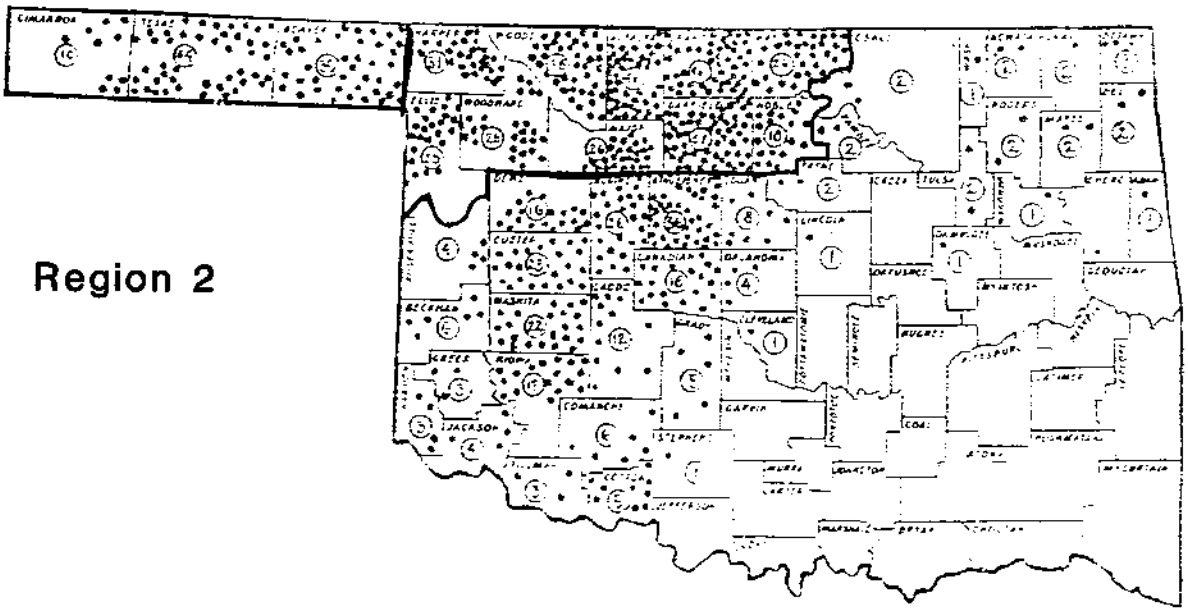


Types of Farming -1925
MAP 6



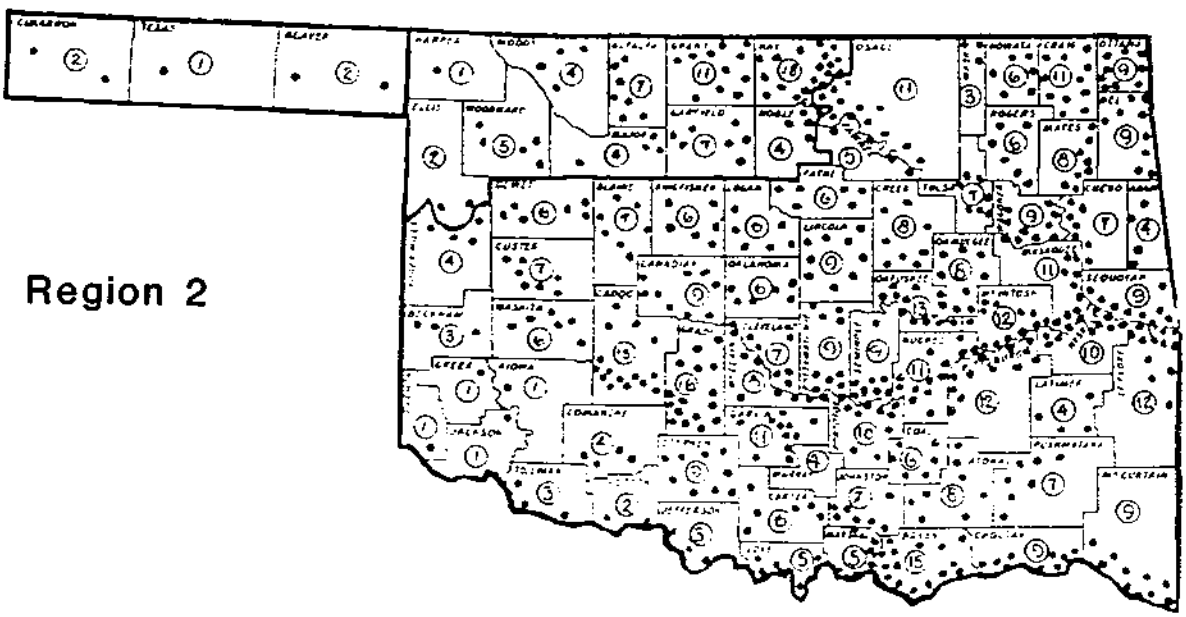
Region 2

Cotton Acreage -1925
MAP 7



Wheat Acreage -1925

MAP 8



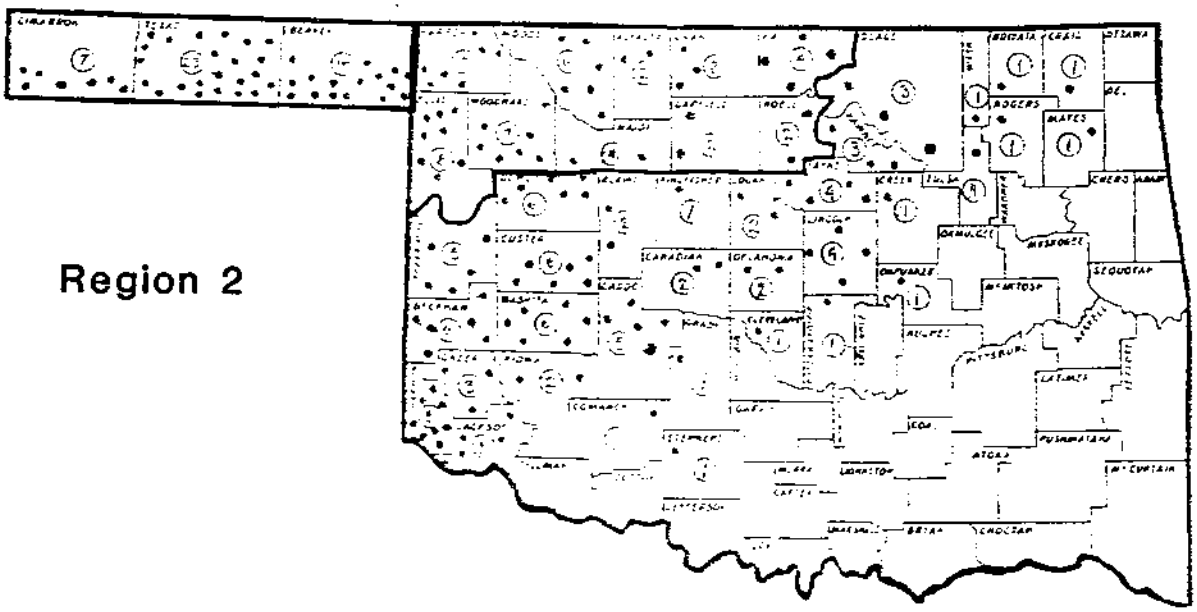
Corn Acreage -1925

MAP 9

plateau by 1925--Kay County with 1.66 million produced on approximately 90,000 acres. Ranking second in corn production was Grant (887,000 bushels) followed by Alfalfa (526,000 bushels), Garfield (453,000 bushels), Noble (347,000 bushels) and Woodward (317,000 bushels). The other four counties produced between 100,000 and 200,000 bushels per year. Acreage for corn production of total farm land in each county was generally 10 percent or less with the lone exception of Kay where about 15 percent was devoted to this grain crop (See Map 9 and Table IV).(32)

Grain sorghums were especially suited to the arid sections of Region 2 and production occurred in each of the ten counties. Milo and kafir were planted on land too sandy for wheat in Region 2.(33) Grain sorghums were used primarily as a feed crop in the ten-county area. Ellis was the leading county in 1924 with 438,000 bushels followed by Woodward (402,000), Harper (390,000), Woods (282,000), Kay (262,000), and Grant (205,000). The remaining four counties each produced less than 200,000 bushels (See Map 10 and Table IV).(34)

The most common size of farm found in Area 2 covered roughly one-half of Region 2 was the 160 acre unit with the most common combination being 60 acres of wheat, 20 acres of corn, 25 acres of oats, and 40 acres of pasture. About 40 percent of the farms in Area 2 fell into this category, however, 36 percent of the farms in Area 2 contained 320 acres, and wheat was grown on 100-150 acres in this farm size group. The remaining 24 percent ofo the farms were in the 400 acre and above category. These farmers raised approximately 150-200 acres of wheat with the remaining acreage devoted to pasture for beef cattle.(35) Wheat was by far the dominant crop in seven of the ten counties of Region 2. In 1924, Alfalfa County had 72 percent of its crop area in wheat followed by Harper (69 percent), Woods (66



Region 2

Grain Sorghum Acreage -1925
MAP 10

percent), Major (66 percent), Garfield (66 percent), and Ellis and Woodward, both exceeding 50 percent.(36)

The most common farm size in the western portions of Region 2 was half-section, or 320 acres. The most common organization of crops was

in hay and 50 acres in pasture. In Ellis , Woodward, Harper, and Woods Counties, where grain sorghum was mixed with wheat, the farms had either considerable sandy soils, or winter killing of wheat. In these areas, when winter wheat failed, grain sorghum was the most likely crop planted because it withstood the light rainfall better than any other crop.(37)

Livestock production was also on the increase by the mid-1920s in Region 2, especially cattle. Woods County was the leader with almost 45,000 followed by Kay (38,000), Garfield (37,000), Grant (36,000), Alfalfa (35,000), Woodward (34,000) and Ellis (31,000). The other three counties produced between 25,000 and 30,000. Swine production was also up, however, the number of mules, horses, sheep, and goats were on the decline by this time.(38)

In summary, one looks back upon the Region 2 farmers that toiled the land from 1893 to 1930 with amazement and a debt of gratitude. With a team of work oxen or mules, they broke the virgin sod and planted crops not knowing what the natural environment held in store for them. They built log structures, soddies, and dugouts; dug wells; hauled produce over countless miles to the country elevator, flour mill, railroad depot, or farmer's market; and provided the basic necessities for themselves and their families. They established schools and churches which dotted the rural landscape. They faced disappointment, economic disaster; they braved searing heat and freezing cold as well as a myriad of crop diseases and pests. Their

expertise ranged from chemistry, agronomy, animal husbandry, mechanical engineering, meteorology, economics, management, to old-fashioned common sense.

Their productivity stimulated new railroad construction, development of new industries, attracted new businesses, and prompted the creation of numerous farm-to-market centers. Moreover, the economic success of the rural population built a financial base for the growth of existing towns in the region. Finally, they experimented and innovated with different crops, livestock, and machinery in order to improve their occupation. From 1893 to 1930 the farmers of Region 2 contributed to the overall growth and maturation of the agricultural economy of Oklahoma, and transformed a raw frontier into one of the most productive farming regions in the state.(39)

Footnotes

1. For a more detailed explanation of the Chisholm Trail, see Wayne Gard, The Chisholm Trail (Norman: University of Oklahoma Press, 1954) and Edwin C. McReynolds, Oklahoma: A History of the Sooner State (Norman: University of Oklahoma Press, 1954), pp. 250-266.

2. Roy Gittinger, The Formation of the State of Oklahoma (Norman: University of Oklahoma Press, 1939), 98n.

3. Muriel H. Wright, A Guide to the Indian Tribes of Oklahoma (Norman: University of Oklahoma Press, 1951), pp. 163, 205, and 213.

4. Edward Everett Dale, "The Cherokee Strip Livestock Association," Chronicles of Oklahoma, Vol. V (March, 1927), pp. 58-78 and Gittinger, The Formation of the State of Oklahoma, pp. 144-146 and 198-200.

5. Joe B. Milan, "The Opening of the Cherokee Outlet," Chronicles of Oklahoma, Vol. IX (September, 1931), pp. 268-286 and Vol. X (March 1932), pp. 115-137.

6. John W. Morris et. al., Historical Atlas of Oklahoma (Norman: Unviersity of Oklahoma Press, 1986), pp. 48, 54, 55, and 59.

7. For futher discussion concerning source areas for migration into Oklahoma, see Michael Doran, "Origins of Culture Areas in Oklahoma, 1830 to 1900," Unpublished Ph.D. dissertation, University of Oregon, 1974; and Michael Roark, "Oklahoma Territory: Frontier Development, Migration, and Culture Areas," Unpublished Ph.D. dissertation, Syracuse University, 1979.

8. Excellent sources on early Oklahoma architecture include John W. Morris and Charles R. Goins, Oklahoma Homes: Past and Present (Norman: University of Oklahoma Press, 1980), pp. 20-51; Arn Henderson et. al., Architecture in Oklahoma: Landmark and Vernacular (Norman: Point Riders Press, 1978), pp. 45-102; and Howard L. and Mary Ellen Meredith, eds., Of the Earth: Oklahoma Architectural History (Oklahoma City: Oklahoma Historical Society, 1980), pp. 35-52.

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10. Stan Hoig, "The Rail Line That Opened the Unassigned Lands," in Donovan L. Hofsommer, ed., Railroads in Oklahoma (Oklahoma City: Oklahoma Historical Society, 1977), pp. 19-30.

11. Carl N. Tyson, "The Oklahoma Agricultural Experiment Station" in Donald E. Green, ed., Rural Oklahoma (Oklahoma City: Oklahoma Historical Society, 1977), pp. 128-146; Francis Richard Gilmore, "A Historical Study of the Oklahoma Agricultural Experiment Station," Unpublished Ed.D. dissertation, Oklahoma State University, 1967; and F. C. Burtis and L.A. Moorhouse, "Wheat Growing, Oklahoma Agricultural Experiment Station Bulletin No. 65 (June, 1905), pp. 1-34.

12. United States Bureau of the Census, Thirteenth Census of the United States, Volume VII, Agriculture (Washington, D.C.: United States Government Printing Office, 1911) and Ibid., Fourteenth Census of the United States - 1920, Volume VI, Part 2, Agriculture (Washington, D.C.: United States Government Printing Office, 1921).

13. Donald E. Green, "Beginnings of Wheat Culture in Oklahoma," in Green, Rural Oklahoma, pp. 70-72; and J.O. Ellsworth and R.W. Baird, "The Combine Harvester on Oklahoma Farms 1926", Oklahoma Agricultural Experiment Station Bulletin No. 162 (April, 1927), pp. 1-15.

14. Oklahoma Farmer - Stockman, April 1, 1926.

15. Annual Report of the Governor of Oklahoma to the Secretary of the Interior, 1899, p. 71.

16. Ibid., p. 81.

17. Green, Rural Oklahoma, p. 70, and Ralph Miller, "Cooperative Marketing of Wheat in Oklahoma," Unpublished Master's Thesis in Business Administration, University of Oklahoma, 1941.

18. Harper County Historical Society, Sage and Sod: Harper County Oklahoma: 1895-1973, Vol. II (Laverne, Oklahoma; The Society, 1974), p. 156.

19. Interested citizens of Shattuck, A Pioneer History of Shattuck (Shattuck, Oklahoma, 1970), p. 44

20. Ibid., pp. 24 and 27.

21. United States Bureau of the Census, Thirteenth Census of the United States 1910, Volume VII, Agriculture (Washington, D.C.: United States Government Printing Office, 1911).

22. Floyd W. Pratt, "A History of Garfield County, Oklahoma: 1828-1907," Master's Thesis, University of Oklahoma, 1929, p. 66.

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26. Foster, "A History of Harper County," pp. 49-51.

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28. Ibid.

29. United States Bureau of the Census, Census of Agricultue, 1925, Part II (Washington, D.C,: United States Government Printing Office, 1926).

30. Ibid.

31. For background reading on early corn production in Oklahoma, see L.A. Moorhouse, "Corn Growing in Oklahoma," Oklahoma Agricultural Experiment Station Circular No. 10 (March, 1908), pp. 1-7.

32. Census of Agriculture, 1925, Part II.

33. M.A. Beeson, "Grain Sorghums for Oklahoma," Oklahoma Agricultural Experiment Station Circular No. 73 (March, 1918), pp. 1-13.

34. Census of Agriculture, 1925, Part II.

35. J.O. Ellsworth and F.F. Elliott, "Types-of-Farming in Oklahoma," Oklahoma Agricultural Experiment Station Bulletin No. 181 (June, 1929), pp. 43-46.

36. Ibid., p. 7.

37. Ibid., p. 38.

38. Census of Agriculture, 1925, Part II.

39. For an excellent analysis on the status of agriculture in Oklahoma at the end of the chronological period for this study, see J. T. Sanders et. al., "Agricultural Outlook for Oklahoma 1929," Oklahoma Agricultural Experiement Station Circular No. 253 (February, 1929), pp. 1-16.

Management Region No. 2
Table I
Agriculture, 1900

County	Total Population	No.of Farms	Land in Farms (Acres)	Improved Land in Farms (Acres)
Alfalfa	N/A	N/A	N/A	N/A
Kay	22,530	2,748	480,453	349,281
Grant	17,273	3,411	605,554	425,901
Noble	14,015	1,648	347,613	210,054
Garfield	22,076	3,744	645,844	424,169
Major	N/A	N/A	N/A	N/A
Woods	34,975	7,277	1,352,326	663,052
Woodward	7,469	1,613	845,414	90,404
Ellis	N/A	N/A	N/A	N/A
Harper	N/A	N/A	N/A	N/A

County	Average Acres Per Farm	Value of all Farm Property ($1,000)	Average Value of all Property Per Farm	Value of all Farm Land ($1,000)
Alfalfa	N/A	N/A	N/A	N/A
Kay	174.8	12,453	4,532	8,730
Grant	177.5	10,066	2,951	6,719
Noble	210.9	6,641	4,030	4,413
Garfield	172.5	11,738	3,135	8,001
Major	N/A	N/A	N/A	N/A
Woods	185.8	15,719	2,160	9,075
Woodward	524.1	6,952	4,310	2,104
Ellis	N/A	N/A	N/A	N/A
Harper	N/A	N/A	N/A	N/A

County	% of Total Value of all Property in Land, etc. ($1,000)	Value of all Implements and Machinery ($1,000)	% of Total Value of all Property in Implements and Machinery	Value of all Farm Buildings ($1,000)
Alfalfa	N/A	N/A	N/A	N/A
Kay	70.1	531	4.3	1,204
Grant	66.7	470	4.7	814
Noble	67.0	276	4.2	450
Garfield	68.2	552	4.7	1,121
Major	N/A	N/A	N/A	N/A
Woods	57.7	697	4.4	1,162
Woodward	30.3	141	2.0	278
Ellis	N/A	N/A	N/A	N/A
Harper	N/A	N/A	N/A	N/A

County	% of Total Value of all Property in Farm Buildings	Value of all Livestock ($1,000)	% of Total Value of all Property in Livestock	Value of Products Not Fed to Livestock ($1,000)
Alfalfa	N/A	N/A	N/A	N/A
Kay	9.7	1,988	16.0	2,544
Grant	8.1	2,063	20.5	2,206
Noble	6.8	1,503	22.6	1,403
Garfield	9.6	2,064	17.6	2,769
Major	N/A	N/A	N/A	N/A
Woods	7.4	4,786	30.4	3,309
Woodward	4.0	4,430	63.7	868
Ellis	N/A	N/A	N/A	N/A
Harper	N/A	N/A	N/A	N/A

	WHEAT		CORN	
County	Acres (1,000)	Bushels (1,000)	Acres (1,000)	Bushels (1,000)
Alfalfa	N/A	N/A	N/A	N/A
Kay	181	2,460	59	2,223
Grant	136	1,805	90	2,524
Noble	86	1,320	36	1,142
Garfield	194	2,994	66	2,114
Major	N/A	N/A	N/A	N/A
Woods	126	1,667	159	4,521
Woodward	2	31	14	337
Ellis	N/A	N/A	N/A	N/A
Harper	N/A	N/A	N/A	N/A

	OATS		KAFIR CORN	
County	Acres (1,000)	Bushels (1,000)	Acres (1,000)	Bushels (1,000)
Alfalfa	N/A	N/A	N/A	N/A
Kay	10	451	<1	9
Grant	9	330	8	111
Noble	9	295	2	49
Garfield	18	577	4	36
Major	N/A	N/A	N/A	N/A
Woods	6	190	14	232
Woodward	<1	7	<1	12
Ellis	N/A	N/A	N/A	N/A
Harper	N/A	N/A	N/A	N/A

County	COTTON Acres (1,000)	COTTON Bales	Total Acres of Hay and Forage (1,000)
Alfalfa	N/A	N/A	N/A
Kay	N/A	N/A	33
Grant	<1	10	44
Noble	2	1,124	29
Garfield	<1	234	44
Major	N/A	N/A	N/A
Woods	<1	402	95
Woodward	<1	6	43
Ellis	N/A	N/A	N/A
Harper	N/A	N/A	N/A

County	No. of Cattle	No. of Horses	No. of Mules	No. of Swine
Alfalfa	N/A	N/A	N/A	N/A
Kay	36,825	14,648	2,568	35,138
Grant	40,130	15,927	2,603	32,786
Noble	37,630	8,389	1,687	20,187
Garfield	38,941	16,048	3,181	26,877
Major	N/A	N/A	N/A	N/A
Woods	119,678	33,514	4,434	52,298
Woodward	175,709	10,864	1,009	5,059
Ellis	N/A	N/A	N/A	N/A
Harper	N/A	N/A	N/A	N/A

County	No. of Sheep	No. of Goats	No. of Poultry (all kinds)	No. of Colonies of Bees
Alfalfa	N/A	N/A	N/A	N/A
Kay	174	220	155,720	29
Grant	161	81	183,998	6
Noble	30	701	82,593	17
Garfield	1,077	100	188,854	7
Major	N/A	N/A	N/A	N/A
Woods	4,488	254	306,974	19
Woodward	4,332	245	61,774	4
Ellis	N/A	N/A	N/A	N/A
Harper	N/A	N/A	N/A	N/A

County	Gallons of Milk Produced (1,000)	No. of Eggs Produced (dozens)	Pounds of Wool Produced
Alfalfa	N/A	N/A	N/A
Kay	3,124	1,038,920	1,328
Grant	3,178	1,057,810	595
Noble	1,550	462,270	108
Garfield	3,538	1,160,870	5,820
Major	N/A	N/A	N/A
Woods	5,190	1,739,350	23,065
Woodward	798	276,650	21,245
Ellis	N/A	N/A	N/A
Harper	N/A	N/A	N/A

	Number of Farms Operated by:		
County	Owners	Tenants	Managers
Alfalfa	N/A	N/A	N/A
Kay	2,322	417	9
Grant	2,891	513	7
Noble	1,391	250	7
Garfield	3,050	681	13
Major	N/A	N/A	N/A
Woods	6,510	741	26
Woodward	1,497	93	23
Ellis	N/A	N/A	N/A
Harper	N/A	N/A	N/A

Sources: Twelfth Census of the United States - 1900
Volume I, Part I - Population

Twelfth Census of the United States - 1900
Volume V, Part I - Agriculture

Twelfth Census of the United States - 1900
Volume VI, Part II - Agriculture

Management Region No. 2
Table II
Agriculture, 1910

County	Total Population	Urban Population	Rural Population	No. of Farms
Alfalfa	18,138	----	18,138	2,533
Kay	26,999	5,787	21,212	2,995
Grant	18,760	----	18,760	2,970
Noble	14,945	3,133	11,812	2,035
Garfield	33,050	13,799	19,251	3,291
Major	15,248	----	15,248	2,469
Woods	17,567	3,688	13,879	2,660
Woodward	16,592	2,696	13,896	2,730
Ellis	15,375	----	15,375	2,791
Harper	8,189	----	8,189	1,955

County	Land in Farms (Acres)	Improved Land in Farms (Acres)	Average Acres per Farm	Value of all Farm Property ($1,000)
Alfalfa	492,640	407,639	195	29,192
Kay	595,031	439,115	199	34,791
Grant	617,540	474,799	208	32,143
Noble	431,629	261,378	212	15,969
Garfield	649,350	502,427	197	36,044
Major	526,239	279,055	213	15,121
Woods	655,921	354,003	247	17,609
Woodward	619,933	416,758	227	14,646
Ellis	612,851	342,794	220	13,044
Harper	533,417	280,669	273	9,057

County	Average Value of all Property per Farm ($)	Value of all Farm Land ($1,000)	% of Total Value of all Property in Land	Value of all Farm Buildings ($1,000)
Alfalfa	11,525	22,375	76.7	2,600
Kay	11,616	25,409	73.0	3,806
Grant	10,823	23,831	74.1	3,213
Noble	7,847	11,386	71.3	1,732
Garfield	10,952	27,234	75.6	3,639
Major	6,124	10,676	70.6	1,486
Woods	6,620	12,666	71.9	1,580
Woodward	5,365	10,118	69.1	1,471
Ellis	4,673	9,335	71.6	1,176
Harper	4,633	6,365	70.3	675

County	% of Total Value of all Property in Farm Buildings	Value of all Implements and Machinery ($1,000)	% of Total Value of Property in Implements and Machinery	Value of all Domestic Animals, Poultry, Bees ($1,000)
Alfalfa	8.9	795	2.7	3,421
Kay	10.9	1,000	2.9	4,576
Grant	10.0	1,008	3.1	4,092
Noble	10.8	430	2.7	2,421
Garfield	10.1	950	2.6	4,220
Major	9.8	506	3.3	2,453
Woods	9.0	549	3.1	2,814
Woodward	10.0	541	3.7	2,516
Ellis	9.0	478	3.7	2,054
Harper	7.5	368	4.1	1,649

County	% of Total Value of all Property in Domestic Animals, etc.	Value of all Crops ($1,000)	WHEAT	
			Acres (1,000)	Bushels (1,000)
Alfalfa	11.7	3,315	106	1,719
Kay	13.2	4,336	52	613
Grant	12.7	4,100	130	1,617
Noble	15.2	2,003	30	298
Garfield	11.7	4,099	133	1,777
Major	16.2	1,533	32	420
Woods	16.0	2,003	94	1,087
Woodward	17.2	1,189	27	219
Ellis	15.7	1,322	48	402
Harper	18.2	856	45	388

County	CORN		OATS	
	Acres (1,000)	Bushels (1,000)	Acres (1,000)	Bushels (1,000)
Alfalfa	129	1,792	10	388
Kay	214	5,386	34	1,018
Grant	148	2,782	34	1,141
Noble	95	1,725	28	814
Garfield	154	2,138	51	1,756
Major	89	799	6	156
Woods	76	647	5	128
Woodward	92	653	5	88
Ellis	72	514	7	105
Harper	22	114	1	17

County	KAFIR CORN and MILO MAIZE		COTTON	
	Acres (1,000)	Bushels (1,000)	Acres (1,000)	Bales
Alfalfa	6	76	<1	2
Kay	2	38	<1	7
Grant	7	101	----	----
Noble	9	111	6	2,020
Garfield	6	89	2	548
Major	13	120	1	176
Woods	23	172	<1	44
Woodward	22	163	1	71
Ellis	43	321	<1	26
Harper	28	138	<1	15

County	Total Acres of Hay and Forage (1,000)	No. of Cattle	No. of Horses	No. of Mules
Alfalfa	28	23,744	18,630	4,164
Kay	45	42,174	20,561	4,938
Grant	35	30,938	21,324	4,434
Noble	27	32,790	11,049	2,605
Garfield	33	37,679	21,133	4,546
Major	21	25,810	14,997	2,522
Woods	24	32,946	16,102	3,976
Woodward	36	26,938	13,817	3,498
Ellis	29	18,532	12,408	2,895
Harper	29	18,757	9,984	2,175

County	No. of Swine	No. of Sheep	No. of Goats	No. of Poultry (all kinds)
Alfalfa	43,966	1,064	270	180,797
Kay	62,855	2,922	38	231,486
Grant	54,187	2,684	59	251,432
Noble	28,013	655	193	138,037
Garfield	50,862	852	65	275,747
Major	23,211	325	672	135,687
Woods	20,757	841	30	169,260
Woodward	24,231	442	558	123,940
Ellis	15,900	114	19	122,115
Harper	10,777	663	13	68,479

County	No. of Colonies of Bees	Gallons of Milk Produced (1,000)	No. of Eggs Produced (dozen)
Alfalfa	105	2,172	1,024,653
Kay	586	2,884	1,047,157
Grant	385	2,837	1,413,470
Noble	67	2,128	737,278
Garfield	159	3,505	1,582,068
Major	16	1,862	723,541
Woods	6	1,850	845,324
Woodward	13	2,022	716,639
Ellis	30	1,557	607,433
Harper	4	1,112	335,390

	Number of Farms Operated By:		
County	Owners	Tenants	Managers
Alfalfa	1,696	831	6
Kay	1,670	1,297	28
Grant	1,845	1,108	17
Noble	1,097	916	22
Garfield	2,116	1,161	14
Major	1,745	716	8
Woods	2,037	614	9
Woodward	2,079	632	19
Ellis	2,308	475	8
Harper	1,702	250	3

Sources: Thirteenth Census of the United States - 1910
Volume VII - Agriculture

Thirteenth Census of the United States - 1910
Volume III - Population

Management Region No. 2
Table III
Agriculture, 1920

County	Total Population	Urban Population	Rural Population	No. of Farms
Alfalfa	16,253	-	16,253	2,329
Kay	34,907	16,758	18,149	2,595
Grant	16,072	-	16,072	2,713
Noble	13,560	3,154	10,406	1,780
Garfield	37,500	16,576	20,924	3,089
Major	12,426	-	12,426	2,029
Woods	15,939	3,913	12,026	2,101
Woodward	14,663	3,849	10,814	1,862
Ellis	11,673	-	11,673	1,858
Harper	7,623	-	7,623	1,426

County	Land in Farms (Acres)	Improved Land in Farms (Acres)	Average Acres per Farm	Value of all Farm Property ($1,000)
Alfalfa	498,715	385,122	214.1	45,332
Kay	554,326	403,131	213.6	51,053
Grant	618,972	460,851	228.2	49,255
Noble	417,074	264,850	234.3	23,236
Garfield	652,703	490,978	211.3	56,595
Major	531,300	246,812	261.9	22,503
Woods	710,254	364,753	338.1	30,240
Woodward	657,759	314,883	353.3	18,875
Ellis	727,722	344,100	391.7	18,884
Harper	558,957	256,059	392.0	16,217

County	Average Value of all Property per Farm ($)	Value of all Farm Land ($1,000)	% of Total Value of all Property in Land	Value of all Farm Buildings ($1,000)
Alfalfa	19,464	32,838	72.4	5,599
Kay	19,674	38,139	74.7	5,680
Grant	18,155	36,562	74.2	5,154
Noble	13,054	17,146	73.8	2,358
Garfield	18,321	43,502	76.9	5,722
Major	11,091	15,583	69.2	2,583
Woods	14,393	22,558	74.6	2,820
Woodward	10,137	12,471	66.1	2,123
Ellis	10,164	12,379	65.6	2,169
Harper	11,372	10,777	66.5	1,743

County	% of Total Value of all Property in Farm Buildings	Value of all Implements and Machinery ($1,000)	% of Total Value of Property in Implements and Machinery	Value of all Livestock on Farm ($1,000)
Alfalfa	12.4	3,425	7.6	3,470
Kay	11.1	2,855	5.6	4,379
Grant	10.5	3,416	6.9	4,123
Noble	10.1	1,383	6.0	2,349
Garfield	10.1	3,253	5.7	4,118
Major	11.5	1,534	6.8	2,803
Woods	9.3	1,667	5.5	3,195
Woodward	11.2	1,116	5.9	3,164
Ellis	11.5	949	5.0	3,387
Harper	10.7	976	6.0	2,721

County	% of Total Value of all Property in Livestock	Value of All Crops ($1,000)	WHEAT	
			Acres (1,000)	Bushels (1,000)
Alfalfa	7.7	9,642	252	3,562
Kay	8.6	10,386	213	3,347
Grant	8.4	12,074	288	4,388
Noble	10.1	6,336	135	2,012
Garfield	7.3	12,597	324	4,649
Major	12.5	4,689	125	1,352
Woods	10.6	6,263	189	1,973
Woodward	16.8	4,812	130	1,137
Ellis	17.9	5,735	80	776
Harper	16.8	5,032	122	1,458

County	CORN		OATS	
	Acres (1,000)	Bushels (1,000)	Acres (1,000)	Bushels (1,000)
Alfalfa	13	176	11	296
Kay	31	448	36	719
Grant	17	203	25	649
Noble	7	131	44	1,066
Garfield	9	145	42	1,065
Major	20	236	7	182
Woods	15	195	11	251
Woodward	19	260	8	208
Ellis	19	316	11	323
Harper	7	86	7	197

County	KAFIR CORN, MILO MAIZE, etc. Acres (1,000)	Bushels (1,000)	COTTON Acres (1,000)	Bales
Alfalfa	12	103	----	----
Kay	8	75	<1	<1
Grant	8	71	----	----
Noble	6	30	1	437
Garfield	6	57	<1	24
Major	20	186	<1	11
Woods	31	242	----	----
Woodward	52	569	<1	3
Ellis	101	1,536	<1	4
Harper	52	612	----	----

County	Total Acres of Hay and Forage (1,000)	No. of Cattle	No. of Horses	No. of Mules
Alfalfa	34	26,478	16,203	4,501
Kay	57	37,928	15,587	4,548
Grant	50	35,155	19,757	4,903
Noble	32	25,666	10,417	2,540
Garfield	40	38,025	18,310	5,469
Major	29	30,130	13,022	2,627
Woods	45	38,079	14,846	4,158
Woodward	38	39,128	12,803	3,018
Ellis	41	40,448	12,048	2,764
Harper	29	35,592	9,422	2,948

County	No. of Swine	No. of Sheep	No. of Goats	No. of Poultry (all kinds)
Alfalfa	11,554	6,657	299	213,038
Kay	23,199	5,649	314	250,524
Grant	16,351	8,109	143	247,916
Noble	8,629	1,837	22	147,100
Garfield	11,042	4,492	364	274,543
Major	10,516	2,122	2,687	165,524
Woods	9,941	3,596	321	200,134
Woodward	11,070	1,614	1,513	147,989
Ellis	12,338	1,349	502	171,627
Harper	10,413	480	39	108,648

County	No. of Colonies of Bees	Gallons of Milk Produced (1,000)	No. of Eggs Produced (dozen)	Pounds of Wool Produced
Alfalfa	274	1,814	804,165	33,648
Kay	752	2,727	1,053,796	34,980
Grant	834	2,412	1,004,256	60,066
Noble	149	1,641	533,147	7,834
Garfield	350	2,758	1,098,601	26,786
Major	192	2,338	567,711	14,043
Woods	154	1,655	780,729	20,357
Woodward	142	2,436	545,011	8,827
Ellis	11	1,992	660,880	3,674
Harper	33	1,318	407,915	2,420

	Number of Farms Operated By:		
County	Owners	Tenants	Managers
Alfalfa	1,345	974	10
Kay	1,351	1,215	29
Grant	1,534	1,162	17
Noble	999	765	16
Garfield	1,753	1,321	15
Major	1,356	662	11
Woods	1,387	693	21
Woodward	1,299	545	18
Ellis	1,343	510	5
Harper	1,045	370	11

Sources: Fourteenth Census of the United States - 1920
Volume VI, Part 2 - Agriculture

Fourteenth Census of the United States - 1920
Volume III - Population

Fourteenth Census of the United States - 1920
Volume I - Population

Management Region No. 2
Table IV
Agriculture, 1925

County	Farm Population (1)	No. of Farms	Land in Farms (acres)	Average Acres per Farm
Alfalfa	9,805	2,363	500,979	212.0
Kay	10,990	2,662	605,469	227.4
Grant	10,475	2,573	579,057	225.1
Noble	7,420	1,706	399,596	234.2
Garfield	12,365	3,049	624,147	204.7
Major	8,180	1,903	526,621	276.7
Woods	9,060	2,088	725,803	347.6
Woodward	7,618	1,717	664,228	386.9
Ellis	7,507	1,834	631,921	344.6
Harper	5,231	1,239	553,299	446.6

County	Value of all Farm Property ($1,000)	Average Value of all Property per Farm ($)	Value of all Farm Land ($1,000)	% of Total Value of all Property in Land
Alfalfa	32,634	13,811	24,850	76.1
Kay	41,601	15,628	31,722	76.3
Grant	35,367	13,745	26,403	74.7
Noble	17,795	10,431	12,733	71.6
Garfield	39,150	12,840	28,857	73.7
Major	16,754	8,804	12,394	74.0
Woods	24,219	11,599	17,376	71.7
Woodward	14,122	8,225	9,706	68.7
Ellis	13,332	7,269	8,996	67.4
Harper	12,557	10,135	8,752	69.7

County	Value of all Farm Buildings ($1,000)	% of Total Value of all Property in Farm Buildings	Value of all Implements and Machinery ($1,000)	% of Total Value of Property in Implements and Machinery
Alfalfa	3,829	11.7	2,002	6.0
Kay	5,625	13.5	1,723	4.1
Grant	4,497	12.7	2,056	5.8
Noble	2,628	14.8	901	5.1
Garfield	5,700	14.6	2,170	5.5
Major	1,982	11.8	912	5.4
Woods	3,104	12.8	1,617	6.7
Woodward	1,903	13.5	828	5.9
Ellis	1,994	15.0	801	6.0
Harper	1,635	13.0	778	6.2

County	Value of all Livestock on Farms ($1,000)	% of Total Value of all Property in Livestock	Value of all Crops ($1,000)
Alfalfa	1,953	6.0	6,485
Kay	2,530	6.1	5,409
Grant	2,411	6.8	6,057
Noble	1,533	8.6	2,748
Garfield	2,424	6.2	6,391
Major	1,467	8.8	3,210
Woods	2,122	8.8	4,590
Woodward	1,686	11.9	2,760
Ellis	1,551	11.6	2,633
Harper	1,392	11.1	3,134

	WHEAT		CORN	
County	Acres (1,000)	Bushels (1,000)	Acres (1,000)	Bushels (1,000)
Alfalfa	229	4,464	33	526
Kay	145	2,178	90	1,661
Grant	233	3,537	55	887
Noble	89	1,198	22	347
Garfield	257	4,023	33	453
Major	130	2,071	21	306
Woods	192	3,142	23	294
Woodward	124	1,488	25	317
Ellis	125	1,554	13	125
Harper	153	2,126	8	106

	OATS		GRAIN SORGHUM	
County	Acres (1,000)	Bushels (1,000)	Acres (1,000)	Bushels (1,000)
Alfalfa	12	389	12	146
Kay	38	826	18	262
Grant	28	636	16	205
Noble	37	835	9	83
Garfield	36	838	13	146
Major	5	133	12	128
Woods	5	128	29	282
Woodward	4	66	34	402
Ellis	4	54	43	438
Harper	3	57	33	390

County	COTTON Acres (1,000)	COTTON Bales	Total Acres of Hay Crops (1,000) (2)
Alfalfa	<1	8	12
Kay	<1	21	33
Grant	<1	13	21
Noble	5	1,446	26
Garfield	1	250	27
Major	1	171	9
Woods	<1	15	9
Woodward	<1	42	14
Ellis	1	180	6
Harper	<1	1	6

County	No. of Cattle	No. of Horses	No. of Mules	No. of Swine
Alfalfa	35,058	12,869	4,521	15,235
Kay	38,429	14,301	4,401	33,497
Grant	36,408	14,668	5,276	19,384
Noble	26,667	9,516	2,792	8,477
Garfield	37,232	14,667	5,284	13,589
Major	26,775	10,278	3,340	8,517
Woods	44,840	12,658	4,963	10,369
Woodward	34,709	10,477	3,789	9,451
Ellis	31,814	10,179	3,423	6,299
Harper	30,385	8,283	3,505	7,214

County	No. of Sheep	No. of Goats	No. of Poultry (3)
Alfalfa	4,126	178	256,690
Kay	4,521	209	292,242
Grant	8,470	40	301,129
Noble	850	68	183,330
Garfield	5,246	233	335,508
Major	1,167	2,313	193,046
Woods	2,059	106	224,036
Woodward	1,056	291	174,368
Ellis	178	226	162,311
Harper	475	14	117,890

County	Gallons of Milk Produced	No. of Eggs Produced (dozens)	Pounds of Wool Produced
Alfalfa	3,329	1,177,180	21,356
Kay	3,530	1,315,381	24,282
Grant	3,680	1,418,619	45,848
Noble	2,252	828,835	3,738
Garfield	3,901	1,491,669	34,949
Major	2,781	712,340	6,037
Woods	3,924	1,091,951	13,645
Woodward	3,204	686,138	6,525
Ellis	2,842	547,475	1,012
Harper	1,878	462,954	4,013

	Number of Farms Operated by:		
County	Owners	Tenants	Managers
Alfalfa	1,285	1,060	18
Kay	1,227	1,424	11
Grant	1,424	1,137	12
Noble	878	814	14
Garfield	1,684	1,344	21
Major	1,136	763	4
Woods	1,276	794	18
Woodward	1,176	532	9
Ellis	1,128	702	4
Harper	837	399	3

Source: United States Census of Agriculture - 1925
Part II

(1) Includes only persons living on farms.
(2) Does not include forage crops.
(3) Includes only chickens.

Management Region No. 2
Table V
Agriculture, 1930

County	Total Population	Urban Population	Rural Population	No. of Farms
Alfalfa	15,228	----	15,228	2,328
Kay	50,186	28,968	21,218	2,849
Grant	14,150	----	14,150	2,757
Noble	15,139	4,206	10,933	2,101
Garfield	45,588	26,399	19,189	3,478
Major	12,206	----	12,206	2,093
Woods	17,005	5,121	11,884	2,030
Woodward	15,844	5,056	10,788	1,784
Ellis	10,541	----	10,541	1,685
Harper	7,761	----	7,761	1,204

County	Land in Farms (acres)	Average Acres per Farm	Value of all Farm Property ($1,000)	Average Value of all Property per Farm ($)
Alfalfa	519,596	223.2	38,677	16,614
Kay	606,384	212.8	46,904	16,463
Grant	668,108	242.3	45,206	16,397
Noble	473,812	225.5	21,297	10,137
Garfield	710,042	204.2	52,339	15,049
Major	561,015	268.0	21,999	10,511
Woods	739,633	364.4	30,911	15,227
Woodward	722,063	404.7	20,088	11,260
Ellis	754,350	447.7	18,404	10,922
Harper	594,817	494.0	17,001	14,120

County	Value of all Farm Land ($1,000)	% of Total Value of all Property in Land	Value of all Farm Buildings ($1,000)	% of Total Value of all Property in Farm Buildings
Alfalfa	29,474	76.2	4,058	10.5
Kay	32,671	69.7	8,741	18.6
Grant	33,977	75.2	4,877	10.8
Noble	15,283	71.8	2,924	13.7
Garfield	38,923	74.4	6,851	13.1
Major	15,307	69.6	2,883	13.1
Woods	21,670	70.1	3,528	11.4
Woodward	12,980	64.6	2,591	12.9
Ellis	11,971	65.0	2,427	13.2
Harper	11,290	66.4	2,019	11.9

County	Value of all Implements and Machinery ($1,000)	% of Total Value of Property in Implements and Machinery	Value of all Domestic Animals, Poultry, Bees ($1,000)	% of Total Value of all Property in Animals, etc.
Alfalfa	2,876	7.4	2,268	5.9
Kay	2,465	5.3	3,026	6.5
Grant	3,652	8.1	2,700	6.0
Noble	1,260	5.9	1,831	8.6
Garfield	3,610	6.9	2,955	5.6
Major	1,758	8.0	2,050	9.3
Woods	2,615	8.5	3,098	10.0
Woodward	1,730	8.6	2,788	13.9
Ellis	1,679	9.1	2,327	12.6
Harper	1,587	9.3	2,105	12.4

County	Value of All Crops ($1,000)	WHEAT	
		Acres (1,000)	Bushels (1,000)
Alfalfa	4,148	275	3,030
Kay	3,506	162	1,514
Grant	4,260	333	2,820
Noble	1,800	102	809
Garfield	4,572	341	3,196
Major	2,525	155	1,632
Woods	3,110	224	2,313
Woodward	2,604	155	1,577
Ellis	3,035	177	2,134
Harper	2,721	179	2,166

County	CORN		OATS	
	Acres (1,000)	Bushels (1,000)	Acres (1,000)	Bushels (1,000)
Alfalfa	26	414	9	319
Kay	90	1,201	28	580
Grant	42	585	20	542
Noble	23	309	31	566
Garfield	25	296	33	846
Major	22	244	6	175
Woods	26	262	4	107
Woodward	29	294	3	71
Ellis	19	192	3	64
Harper	14	156	1	26

County	GRAIN SORGHUM Acres (1,000)	GRAIN SORGHUM Bushels (1,000)	COTTON Acres (1,000)	COTTON Bales (1,000)
Alfalfa	8	100	1	<1
Kay	7	71	<1	<1
Grant	6	72	<1	<1
Noble	6	40	7	2
Garfield	4	39	1	<1
Major	8	73	6	1
Woods	19	201	<1	<1
Woodward	27	254	3	1
Ellis	32	356	4	1
Harper	22	241	<1	<1

County	Total Acres of Hay (1,000) (1)	No. of Cattle	No. of Horses	No. of Mules
Alfalfa	9	31,666	7,627	3,797
Kay	27	37,098	11,051	3,275
Grant	15	34,733	9,567	2,296
Noble	24	26,141	7,213	2,088
Garfield	22	42,134	10,149	3,008
Major	6	30,975	8,524	1,709
Woods	3	51,207	8,607	2,199
Woodward	7	46,938	8,901	1,991
Ellis	7	39,509	7,502	1,430
Harper	4	35,272	6,084	1,601

County	No. of Swine	No. of Sheep	No. of Goats	No. of Poultry (all kinds)
Alfalfa	10,673	16,480	144	211,917
Kay	44,828	14,014	391	232,098
Grant	21,423	21,603	175	257,047
Noble	11,829	5,696	189	164,289
Garfield	13,096	16,304	332	295,745
Major	7,650	4,153	3,482	155,846
Woods	9,249	4,534	182	207,448
Woodward	9,728	3,742	266	173,647
Ellis	7,036	1,838	441	163,619
Harper	7,365	2,893	89	133,370

County	No. of Colonies of Bees	Gallons of Milk Produced (1,000)	No. of Eggs Produced (dozen)	Pounds of Wool Produced
Alfalfa	343	4,760	1,523,914	65,796
Kay	1,160	4,538	1,666,370	43,158
Grant	529	4,146	1,676,883	89,592
Noble	237	3,080	1,082,062	16,702
Garfield	299	5,828	2,148,674	66,203
Major	150	3,525	1,022,984	19,285
Woods	152	4,282	1,616,336	15,252
Woodward	694	4,140	1,147,427	5,544
Ellis	140	3,707	1,042,272	7,635
Harper	176	2,896	857,966	9,834

County	Number of Farms Operated By: Owners	Tenants	Managers
Alfalfa	1,322	1,002	4
Kay	1,241	1,583	25
Grant	1,413	1,338	6
Noble	959	1,134	8
Garfield	1,809	1,654	15
Major	1,117	964	12
Woods	1,265	756	9
Woodward	1,164	611	9
Ellis	1,067	614	4
Harper	829	373	2

Sources: Fifteenth Census of the United States - 1930
Volume II, Part 2 - Agriculture

Fifteenth Census of the United States - 1930
Volume III - Population

(1) Does no include forage crops.

PROPERTY TYPE ANALYSIS

FARMHOUSE

Few persons believe that they have no right to build until professional help can be afforded; yet such a position would be well taken. Houses stand not for a month nor for a year, but for a generation; by then the thrift of a community is judged, by then the ideals and taste of a community are formed. He who deliberately builds an ugly house condemns himself as a poor citizen; while he who builds a beautiful house proves himself a good citizen, for his personal effort contributes to the public welfare.

Helen Brinkerd Young, 1914

I. Description

In analyzing farmhouse designs that were popular during the pre-1930 period in Region 2, it is apparent that no one style of architecture was dominant because no true American type had evolved. However, several farmhouse types were prevalent in Region 2 including:

A. "Soddy" or Sod House

The first step in erecting a sod house was to mark the inside dimensions after the site was selected. Sod house dimensions varied, but 16' X 24' was average. The floor was leveled and then dampened and packed in order to provide a hard, smooth surface. The sod "bricks" were cut from the prairie sod and usually were 2-3' in length, 1-1½' in width, and 3-4" thick. The sod house walls were laid beginning at the corners. Usually two or three widths of sod were placed to form the thickness of the wall. The grass side of each sod brick was placed downward. After three or four layers of the wall had been completed, a layer was placed crosswise of the other rows of sod to add strength to the wall by binding the widths of sod together. Door and window frames were propped into the wall at the desired positions and sod was placed around them. Some farmers were able to afford board gables and rafters to accommodate a wood shingle roof. Because of lack of timber, most farmers also had a sod roof. Support material for a sod roof consisted of forked poles at either end of the sod house to support the ridgepole. Gable ends were then filled with blocks of sod similar to the wall construction. Straight poles of cottonwood, willow, and blackjack were attached to the ridgepole and extended over the walls to form eaves. A layer of brush and grass was used as sheathing before adding the sod bricks. The number of layers varied, but up to five were used in some sod houses.

B. Dugout and Half Dugout Houses

A dugout house began with selection of a bank or wall of a ravine and then an excavation of up to 15' was made into the slope. A roof of split poles, hay or brush, and dirt was made with a length of pipe through the top to let out smoke from the stove. A half dugout house involved digging a hole perhaps 4-5' deep, and then erecting sod or frame walls and roof, depending on the availability of materials.

C. Log Cabin Farmhouses

(1) Single-Pen Cabins

Single-pen log cabins were one room units (usually about 12' X 14') consisting of one story, an end chimney, and gable roof. Logs were prepared for walls by squaring off the inside and outside facing edges and purposely notching the corners to leave ample space between each log which was filled with caulking of mud, stones, and wood chips.

(2) Double-Pen Cabins

A second room was added to the single-pen version. It retained the one-story height, gable roof, and end chimney; but was larger in dimensions (usually 12' X 28')

(3) Saddle-Bag Cabins

The saddle-bag cabin featured the addition of a second room to the chimney end of a single-pen cabin. The central chimney with one room on either side resembled a saddle bag over a horse, hence the name saddle-bag. It retained the gable roof and one story height.

(4) Dogtrot (also known as "two-pens-and-a-passage," "hallway house," and "breezeway house.")

The main feature of this type of log cabin was the open, roofed passageway placed between two main rooms. It had one or two end chimneys, porches varied, and retained a gable roof and one story height. Dimensions were usually about 12' X 36'. Originally built of log, it may have also been covered with board-and-batten or clapboard, or a combination of either of those sidings.

D. I-House

The basic plan of the I-House was one room deep, two full stories high, and two-three rooms wide. It always possessed sideward facing gables. Chimneys varied from none to matching end wall versions. Finishing materials also varied, but the most common in Oklahoma was clapboard.

E. Colonial

Colonial style farmhouses were usually broad, with a hall in the center and rooms on both sides, the parlor and living room on one side, dining room and kitchen on the other, with the bed chambers arranged symmetrically on both sides of the second floor hall. Some of the distinguishing characteristics of the exterior of the Colonial farmhouse are tall, stately columns, small porches, roofs either gambrel or high-gabled, narrow eaves, and symmetrically placed windows.

F. Dutch

Dutch farmhouses were usually quite sedate and symmetrical. They are placed with a central entrance on a broad side to the front. Broad porches support large, simple columns. In these houses, the living room is quite large and is often used as a dining room. Bed chambers are almost always on the second floor.

G. Mission

The Mission Style features included large, plain wall surfaces, usually of stucco, occasional high, severe towers, and close grouping of windows. To brighten the dull surface of the cement walls, red roofing tile and bright color in window sash and frames are used.

H. California Bungalow

The California bungalow consisted of low construction, broad, overhanging eaves, and comparatively low roofs. Bungalow farmhouses may be one, one and one-half, or even two story construction; even though a true bungalow is of but one story.

I. Chicago, Natural, or American

The Chicago, Natural, or American Style farmhouse had traces of the influence of several styles that have preceded it. The farmhouses built in this style have a peculiar quiet dignity and an appearance of solidity. Low-pitched roofs, wide eaves, and high windows combine to make a distinct impression of attractive simplicity which harmonizes well with the country landscape.

J. Additional Description

Several sources indicate the interior of the farmhouse in the pre-1930 period should be a two-room structure including a kitchen, dining room, living room, a minimum of four bedrooms, office, wash room, bathroom, man's room, several closets, and a veranda. The kitchen floor dimensions should be no less than 150 square feet. Good lighting and good ventilation are two essentials for the kitchen. Doors should be well placed and as few in number as possible because they occupy wall space, and wall space is valuable for cupboard and shelving. The dining room should be large enough to accommodate a good-sized table. Since an ordinary table is $4\frac{1}{2}$' wide, and the width taken up by persons seated at the table will increase the space needed to at least 7', it is recommended that 11' be the minimum dimension for a dining room. Living rooms should be large enough to accommodate the entire family and several guests. A fireplace is almost essential. Built-in bookcases and window seats add to the comfortable appearance of the room. The room should be no less than 300 square feet and should serve as the center of the social life of the family.

There should be a minimum of four bedrooms, and sometimes that number is insufficient when farm operations require more than the usual quota of men. One bedroom may be placed on the first floor, though in most designs all are placed in the upper floor.

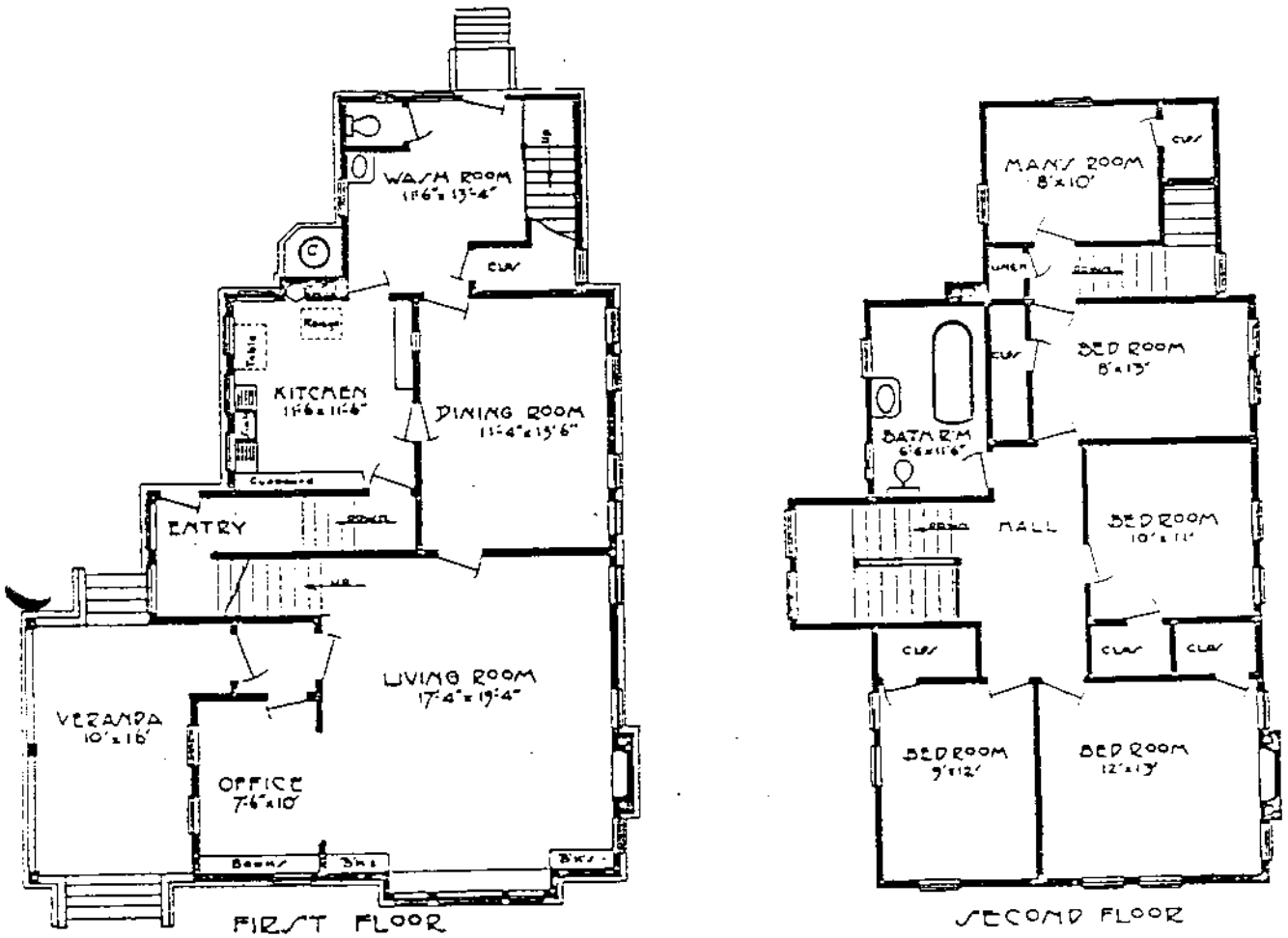
A wash room to the rear of the first floor is a necessity for farmhouses because a place is needed to wash and change clothes before entering the dining room for a meal. Furnishings should include a lavatory, an ample supply of clothes racks, and a strong, simple bench seat. The wash room may also serve as a laundry room and, when wood is used for fuel, as a wood storage room (see Figures 1 and 2).

According to U.S.D.A. bulletins of the early 20th century, the farmhouse is the most important building on the farmstead because it is the farmer's residence and office. Three essentials should be combined in every farm house: comfort, convenience, and economy. In locating the farm house, consideration should be given to soil type and air flow. A dry, well-drained soil is absolutely essential. A site too closely shut in by timber will lose what it may gain in shade by the absence of free circulation of air by cutting off breezes during the sultry days of summer and the absence of sunlight in winter. Distance from the main road is also an important consideration. If the farm house is too far from the main road the almost inevitable loneliness and isolation of farm life is intensified. On the other hand, if too near the road all privacy is lost, the dust becomes an annoyance, and there is an undesirable appearance of being crowded for room.

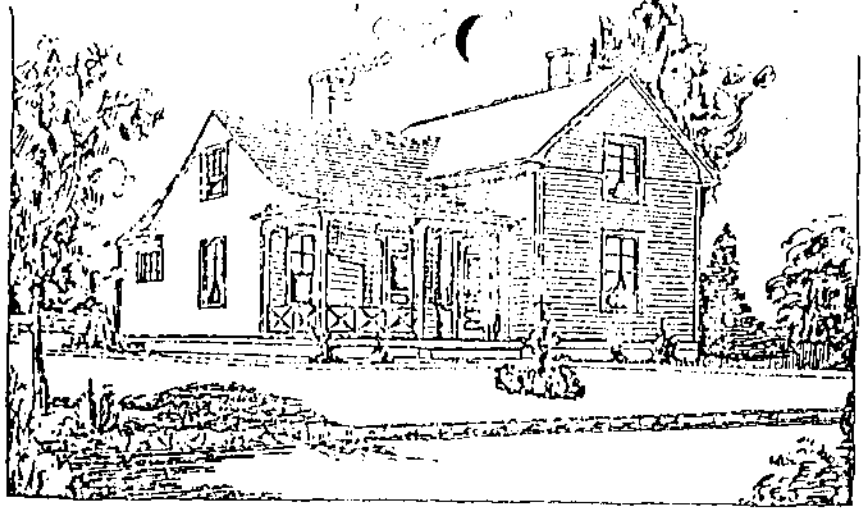
The U.S.D.A. bulletins suggest two plans for farm houses: $600 house with $500 addition and the $1,000 house. Both plans are of the balloon frame type consisting of sills, studding, plates, joists, and rafters. The first plan provides a main building with a living room 15' x 15', a back room 9'6" bv 10'6" with a commodious closet and a staircase from the first floor. The second floor has two rooms, respectively 15' x 15' and 9'6" x 10'6". The plan provides for a further addition for enlargement of the house when financial conditions permit. This addition will be 16' x 28', providing on the first floor a living room and kitchen and on the second floor a bedchamber. The kitchen will be 11' x 11'6" with a pantry and stairway to cellar. The walls of the main building are 14' high and those of the addition 12'. The house should also have a porch 8' x 16', large enough to prove not only an ornament, but a great convenience during warmer portions of the year (see Figures 3, 4, and 5).

The $1,000 house design provides for a somewhat roomier house, an attractive exterior design, and one capable of being made into a larger, finer residence eventually. A large living room, a conveniently large kitchen, and two good-sized bedrooms, together with a large covered porch, take up the space on the first floor. The second floor will provide a hall, a garret, two bedrooms and bathroom. A single chimney with two flues is so placed as to make it possible to have a stove in each of the first floor rooms (see Figures 6, 7, and 8).

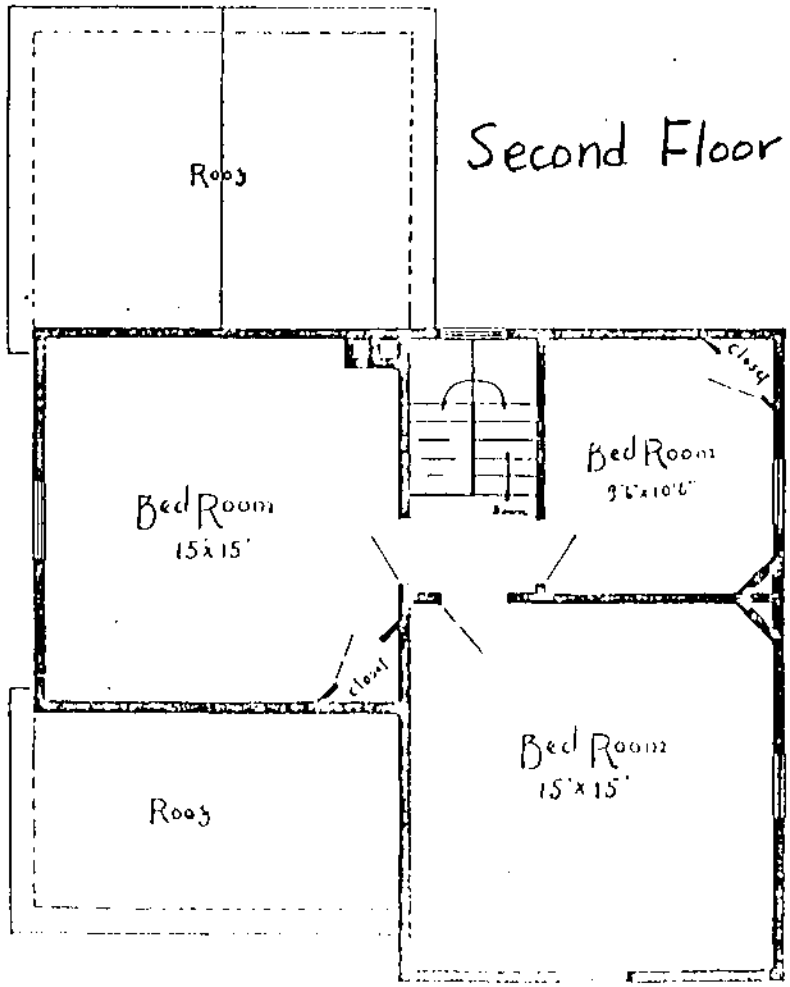
The foundation for these two plans may vary. The most inexpensive foundation consists of short wooden posts extending from below the frost line to a foot or more above ground, set near enough together to adequately support the sills. A second, more expensive type of foundation consists of a brick wall, two bricks (9") thick. Such a wall will extend well below the frost line. If there is to be a cellar, the wall should be 7' high.

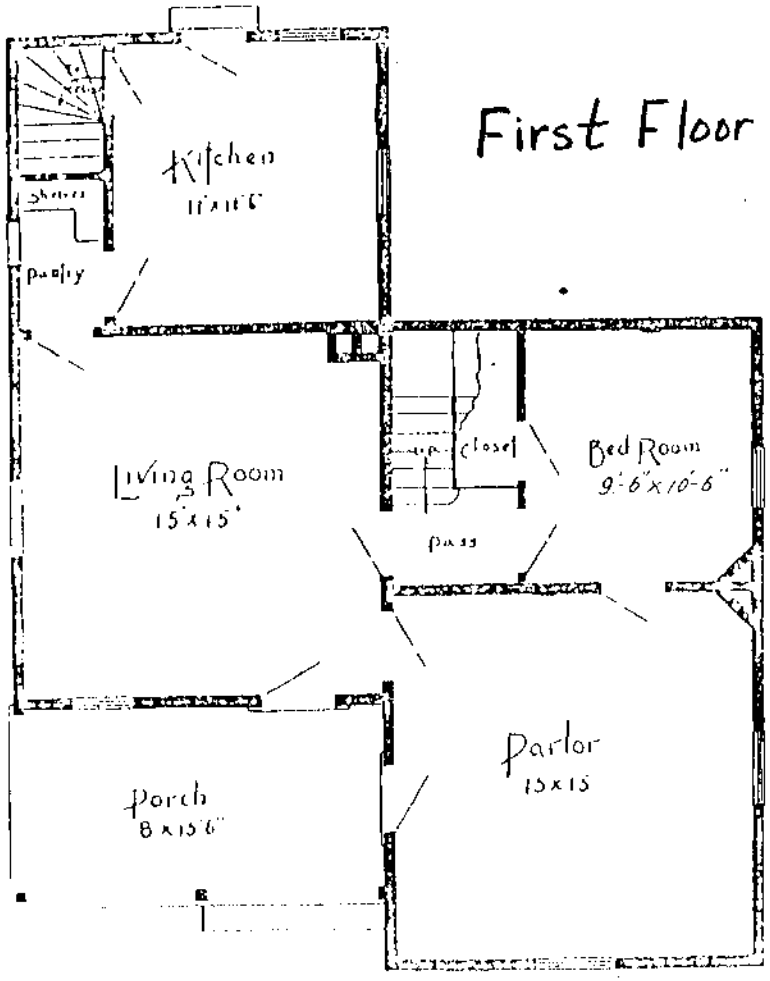


Figures 1 & 2
Convenient Farmhouse Plan
ca. 1915

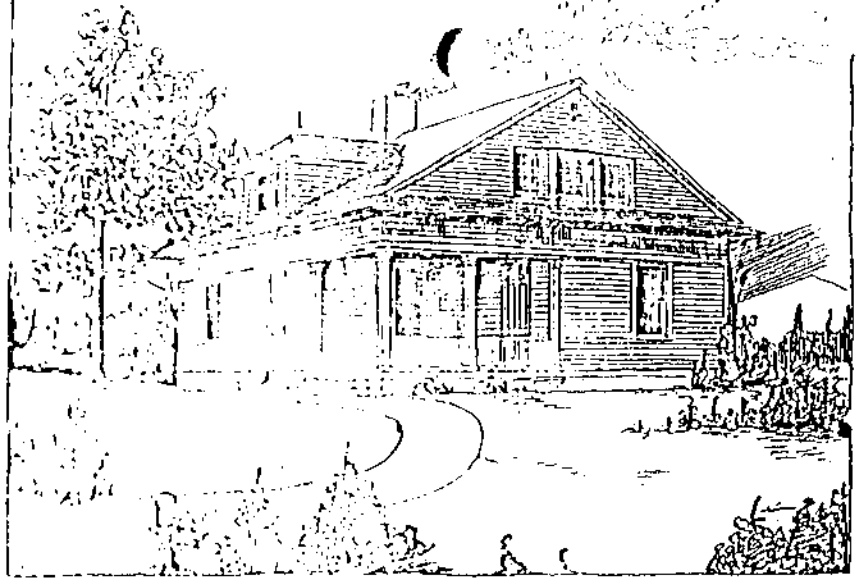


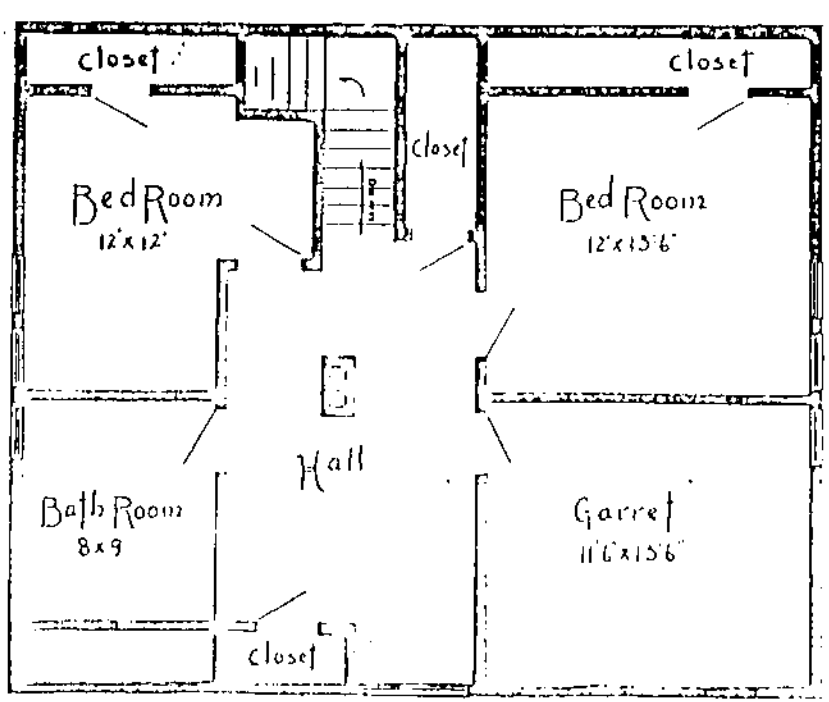
A $600
Farmhouse with
$500 Addition
ca. 1900



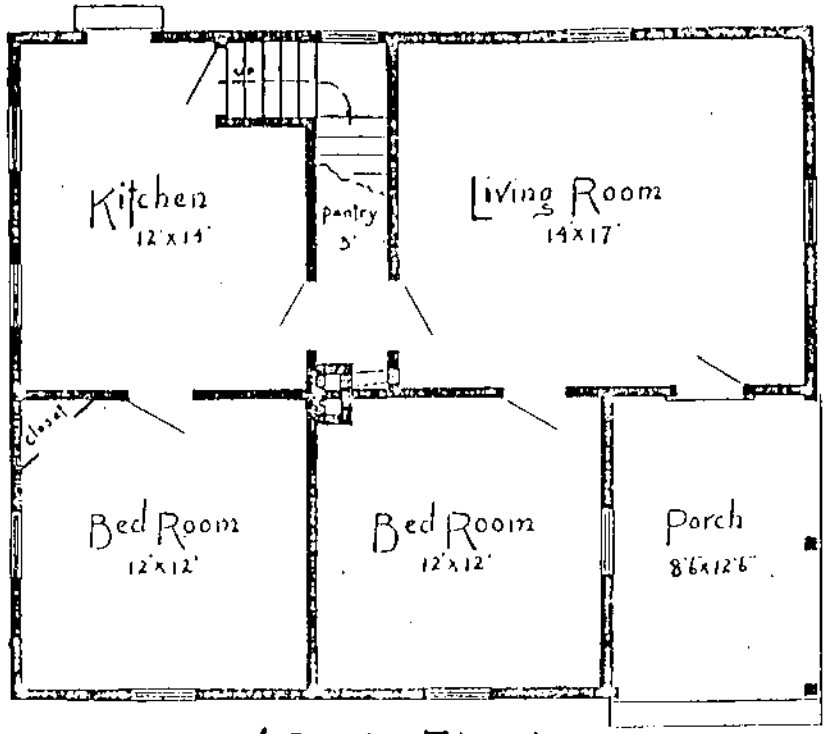


Figures 3, 4 & 5





(Second Floor)



(First Floor)

Figures 6, 7, & 8

Floor Plan and Perspective - $1,000 FARM HOUSE
1900

The chimney for both house plans should start from the ground. It should have a solid foundation of brick or stone. The exterior walls should be two bricks thick and the division walls one brick thick. In case the chimney is lined with one of the patent fire-clay linings one brick will prove of sufficient thickness for the exterior walls.

In framing the farm house, the vertical width of the sill should not be less than 8". The horizontal width of the sill should be 6". This allows for 2" space inside the studding on which the flooring should rest, making the walls tight at the bottom to exclude both drafts and vermin. The floor joists should not be less than 2" x 8" and should be cross-bridged once in every span of 10', twice in a span of 15', and so on. The studding in the frame house should be 2" x 4". At all corners and on either side of all door and window openings, the use of a 4" x 4" or two 2" x 4" spiked together is recommended. The plates should consist of 2" x 4" laid double, securely spiked into the top of every stud and with all joints broken. Rafters should be of 2" x 6" stuff, long enough to permit generous eaves and accurately sawed to allow tight nailing to ridge boards and plates.

The flooring should be of double thickness. The first floor may be of rough stuff, but must be brought to an even thickness and laid diagonally. If possible use 4-inch match flooring for this layer. In completing the building after the plasterers are through, this floor should be covered with a layer of good building paper and 1" x 2" strips nailed on top of that and immediately over the joists, and then a thoroughly dry 3-inch matched floor laid on the strips, blind nailed and butting squarely against the grounds. The second floor joists rest on bearers, usually 1" x 6", let into the studding at the required heights.

The roof should have a pitch of not less than one-third, or better still, one-half. A roof with the latter pitch is less likely to leak, the outward pressure on the walls is less, and the exterior appearance is better. The two most common coverings for the roof are shingles and metal. Where shingles are used, the roof should be sheathed with strips (1" x 3"), nailed to the rafters with spaces between each course of strips of not less than 1". Metal roofs are more expensive and difficult to lay, but if kept well painted will last longer and are less subject to fire.

Generous eaves always prove economic because they protect the walls from weathering. A plain cornice, the ends of the rafters neatly boxed with the least possible molding, is the most sensible method of construction. Ornate gables and cornices are too often used to hide inferior carpentry and add expense to the house. A farm house with good lines, properly proportioned, needs no "gingerbread" or ornamentation.

There are three essentials to a good wall -- good sheathing, good paper, and good weather-boarding. Next to the studding, there should be a sheathing of cheap lumber. The best method is to place this sheathing diagonally so that every board is a brace which will serve to strengthen the frame. This sheathing should fit tight around all window and door frames and extend entirely over corner posts, plates, and sills, completely boxing the framework of the house. A good quality of building paper should completely envelop the outside walls, fitting closely around

all openings. The most serviceable and most satisfactory covering for the exterior is clapboard, sawed thinner at one edge than the other and each board overlapping the one below. It should be put on with finishing nails, and they should be driven at least one inch above the lower edge.

Wide windows are always preferable to narrow ones, even though there be fewer of them. The sash should be of the style known as check rail and glazed with double-strength glass. Outside blinds should be considered.
Wrought-iron hinges are preferred over cast iron because of cost and durability.

Good broad verandas are almost a necessity. The roof should be supported by plain columns with no railing. The floor of the veranda should always be constructed of narrow, matched strips of heart wood, blind nailed, and, if possible, with not less than three good coats of paint. The ceiling may be of matched and beaded 3-inch stuff.

The farmhouse should be located in a rural setting in a pre-1930 farmstead, usually the most prominent building. It should be located on its original site.

II. Significance

Farmhouses as a property type were vital cultural resources in Management Region 2 because by 1910 there were more than a 1,000 farms in each of the ten counties. By 1930 the number of farms in the region ranged from 1,204 in Harper County to 3,478 in Garfield County. The farmhouse was the most important building in the farmstead group. The farmhouse was a shelter for the child at birth, a protection and refuge during growth and maturity, and a comfort to the elderly in their declining years. The farmhouse was the woman's domain, where she spent most of her time, in the care of the family, in the planning and serving of meals and providing for recreation, rest, and sleep. The farmhouse was also the business center of the farm; there the office was installed, wherein the business records were kept, and the business of selling and buying was largely planned there. Often farm laborers were housed in the farmhouse, and sleeping rooms, wash rooms, and recreation rooms for the help were maintained.

III. Registration Requirements

To be eligible for listing in the National Register of Historic Places, a farmhouse in Region 2 must retain integrity in setting, materials, and design. The farmhouse should be located in a rural setting on a pre-1930 farmstead, usually the most prominent building. To retain its integrity in setting and location, the farmhouse must be located on its original site and should not have been moved to another location on the farm acreage or to a nearby farm or town.

To be eligible, sod house farm dwellings must have original walls intact, enough to give the appearance and historic feeling of pre-1930 construction. Although roofing materials may have been replaced over time, the sod house must retain the basic roof design. It should be free of additions and should not be enclosed or covered with any synthetic siding or other materials which would detract from the integrity of its materials.

A dugout or half-dugout must retain the basic design element of excavation into the slope of a hill or ravine. The dugout portion of the house must be present along with roofing materials of the original house.

Single-pen log cabin farmhouses must have log walls intact and contain basic features such as one room, one story, gable roof, and end wall chimney of sandstone or limestone. The original wood shake shingle roof may have been replaced over time as well as the original caulking between spaces of log walls.

Double-pen log cabin farmhouses must include two rooms with end wall chimney of sandstone or limestone. It should also be one story high and possess a gable roof.

Saddle-bag log farmhouses must be constructed of log materials and be one-story, consist of two rooms, and gable roof. The one feature it must possess is the centrally located fireplace and chimney which distinguishes it from the double-pen version which has end wall chimneys.

Dogtrot log cabins must be constructed of log materials, may have one or two end wall chimneys, gable roof, and one-story height. The main feature of the dogtrot for it to meet eligibility requirements is the open, roofed passageway placed between the two main rooms.

To be eligible, all log cabin farmhouses must be free of additions or major alterations, and should not be covered with siding materials which detract from their architectural integrity. Roofing materials and caulking between logs in wall surfaces may have been replaced over time, however, original roof lines and basic wall construction must be present.

The I-house as a farm dwelling must possess the basic floor plan of one room deep, two full stories high, and two-three rooms wide with sideward facing gables. Finishing materials and decorative elements may vary, but to be eligible the I-house must retain the basic design pattern which characterizes I-houses from other forms of farmhouses.

Colonial farmhouses must retain tall, stately columns; small porches; either gambrel or steeply gabled roofs; narrow eaves; and symetrically placed windows.

Dutch farmhouses must contain certain features such as Dutch gambrel roof, central entrance on a broad side to the front, and broad porches supported by large, simple columns.

Mission farmhouses must possess plain, stucco wall surfaces, high towers, close grouping of windows, and red roofing tile.

The California Bungalow must retain low construction design, low roofs, and broad, overhanging eaves. The traditional bungalow was only one story, but bungalow farmhouses may be one-and-a-half or two stories high.

The Chicago farmhouse must possess low-pitched roofs, wide eaves, and high windows as well as simply designed decorative elements.

All these styles must be free of additions or major alterations which would detract from their historic and architectural integrity. No siding materials should cover original walls.

The farmhouse to meet eligibility requirements must have been occupied by a farm family during the pre-1930 period and must have served as the principal building on a pre-1930 farmstead where agricultural activities were planned and coordinated.

GENERAL PURPOSE BARNS

I. Description

Barns as a property type may be classified in different ways. In shape the barn may be classed under one of the following: square, rectangular, L-, T-, or U-shaped, and round.

The square barn is economical, and if this shape permits the use of a good floor plan there is no problem. For barns longer than 34 to 36 feet there is no advantage in increasing the width to correspond to the length.

The rectangular barn of sufficient width to accommodate two rows of stock is the most common shape. The length can then be made to suit any condition, or existing barns may be extended, if the herds are increased. There is no limit to the length of a rectangular barn, 150 feet is common.

The L-shaped barn is desirable because a sheltered yard may be formed in the angle of the two parts. The main part should serve for the principal stock, the ell being used as a feeding area or cattle shed. To avoid interference with light and ventilation, the main barn should be placed with the long axis north and south, and the wing attached at the north end on either side.

The T-shaped barn in the common arrangement for a two-story feed and hay barn, and a one-story stable. One section may be built to meet the requirements for a time, and the other added as the herds are increased.

The U-shaped barn usually consists of two separate barn units, parallel to each other, and connected by a feed storage, passage, or shelter wall. The sheltered yard so formed is valuable.

The round barn encloses the most area with a given length of wall, for the same reason that a circle encloses the most area. Since there is less exposure than in other shapes, the barn is warmer. Round construction is the strongest type and there are no corners for the carpenter or mason to construct, so there is time saved in the construction. The usual plan includes a silo in the center of the barn, which makes feeding convenient when the stock faces the center. A floor plan for a 60' round barn is given in Figure 9.

Barns may also be classified by number of stories and by roof type. The one-story barn in simply a stable, without feed storage above, and may be used as a wing in connection with a storage barn, or as a separate building. The one-story barn is usually the lowest in cost of any of the heights, but not necessarily the most economical, as the same roof and foundation might be utilized in building additional hay space. The one-story barn is usually of the gable or shed roof type.

The story and a half barn provides a certain amount of hay space, the side walls above the stable being not more than 6 feet high. If a gambrel roof is used, the lower rafters may come just over the loft-floor joists.

The two-story barn is the most economical and the most common general purpose barn. The walls are from 8 to 18 feet above the first story. The self-supporting plank frame roof is recommended for best results in hay storage.

The most common roof shapes for barns are: (1) shed, (2) gable, (3) gambrel or "hip", (4) monitor, (5) half-monitor, and (6) Gothic or arched. The shed roof is a single-slope and simply constructed type used principally for a "lean-to" in connection with another building. The pitch is low, usually not over one-third pitch is used. The gable roof is the most common two-slope roof. The common pitches range from one-fourth to one-half. The gambrel roof which has two slopes on each side is undoubtedly the most practical for the farm barn. The lower set of rafters is set at about 60° with the horizontal and the upper slope at about 30°. The gambrel roof is easily made self-supporting, affording an unobstructed loft. The Gothic, vaulted, or arched roof has become popular because there are no obstructions in the loft. The shape of the roof may vary from nearly flat up to a height equal to about 2/3 the width of the barn. The higher shapes afford the most hay storage and are easier to construct. The monitor barn results from the higher roof on the center or main part of the barn, and sheds on either side (See Figure 9 for height of barns and roof shapes).

Barn foundations should be extended below the frost line and down into firm soil. The foundation wall should be not less than 10" thick if of concrete. Stone walls are made about 2' thick. The foundation of masonry should be carried at least 1' above the ground to keep the framing from the damp ground.

Barn floors are made $4\frac{1}{2}$ or 5 inches thick of two-course concrete. Anchors and bolts are placed when the concrete is poured. Floors should be given sufficient slope to carry all water to the drains.

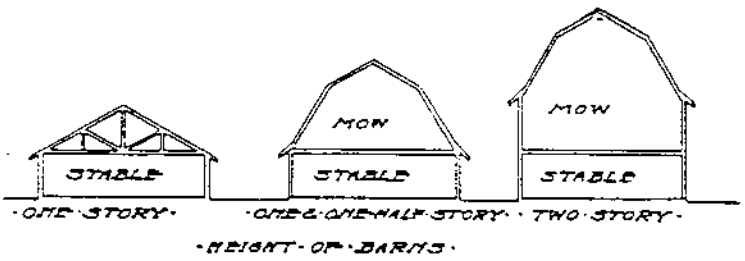
The types of permanent materials used in barn walls are concrete, hollow tile, brick, stone and concrete blocks. Concrete walls are made 10 to 12" thick. Two inch plank frames around the openings are necessary.

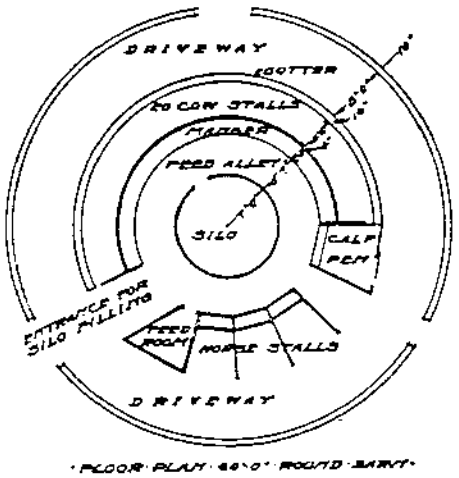
Hollow tile walls should be 8 to 12" thick. The mortar joints average 5/8" thick. Portland cement mortar, either white or colored, may be used.

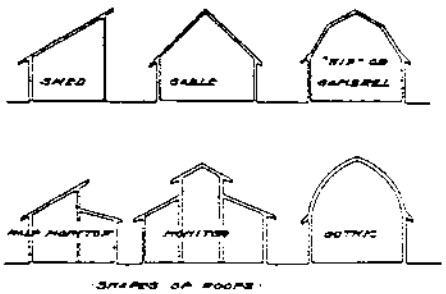
Cement blocks are laid up in much the same matter as the hollow tile, and form an 8 to 12" wall.

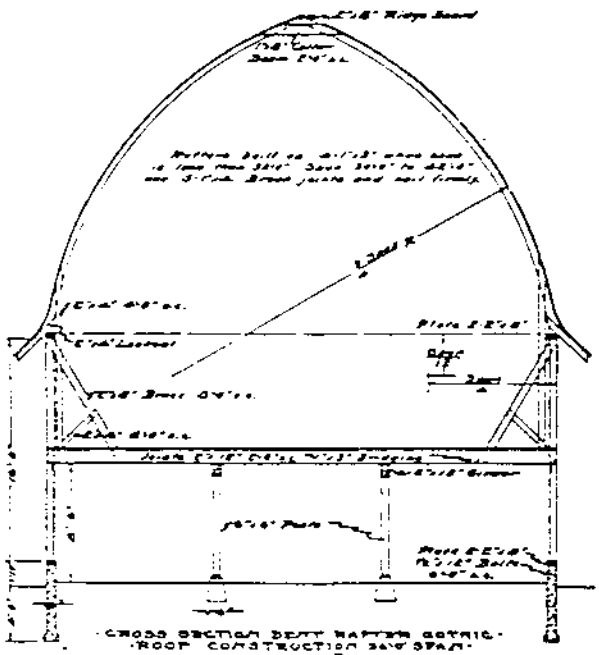
Brick and stone are used only to a limited extent. Brick walls should be at least 9" thick. The average brick is $2\frac{1}{2}$" x 4" x 8" in size, and requires a mortar joint 1/4 to 3/8" thick. Stone walls are 20 to 24" thick, laid up with cement mortar.

If the foundation is made continuous, the sill usually consists of two pieces of 2" lumber, 6, 8, or 10" wide, according to the thickness of the wall. The sill should be laid in a bed of mortar, on the foundation, and made level. If bolts have been placed in the foundation, the sill may be bolted fast. The double thickness sill can be spliced by breaking joints, and the strength is not harmed. In barns built on piers, the sill is of the heavy timber type, perhaps 10" square. The wall plate is of the same material and construction as the sill; it is fastened to the studding and serves as a seat for the rafters. The vertical wall members vary from 2" x 4" material to 2" x 10". The usual spacing in barns is 2' apart on centers. Studs are doubled at each side of the openings, and are double or triple at the corners. The columns or posts may be of solid timber, built-up lumber, or of iron or steel.









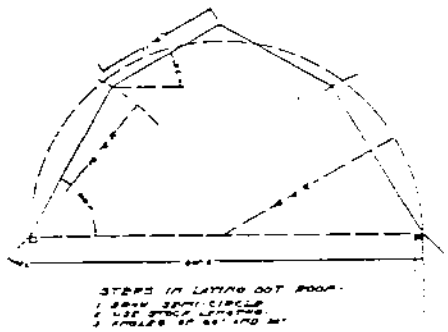


Figure 9

Barn Types By Roof Shapes and Stories

The common sizes are 6" x 6" wood, or 4 and 4½" iron or steel. The length of the column and the load to be supported should be considered for best economy. In "face-out" floor plans the posts should come at the rear of the stall partitions, and in the "face-in" plan the posts are placed just behind the stall frame. Steel posts, concrete filled, are preferred to any other type. The built-up girder, made from several thicknesses of 2" lumber, is preferred. The joists can be distributed so the girder is not weakened at any one point; the continuous beam is somewhat stronger than the simple beam that is broken at each support. The girder should be supported by a post at intervals not greater than 14 feet. The floor joists are 2" thick, and vary according to the load, from 8 to 12" deep. The joists should run crosswise of the barn, and be lapped above the girder. The total length of the joists across the barn should exceed the barn width by about 2', to allow for lapping. The usual spacing is 2' apart on centers. Joists should be bridged once in 8 feet, and twice in a 14' span. Barn rafters are almost without exception made of 2" x 6" material, and spaced 2' on centers. Long rafter lengths are sometimes supported between the plate and ridge with a purlin. In the self-supporting roof, the rafters are usually braced in pairs, to form trusses. Wall sheathing is often omitted in barns, and the siding nailed directly on the studding. If sheathing is used, the usual material is either shiplap, or inch boards, No. 2 grade being generally used. Some sheathing is put on diagonally for the bracing effect, though usually it is placed horizontally. Roof sheathing for prepared roofing or slate or asphalt shingles is put on solid. For wood shingles, the sheathing consists of 1" x 4" boards laid with a 2" space between them. The most common forms of siding for barns are bevel siding, drop siding, matched boards, and plain boards with batten. Either horizontal or vertical siding may be used, and the kind depends on the type of framing. The plank truss frame usually takes vertical siding and the braced rafter frame the horizontal siding. Weather-resistant woods such as white pine, cypress, cedar, and redwood are preferable for siding. Ceiling lumber is matched, dressed, and beaded, and is used in place of sheathing on the projecting ends of the rafter, if the open cornice is used. Clear pine or fir is the most common material used, the 5/8" thickness being most widely used. Loft floors should be made of dressed and matched lumber, the most suitable material being pine or fir, 1" x 6" flooring.

Barns may also be classified by the type of framing. There are several types including: (1) timber frame, (2) plank frame, (3) braced rafter, (4) plank truss, (5) gambrel roof framing, (6) wide barn framing, (7) Gothic roof framing, and (8) round barn framing.

The timber frame consists of sills, posts, girders, and braces of large timbers, ranging up to 12" x 12" pieces, the heavy pieces being usually mortised together.

The plank-frame barn is built without the use of any material larger than 2" x 12". The greatest length necessary is about 24 feet for a few braces or supports, and these pieces may be spliced from shorter lengths. Girders or posts requiring more strength than is given by one piece are built up from two or more 2" pieces. The sizes of material used in the plank frame are figured for spans of from 32 to 40 feet.

Gable roof framing is commonly used for one-story barns. The roof pitch varies from ¼ to ½. The building should be tied together at the plate either

by ceiling joists or cross ties, to prevent spreading. Rafters are 2" x 4" in size for spans under 20 feet, and 2" x 6" for all spans greater than 20 feet. A purlin plate, intermediate between the plate and ridge and supported by posts from the floor, is needed.

Gambrel roof framing should follow these three principles:

(1) Since the arch is one of the strongest forms of construction, the gambrel roof is probably strongest when it forms an arch. The ridge should fall above the curve and the break within the semicircle. To secure a truss approaching the lines of this arch, construct a semicircle with a radius equal to one-half the width of the building. Place the center of the semicircle on a level with the plates and midway between.

(2) The use of stock lengths of lumber is economical, and the roof should be designed to use stock-length materials. The upper and lower rafters may be about the same length, or the upper pair 2' shorter than the lower ones. Lengths of 16 and 12 feet work out well for the 36 foot barn.

(3) The lower slope of the gambrel roof should be approximately 60° with the horizontal, and the upper slope about 30°.

Braced rafter framing consists of studding spaced 2 feet apart on centers. The floor joists are set crosswise of the barn with the same spacing as the studs. The distinguishing feature of the braced rafter frame is the fact that each set of four rafters is braced at all angles, to form a light truss, which supports the roof through a length of 2 feet, which is the spacing of the rafters, no purlins or extra framing is necessary. Each truss consists of two lower rafters, two upper rafters, a collar beam, or tie, and upper and lower braces. The upper braces are made approximately the same length as the upper rafters, and extend from the center of the upper rafters to a point about 7 feet below the angle of the roof on the lower rafter. The lower brace is about the same length as the lower rafter, and extends from just above the second floor to the point where the upper brace attaches. The braced rafter barn framing should be made from 2" x 6" lumber. The braces are sometimes made of 2 pieces of 1" x 6" or 1" x 8" material. The studding for this type should be 2" x 6" or 2" x 8".

In the plank truss frame, the trusses are placed 10 to 16 feet apart. These trusses support the entire roof load. The space between the trusses is filled in with braces and rafters. In the first story of the plank truss barn, the wall studding are not spaced at regular intervals, but according to the openings. Diagonal braces are placed at frequent intervals between the openings to strengthen the frame. The plate under the joists serves as the header for the top of the openings. At the truss intervals, several pieces of studding are set together to form a post on which the truss is supported. Each truss is made up of the following parts: a cross tie extends across the building at the truss, which consists of three pieces, the same size as the joists. The pieces are set with short blocks between them, for splicing, which gives a three-ply piece, with two 2" spaces. Purlin supports extend from the joist line to the purlin. They are made up of two pieces of 2" x 10" or 2" x 12" material, with a 2" space between the pieces. Roof or purlin supports extend from just below the plate to the ridge of the roof. The wall

post consists of two pieces of 2" x 8", with a 2" space between. A 2" x 4" brace extends from the purlin to the ridge. These pieces, together with the short braces, form the truss.

In Gothic roof framing, the shape of the roof is a pointed arch and is secured by taking a radius equal to three-fourths the width of the barn to find the curve of the rafters. The center is taken at a point 3 or 4 feet below the level of the plate, and an arc is described through the plate and the center of the barn at the ridge. The point of meeting of the two arcs drawn determines the ridge and the shape of the entire roof. The lookout is a reverse curve, on a 5-foot radius, and fits smoothly into the rafter curve. The most common method of building the rafters is to lay out the shape of the rafter on a smooth surface, and to fit 1" x 4" pieces to the form. Five or six pieces are bent to shape and nailed to form a rafter of the correct shape and strength. The rafters are spaced 2 feet apart in the building, and tied at the ridge.

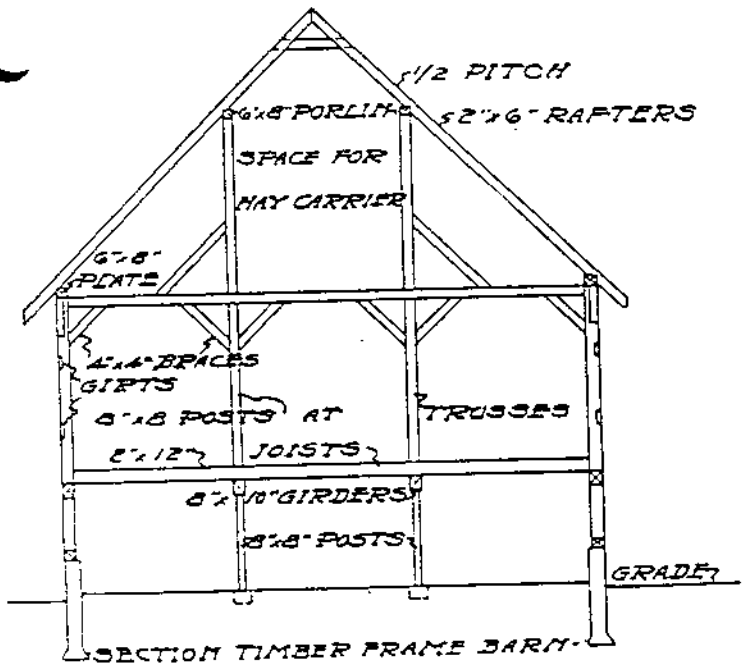
The framing of the round barn is similar to that for the braced rafter barn. The members of the frame converge to the center, making the round frame very strong. The two slope gambrel roof is most often used. Since the round barn will be about 60 feet or more in diameter, longer length lumber is required in the roof frame. Since the framing parts become closer together as they approach the center, there is more material in the round barn frame than is necessary for strength (see Figure 10 for some types of barn framing).

The USDA Bulletins of the early 20th century give two designs for small barns for the farmer who has but small capital to expend. The first is called the $450 barn. It is 37' x 34' and 12' high at the eaves and 29½' to the peak. The loft is supported by sixteen 8' x 8' post (round) while the roof is supported by eight 6' x 6' purline posts. The first floor provides for 4 horse stalls and 3 double cow stalls, while a shed opening into a small yard affords additional room for stock. A clear space, 12' x 37', is left down the center, which would accommodate several implements and leave room for a considerable amount of forage at the rear end. The loft would accommodate from 20 to 25 tons of hay. The granary is 7½' x 8½'. The design calls for flooring the driveway at the height of 12' above the ground, and the side spaces over stalls and shed at a height of 8'. In the center a space 10' x 12' should be left for pitching hay into the loft. The timbers should be mortised and pinned with hard wood pins. Attached figures illustrate the floor plan, end bents, and elevations of the $450 barn.

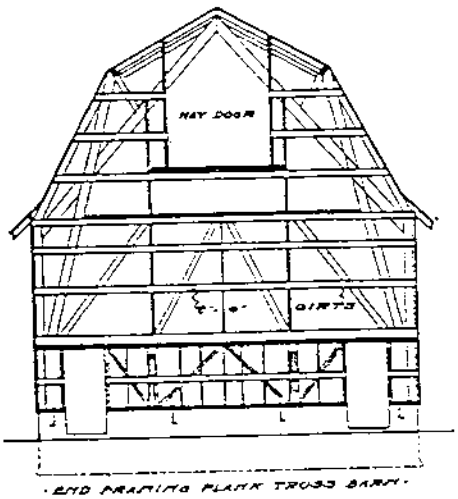
Design No. 2 provides for the $275 barn. It is 24' x 24' and 16' high at the eaves. It is divided into stable and wagon and carriage rooms. The stable affords room for three head of cattle and two horses. The loft will hold approximately 10 tons of hay. The design permits the erection of sheds on each side of the main building which would increase the capacity of the barn to 15 head of stock or more (see Figures 11 and 12).

Three-Portal Barn

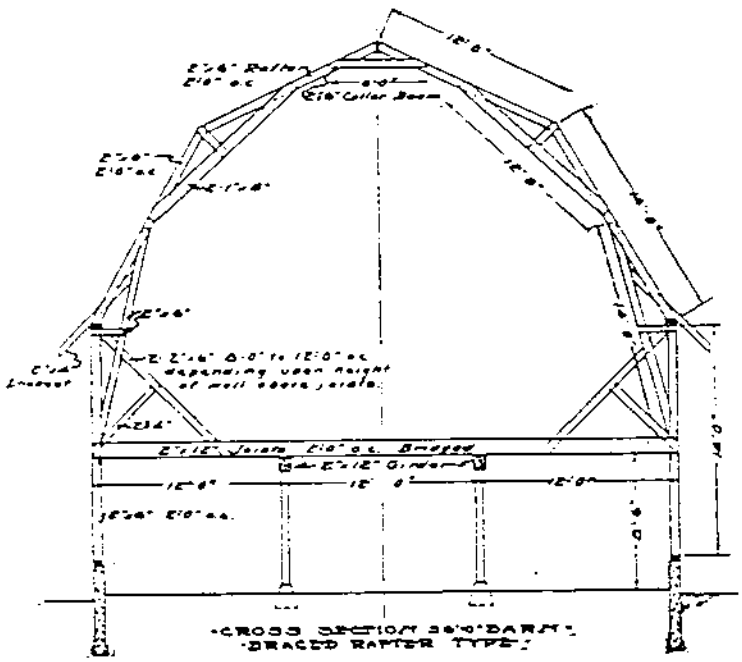
The most common barn type found in the heartland of America during the late nineteenth and early twentieth century was the Midwest three-portal barn. It is believed they were introduced to the United States directly from Europe by German settlers. They are sometimes locally referred to as feeder barns

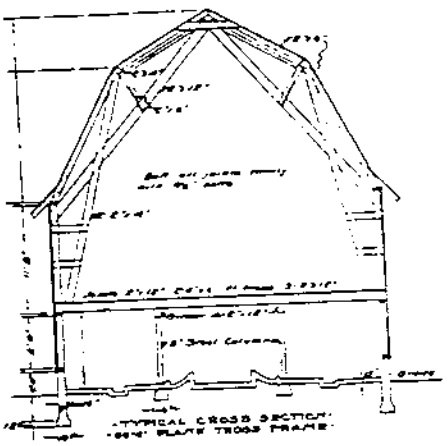


SECTION TIMBER FRAME BARN.



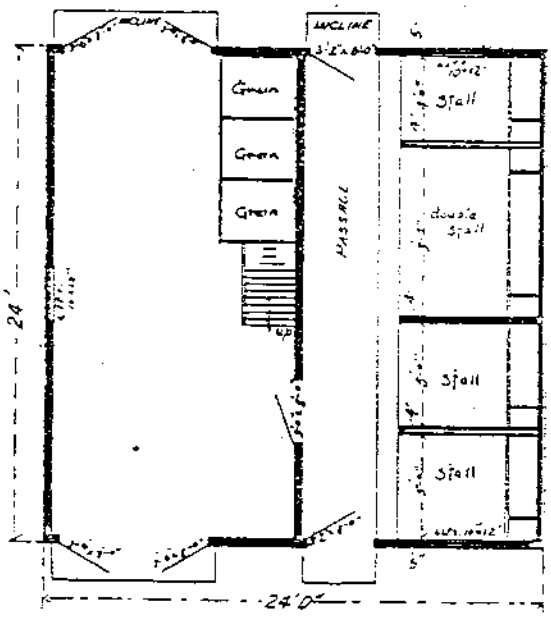
END FRAMING PLANK TRUSS BARN.

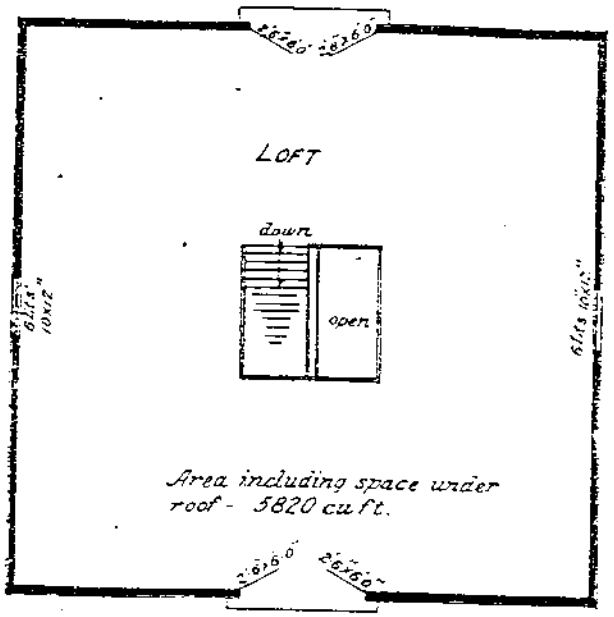

CROSS SECTION 36'0" BARN.
BRACED RAFTER TYPE.

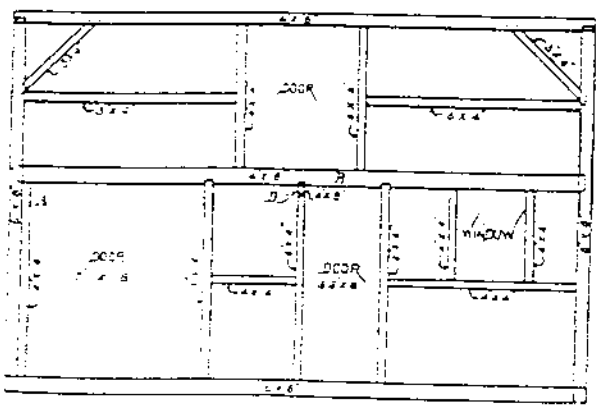

TYPICAL CROSS SECTION

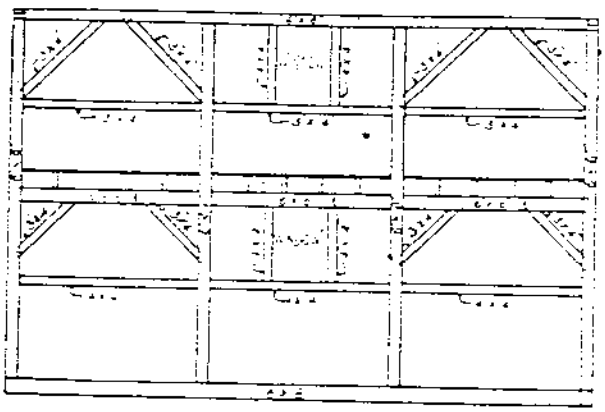
Barn Framing

Figure 10









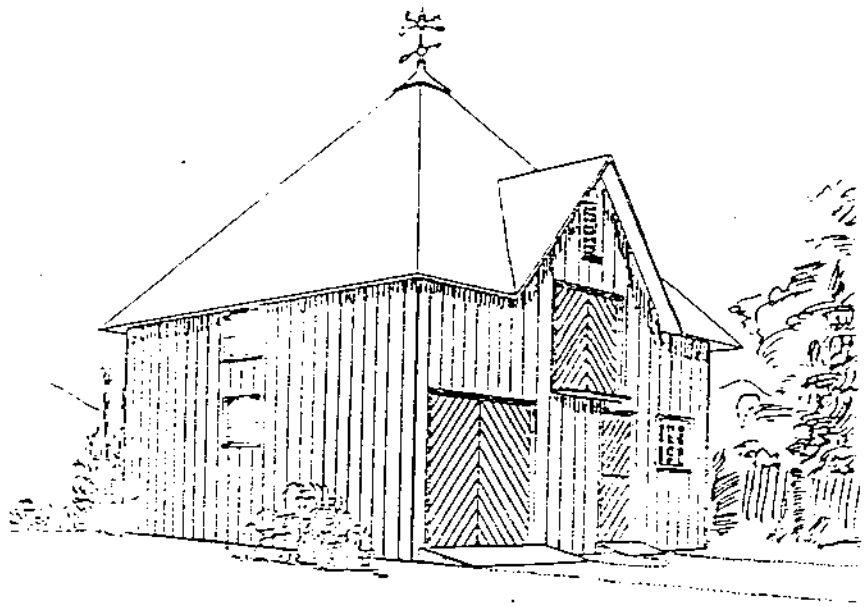


Figure 11

Floor Plan, End and Side, and Perspective

#275 Barn

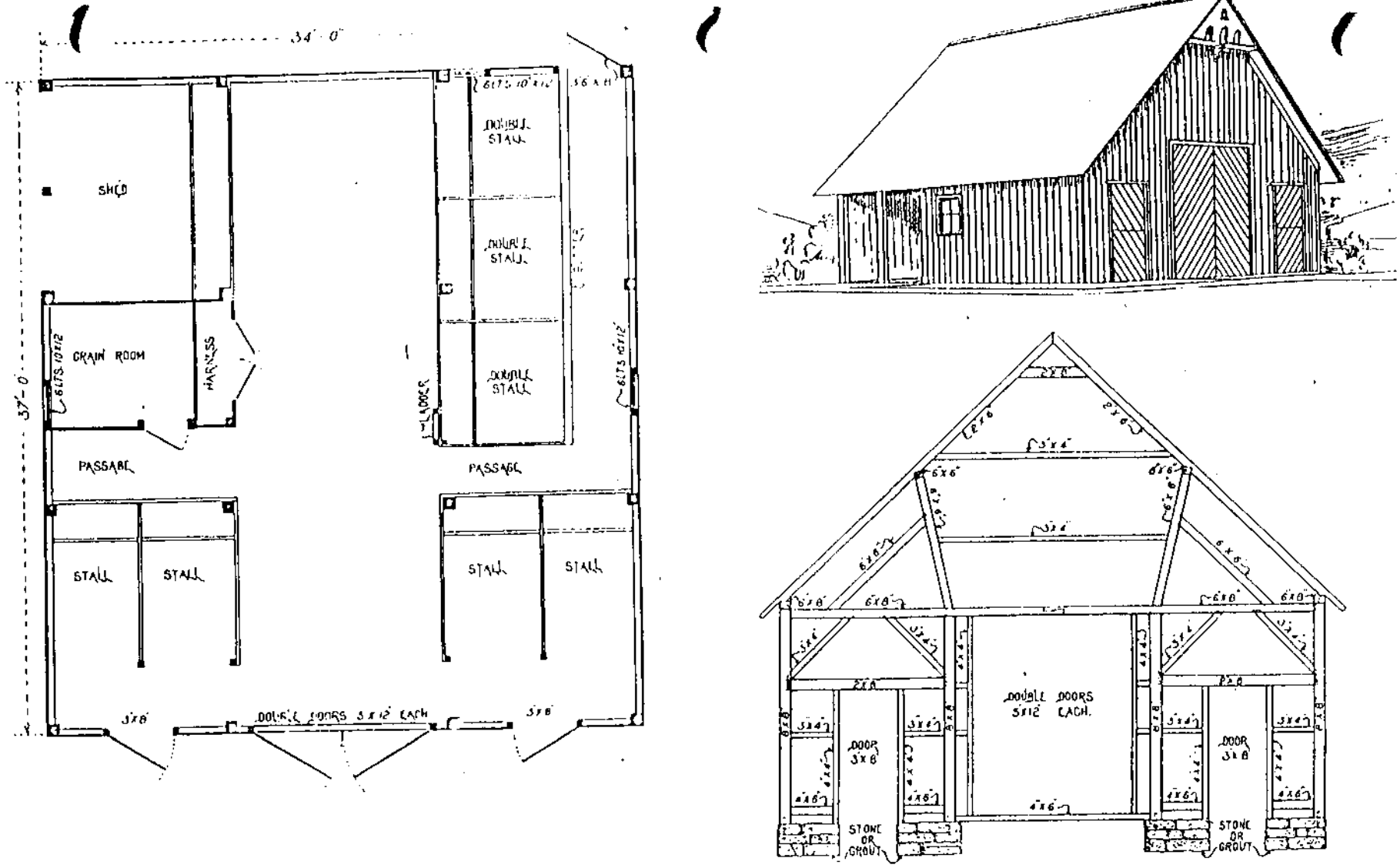


Figure 12

Floor Plan, End Construction, and Perspective

#450 Barn

because they were used in housing livestock. Two variations can be identified, primarily on the basis of plan. The first type is merely an expanded barn achieved by adding enclosed side aisles. In some instances such additions are clearly an afterthought and the roof line is broken, indicating the addition of a later roof to cover the added aisle. Such an aisle is sometimes used to stable livestock. Early gable roofs in many cases have been replaced by gambrel roofs, but the addition of the aisle roof is still easy to identify. In the twentieth century, barns were built with original gambrel roofs spread to cover the side aisles. The second type of the Midwest three portal barn represents the culmination of this line of evolutionary development. The central aisle has been reduced to a narrow walkway, but flanking cribs or stables have been added. The dimensions of this barn are between 36' and 42' on a side, and often the gable wall is longer than the side wall. The roof line may or may not be broken, depending upon whether or not the barn was fully conceived or simply grew by accretion. In addition to providing hay storage, these barns were used to house livestock and machinery, and often grain as well (see Figure 13).

The German Bank Barn

Although there are many variants of the German barns, the type most likely to be encountered in Region 2, is the Sweitzer barn. It is basically a $2\frac{1}{2}$ story building. The lower floor, devoted primarily to cattle stalls, stables, and other space for animals, is normally partially excavated. Such a situation in which the structure is built into the hillside helps conserve heat in the winter season and, conversely, provides a cooler environment in summer. The lower story is constructed of stone or concrete. The upper floor is conventionally divided into three units -- either two cribs and a drive-space or three bays. Entry to the upper floor is by double wagon doors centered on the upslope side of the barn. The center area of this level was designed originally for use as a threshing floor. This use is verified by the occurrence of threshing doors in an opposing position, opening out over the feeding lot. These doors have no entry or access function, but serve only to promote the winnowing associated with grain threshing by hand. Side bays permitted storage of farm machinery and tools as well as unthreshed grain. Often a bay was used as a hay mow. Threshed grain usually was stored in granary bins built into the forebay of the barn. The most distinctive structural feature of the Sweitzer barn is this forebay, the second-story projection or overhand on the downslope side of the barn. The forebay offers several advantages. First, because it extends out over the feed lot, it affords projection for stock in inclement weather. Second, the projection obviates the necessity of shoveling snow away from the basement doors. Third, chutes cut into its floor provide a means by which feed, straw, and hay can be dropped directly to the stock in the feed lot below. Finally, the forebay permits a larger second story than is provided by the foundation walls. The forebay is supported by cantilevered beams. Posts or columns are not normally used for support of the forebay. The barn may be constructed of logs, timber frame, birch, or stone, but the forebay is invariably of timber framing covered with plank siding. In early designs, the gable roof of the barn is assymetrical, with the forebay continuing the roof line, but in later designs a symmetrical roof line appears. The Sweitzer barn is crowned by a commodious loft used for hay storage. The interval plan of the barn is

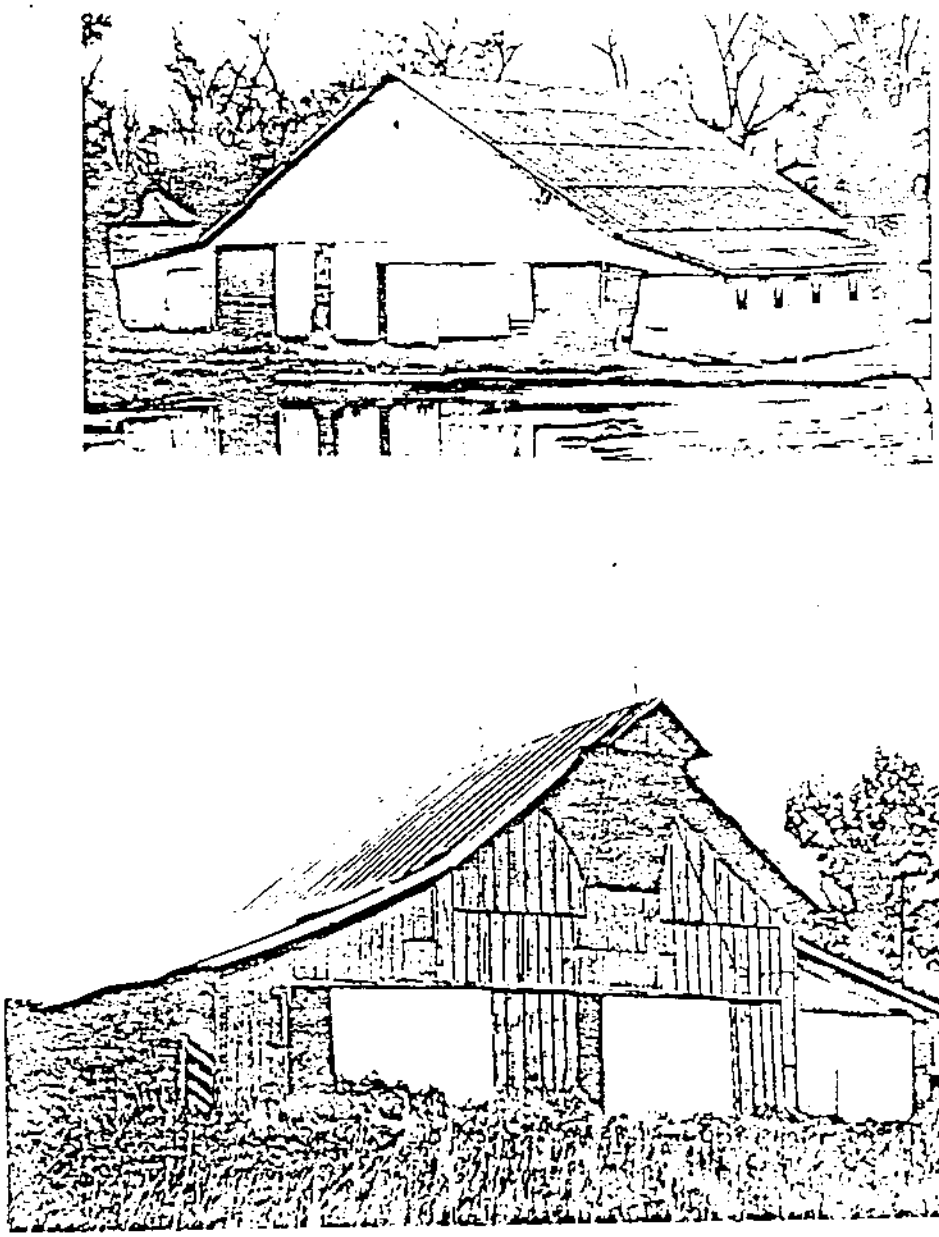


Figure 13

Midwest Three-Portal Barn

simple. There are usually three units on the second floor and rows of cow stalls and stables separated by aisles on the lower level. Access to the lower level is provided by a number of Dutch doors positioned on the wall under the forebay. Barn proportions are usually three to two, i.e., three bays wide and two bays deep, although barns four to seven bays are not unknown. Furthermore, the width and depth of a bay may not be equal in size (see Figure 14).

The general purpose barn should be located on a pre-1930 farmstead about 150 to 200 feet from the farmhouse and, if possible, in the direction away from the prevailing summer winds. The general purpose barn should stand on its original site.

II. Significance

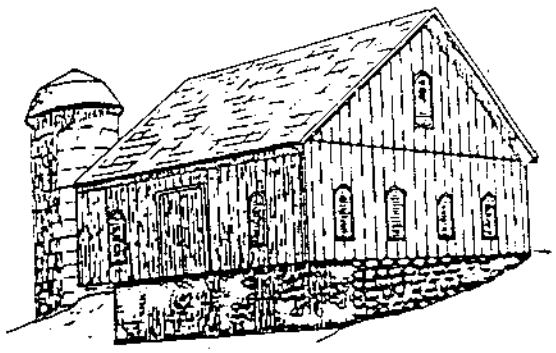
General purpose barns were significant historic resources in Management Region 2 prior to 1930 because the region was an important agricultural part of Oklahoma's economy. Census data indicate that farms in the region by 1900 averaged approximately 240 acres and were fairly diversified in terms of producing crops and livestock. Therefore, general purpose barns which provided a variety of functions were common. General purpose barns usually housed two or more classes of livestock (horses, dairy cows, or beef cattle) and the barn was designed to combine facilities for feeding and housing several animals and that the different classes of livestock be separated. If milk was produced, housing of dairy cattle had to meet certain legal requirements for the production of graded milk including ample light, ventilation, and sanitation. In most cases, horses and cows should be separated by a tight wall and it was not a good practice for cattle and horses to share a common feed or litter alley.

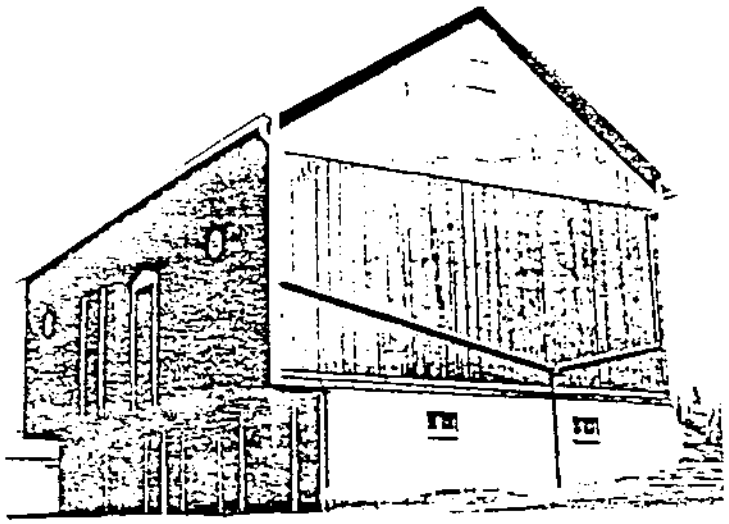
III. Registration Requirements

To be eligible for listing in the National Register of Historic Places, general purpose barns must retain integrity of setting, materials, and design. The general purpose barn should be located on a pre-1930 farmstead and should be set with the long axis to the north and south for best lighting and to form a protection for a sheltered yard. The general purpose barn should be 150 to 200 feet from the farmhouse, and if possible, in the direction away from the prevailing summer winds. The general purpose barn should be located on its original site and not been moved to another location on the farm acreage, or to a nearby farm or town.

General purpose barns to be eligible must retain one of the basic floor plans. For rectangular style, it should be approximately 30' X 150' and should be able to accommodate two rows of stock. The square barn should be approximately 36' X 36'. The L-shaped barn should be placed with the long axis north and south with the ell, or wing, attached to at the north end on either side. The U-shaped barn should consist of two separate barn units, parallel to each other, and connected by a passage or shelter wall. The round barn should be approximately 60' in diameter.

The general purpose barn should retain the original walls of either wood or stone, both the most common materials in Region 2. It should not have any additions or other major alterations such as synthetic siding or other materials which would detract from its architectural integrity. The roof design must be intact and follow any one of several shapes including shed, gable, gambrel, monitor, half-monitor, or Gothic. Although roofing materials may have been replaced over time, it must retain the original roof lines.





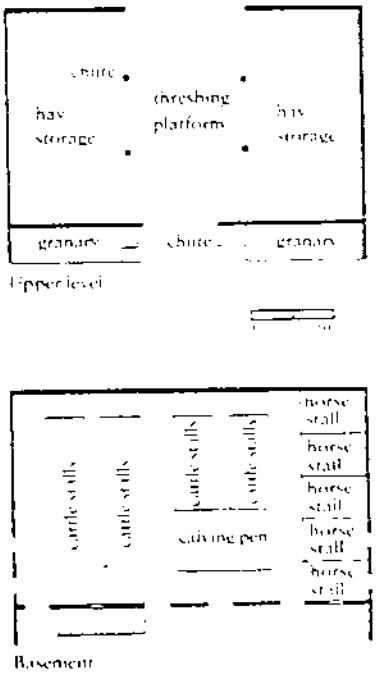


Figure 14

Sweitzer Barn and Floor Plan

The three-portal barn must possess certain features to be eligible. It should have a broadly-pitched gable roof with three openings, or aisles, through the barn. One of these aisles is placed in the main section and the other two are located in the shed type sections on either side of the main part. Construction materials were milled lumber and roofs were originally shake shingles. Original siding should remain intact, however, wood shake shingles may have been replaced with corrugated metal materials.

The German bank barn to be eligible must contain certain features. The most distinctive design element, which must be present, is the forebay, a second-story projection or overhang on the downslope side of the barn. It should be a $2\frac{1}{2}$ story barn with the lower floor partially excavated into a hillside. This lower floor must be designed to accommodate cattle stalls and stables. The second floor should be divided into three units--either two cribs and a drive-space or three bays. The upper half story should be used as a hay loft. The construction materials may vary from timber frame to stone, but the forebay should be of timber framing with plank siding. The roof shape should be an assymetrical gable with the forebay continuing the roof line.

The general purpose barn must have been associated with a pre-1930 farming operation and used for shelter for farm animals and storage for grain, hay, and other farm produce.

DAIRY BARNS

I. Description

Dairy barns as an agricultural property type require greater care in design than any other farm building except the farmhouse. It is not possible to standardize complete dairy barn descriptions because each farm furnishes an individual problem. The items of stalls, mangers, gutters, alleys, and pens pose problems of standardization, however, the following paragraphs present several features found in dairy barns during the pre-1930 period.

In terms of ceiling height, 8½' is the best. Ceilings below 8' afford too little headroom, and interfere with correct lighting. The height is measured from the alley at the rear of the stalls to the under side of the joists.

The best width for the dairy barn is between 32 and 38 feet, providing for two rows of stalls lengthwise of the barn. A width of 34 to 36 feet works out to the best advantage in affording correct widths of alleys and stalls.

The length of the dairy barn depends entirely on the amount of stock to be housed. Barns of 150' or more in length are not uncommon.

Cows in stalls may face the outer wall, with a single cleaning alley in the center, or they may face on a center feeding alley. Cow stalls are of varying widths of from 3'2" to 3'6". An average length of stall platform from curb to gutter is 4'8" as this length will care for the average dairy animal.

The dairy manger should follow the recommended U.S.D.A. standard measurements:

Width (Inches)	Height of Front (Inches)
20	6
24	12
28	18
32	24

The shape of the bottom of the manger is formed by the arc of a circle between the front of the curb and the manger front. The radius of the arc is 18", and is centered at a point 7" in front of the stall frame. Concrete is the recommended material for the manger.

The curb forms the rear of the manger, and serves to hold the stanchions and stall frame. Bolts, plates, or anchors are placed in the curb at the time the concrete is poured, and the equipment is bolted fast later. The curb is 6" high, and 4 to 6" wide.

The gutter is usually 16" wide. On the stall side the depth is 7 to 8 inches, and on the alley side about 4 inches. The bottom of the gutter should be made level crosswise rather than sloping and the litter alley made about 3" lower then the platform.

The feed alley should be from 5 to 6 feet wide if the cows face the center of the barn. In the face-out arrangement the minimum width should be 3'6", and 4' is considered the best width. A center litter alley should be from 6 to 8 feet, and at least 4 feet 6 inches when the stock face the center.

In case a driveway through the barn is desired, 8 feet is the minimum width between gutters or mangers. The best alley widths, in connection with the widths given above for stall, manger, curb, and gutter, can readily be secured in the common widths of 34 to 36 feet for the entire barn.

Concrete is the most desirable material for the dairy barn floor. For the standing platform, wood blocks or cork brick are commonly used. The latter materials are laid on a concrete base (see sketches of typical dairy barn floor plan in Figure 15).

The dairy barn should be located on a pre-1930 farmstead usually about 150 to 200 feet from the farm house and in the direction away from the prevailing summer winds. It should be located on its original site.

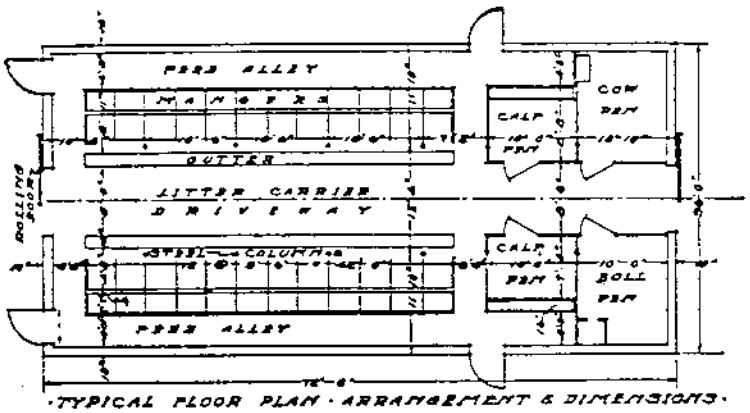
During the last quarter of the nineteenth century, the Agricultural Experiment Station at the University of Wisconsin developed a style of barn suited to the dairy industry. It became popular throughout the Midwest and Great Plains and would likely be the style found on dairy farms in Region 2.

Wisconsin Dairy Barn

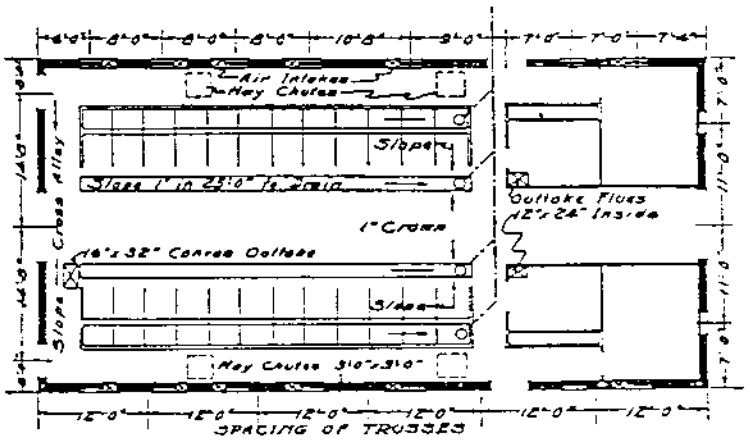
The combination of lumber-truss construction and the gambrel roof was followed. The Wisconsin dairy barn is normally only about 36' wide, but often a hundred feet or more in length. Because of the narrow width the Wisconsin dairy barn prototype provides excellent interior light, one of its most important advantages. Rows of small windows are designed to maximize light penetration. The interior is arranged to accommodate two rows of stanchions, with horse stalls at one end. The main central aisle runs from gable to gable and a short transverse aisle may connect doors midway on the sides of the structure. Ceiling heights are rarely more than 8 to 9 feet, to conserve the heat generated by the animals in the winter. The Wisconsin dairy barn incorporates a system of ventilator chutes in its interior design in order to provide sufficient ventilation for cooling. Conspicuous roof ventilators are thus usually an exterior feature of Wisconsin dairy barns. The very large loft, created in part by the gambrel roof, provides maximum storage area for the hay and feed requirements of large dairy herds (see Figure 16)

II. Significance

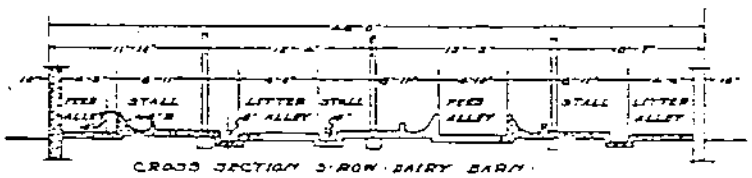
Dairy barns were a significant property type in Management Region 2 prior to 1930 because milk production averaged approximately 2 million gallons per county by the year 1910. During the next 20 years, milk output increased to over 4 million gallons per county per annum. Dairy barns as a separate farmstead unit became increasingly necessary because of the type of commodity produced in them--milk. Because it was used for human consumption, sanitary requirements of light, ventilation, drainage, and cleanliness became important factors. In most cases, the dairy barn became the second most important building in the farmstead and was kept as clean as the farmhouse kitchen. Another important consideration was convenience and the floor plan of the dairy barn had to be arranged to meet certain specifications if the producer was to market graded milk. The dairy barn was also significant because of the daily demands in the production of milk. Morning and evening the cows had to be milked each day of the year so proper arrangement of equipment was also necessary in order to reduce the amount of labor needed.



·TYPICAL FLOOR PLAN · ARRANGEMENT & DIMENSIONS·



·FLOOR PLAN SHOWING LOCATION OF DOOR WINDOWS · DRAINS · HAY CHUTES · AND VENTILATING FLUES ·



CROSS SECTION 3-ROW DAIRY BARN

Figure 15

Floor Plan and Cross Section

Typical Dairy Barn

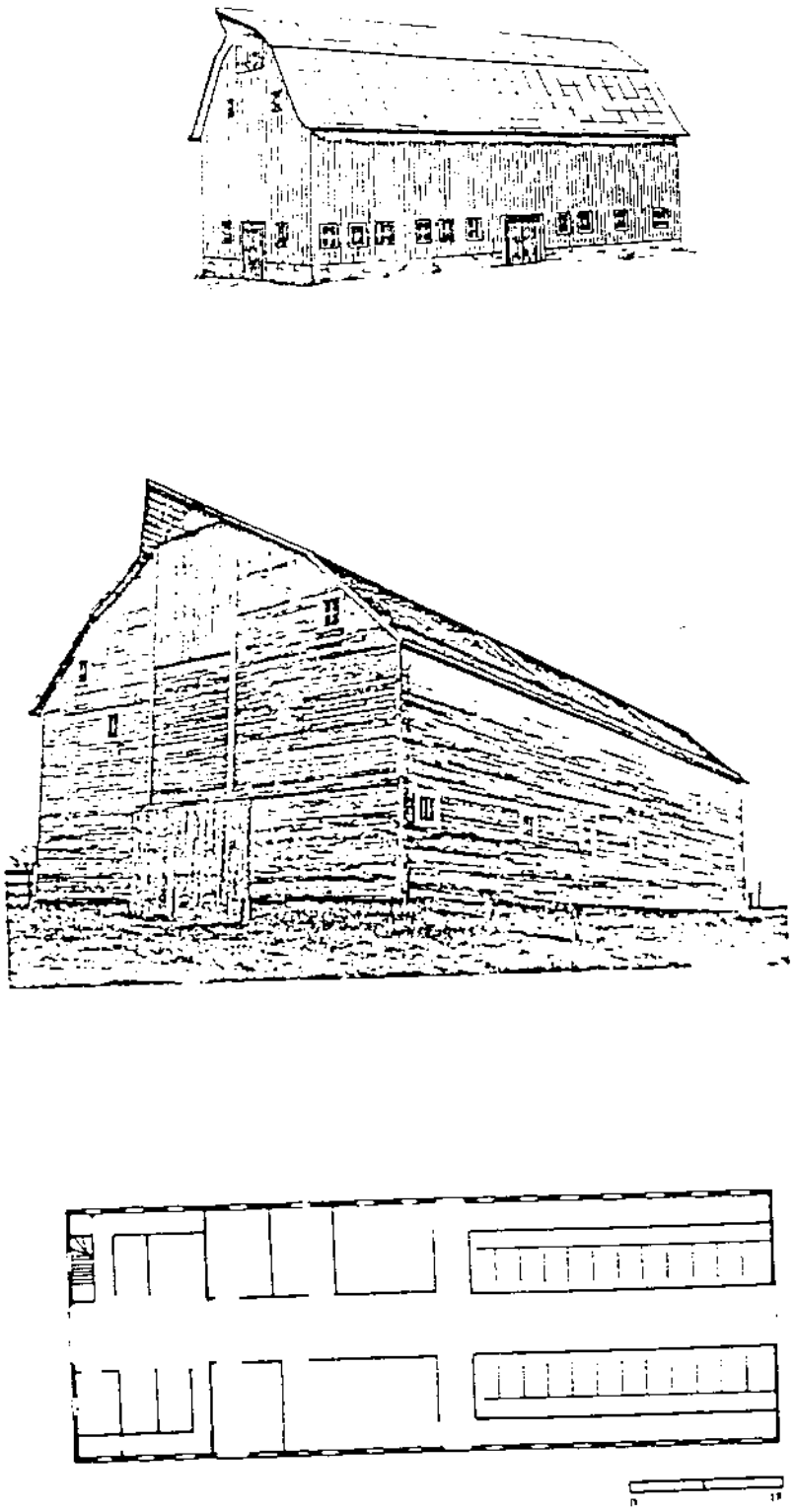


Figure 16
Wisconsin Type Dairy Barn

III. Registration Requirements

To be eligible for listing in the National Register of Historic Places, dairy barns should retain integrity of setting, materials, and design. The dairy barn should be located on a pre-1930 farmstead usually about 150 to 200 feet from the farmhouse and in the direction away from the prevailing summer winds. The dairy barn should be placed with the long axis north and south in order to secure direct sunlight on the stalls for as much of the day as possible.

Original construction materials of either wood or stone must be present. Lumber-truss construction and a gambrel roof should be retained to be eligible. The dimensions may vary, but should be approximately 32' X 100' and about 8-10' high. Dairy barns should contain certain exterior features including rows of small windows and several metal cupolas on the gambrel roof ridge to provide ventilation. Roofing materials may have been replaced over time due to weathering, however, the basic roof lines must remain intact.

The dairy barn should not have any additions and be free of new siding or any materials that would affect its historic and architectural integrity.

The dairy barn's eligibility should also be based on the fact that it was a working dairy barn on a pre-1930 farmstead and was a building located within a pre-1930 farmstead which was considered a working farm operation.

FARM ANIMAL STRUCTURES

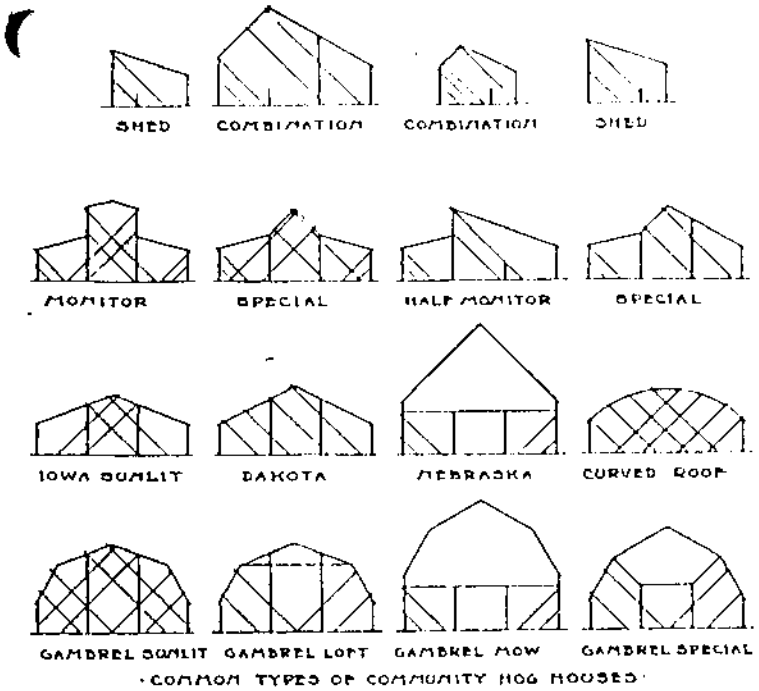
Hog Houses

I. Description

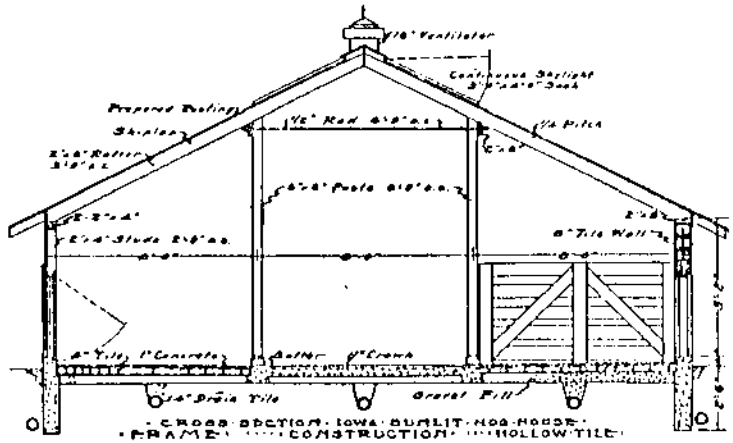
There are two types of hog houses: movable and community. The most common type of movable hog houses are the gable-roof, combination, and A-shaped. The gable-roof hog house has a vertical side wall of about $2\frac{1}{2}$', and utilizes the full area of the floor. The roof is of two equal pitches. End doors are provided for entrance, and large doors are placed in one slope of the roof, for airing and sunlight. The side walls may be nailed tightly to the studding, or they may be hinged at the top to open outward, to provide shade in the summer. The object of the combination-roof hog house with unequal pitches is to afford more headroom and more direct sunlight when the house is faced to the south. The construction is not essentially different from the gable-roof house. The A-shaped house does not have side walls, but the A-shaped roof is carried to the floor. This simplifies the framing, and reduces the amount of material needed. The angle of the roof with the floor affords a space which protects the little pigs from being crushed by the mother. The sides may be hinged at the side or top, forming doors. The door hinged at the top provides shade, while the doors hinged at the side permit better airing and direct sunlight.

Construction of the movable house types is practically the same. The size found most satisfactory is 6' x 8'. The runners or the sills of the house should be made of 4" x 4" fir, cypress, or other moisture-resistant wood, beveled at the ends for easy moving. For the floor 2" x 12" lumber is necessary, the planks being nailed directly to the runners. Framing is entirely of 2" x 4" material, usually yellow pine. One thickness of covering of 8" or 10" shiplap is all usually needed.

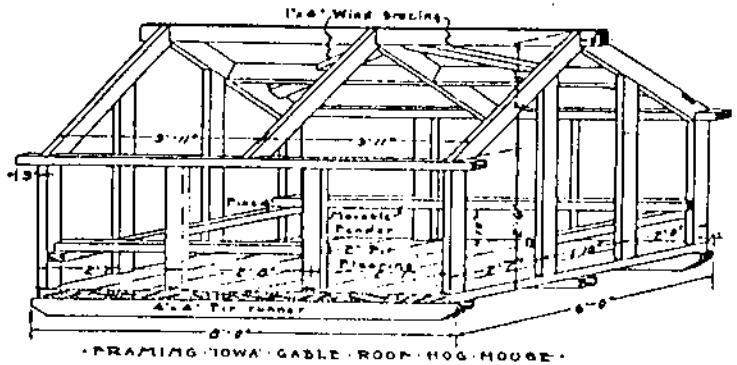
There are several types of community hog houses which are categorized by roof type: shed roof, combination-roof, monitor, half-monitor, gambrel, and gable roof. The shed roof type is usually a one-row house, 12 to 14 feet wide. The roof consists of a single pitch, and the windows are in the front wall. The rear wall is about 5' high, and the front wall is 6 to 9 feet in height. It is used for the one-row or small two-row house. The monitor roof house is set north and south and has no windows in the roof. The monitor or center portion is made higher, and a row of windows placed on each side of the monitor, for the purpose of getting direct sunlight. The half-monitor roof house is popular as a south-front house. The side walls are 4 to 5 feet high, and the total height of the house is 12 to 14 feet. There are two rows of windows, one row in the upper and one row in the lower south wall. The gambrel roof with two slopes on each side affords good lighting arrangements. There are four rows of windows in the roof, providing light in the pens throughout the day. The gable-roof house has three variations: Iowa Sunlit, the Nebraska, and the Dakota. The Iowa Sunlit is set with the long axis north and south, a continuous row of windows being placed in each slope. The Nebraska house is set north and south, but the walls are made 6 to 7 feet high, with all windows in the side walls. The roof is made at a half pitch, and feed and bedding storage is provided in a loft. The Dakota type has the long axis to the east and west, and has two rows of windows in the south slope. The doors may be omitted from the north wall, and the wall banked for warmth (see accompanying sketches of movable and community hog house types in Figure 17).



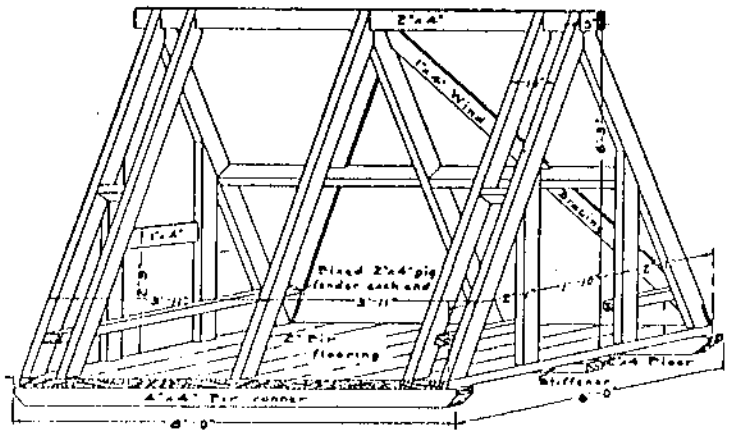
·COMMON TYPES OF COMMUNITY HOG HOUSES·



·CROSS SECTION·IOWA GUMLIT HOG HOUSE·
·FRAME·····CONSTRUCTION·····HOLLOW TILE·



·FRAMING·IOWA·GABLE·ROOF·HOG HOUSE·



·FRAMING A SHAPE·HOG·HOUSE·

Types of Hog Houses

Figure 17

Poultry Houses

The two types of poultry houses in common use are the colony, or small house, and the community, or permanent house. The colony houses are usually built on sills, which serve as runners so the house can be moved. Four by four-inch wood sills are commonly used in the construction, together with 1" flooring, 2" x 4" framing, and tight boards for the covering. Two types of roofs are used for the colony house. The shed-roof house is 5' high at the rear and 7' high in front with a door and window in the south side. A size of 6' x 8' is standard for the shed-roof house. The gable-roof house, usually 6' x 8', has side walls 5' high with a door and window in the end.

The community poultry house may be classified by roof type: shed, gable, combination, or half-monitor. The shed-roof house is usually 14 feet wide. The roof is a single slope, and the house should face south. The north wall is made 5' high, and the front is about 8' high. The walls may be either of hollow tile or frame. This type house is frequently built with an open front. The gable-roof house has two-slopes, low walls, and a steep-pitch roof. The windows are placed in the gable ends. The combination roof house has a short rafter in the south slope, giving more headroom than the shed type. The south wall will accommodate full-size windows, and the doors are placed in the ends. The half-monitor, or "sawtooth" house has a front wall covered with screened openings, and adjustable windows in the monitor, or center of the house. The front part provides a scratching shed 8 or more feet wide, and the usual width of 10 feet is available for equipment (see Figure 18).

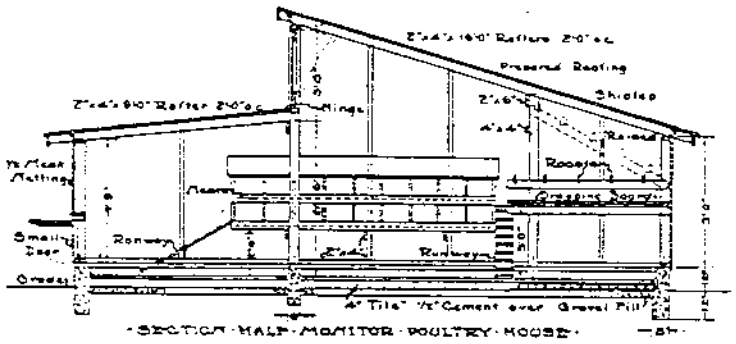
Feeding Barns for Beef Cattle and Sheep

Although there are various shapes and kinds of structures used for feeding livestock, the common ones may be classed as either open-shed barn, monitor barns, or closed barns. The open-shed barn may be a single shed, closed on three sides, and open to the south, or it may be L- or U-shaped, open on the yard. One-story sheds with one slope, gable, or combination roof are economical. Two-story shed barns are open along one side, but there is a loft for hay storage. Shed barns are often connected in the form of an L to the general purpose barn.

The monitor barn consists of a main part, 16 to 24 feet wide, for hay storage, and the hay space extends to the ground. On two or three sides of the barn are sheds for the stock, each 14 to 20 feet wide. Hay is fed into racks from the loft, and wide doors are provided at the ends of each shed.

The two-story closed barn harmonizes well with the other barns on a farmstead, affords ample hay storage overhead, and can be built with a self-supporting roof. The hay can be fed through chutes. The feed alley is usually built higher than the pen floors (see attached sketches for beef and sheep barns in Figure 19).

Farm animal structures should be located on a pre-1930 farmstead and must stand on their original sites. Hog houses should be located on a site fartherest away from the farmhouse, poultry houses should be located closer to the farmhouse than other farm buildings, and sheep and beef cattle barns should be located near silos, cribs, or main barn.



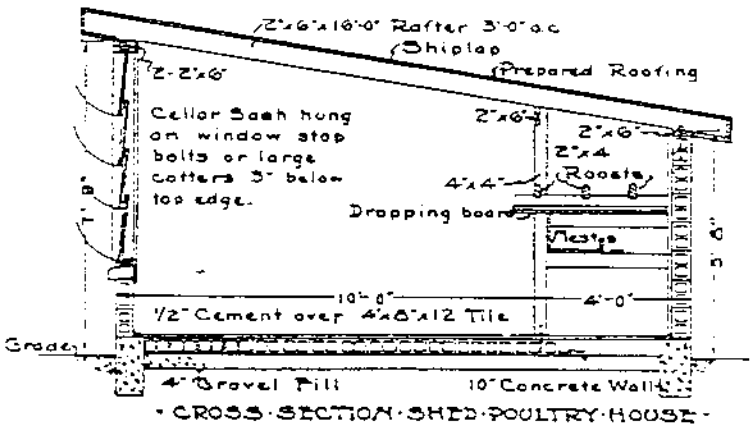
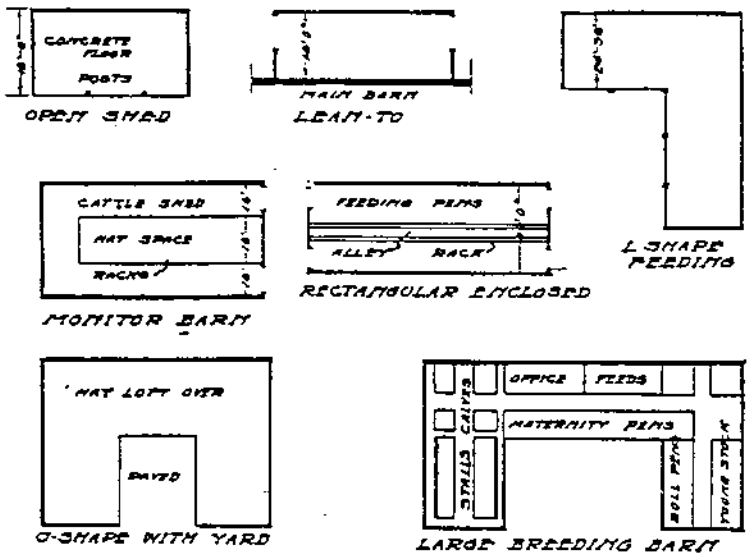
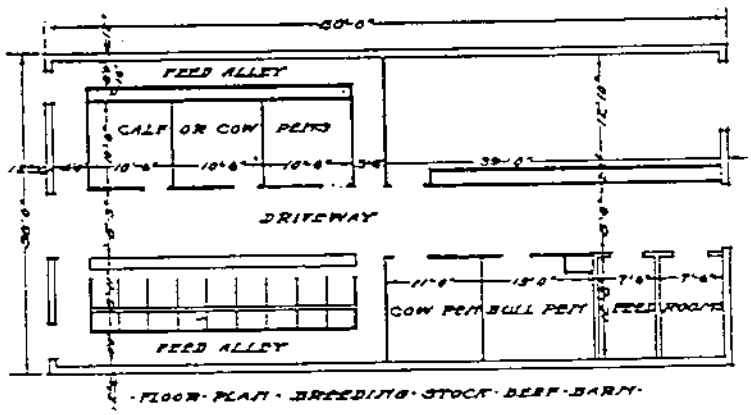


Figure 18

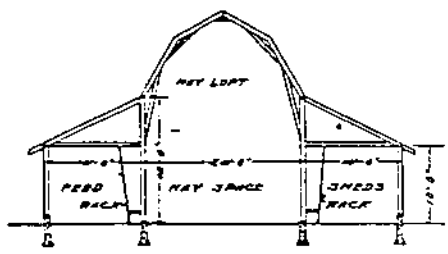
Types of Poultry Houses



·COMMON TYPES OF BEEF BARNS·



·FLOOR PLAN · BREEDING STOCK · BEEF BARN·



·MONITOR FEEDING BARN·

Figure 19

Beef and Sheep Barns

II. Significance

Farm animal structures were significant resources in Management Region 2 because all ten counties were raising cattle, sheep, swine, and poultry by 1900. The number of swine in 1900 ranged from 5,059 in Woodward County to 52,298 in Woods County. Beef cattle in each of the ten counties numbered from 20,000-30,000 in 1900. Poultry figures indicate a range of 61,774 in Woodward County to 306,924 in Woods County. Finally, sheep production ranged from 30 in Noble County to almost 4,500 in Woods. By 1930 swine numbered more than 7,000 in each county, sheep production had increased in all ten counties, beef cattle numbered more than 25,000 in each county, and poultry had reached to over 155,000 in each county. Proper housing for farm animals resulted in a more sanitary farmstead and a more healthful place for the animals. Fewer losses resulted from disease and more animals per herd or flock were raised. Better housing also helped in reducing labor. Furthermore, it was essential that livestock be handled in good quarters if the farmer was interested in development of pure-bred breeding.

III. Registration Requirements

To be eligible for listing in the National Register of Historic Places, farm animal buildings should retain integrity of setting, materials, and design.

Hog houses should be located on a pre-1930 farmstead fartherest away from the farmhouse. They should be located on a working farm and should have been used to provide shelter for hogs and their litters. Hog houses should follow one of the basic designs that were in use prior to 1930. These included shed, monitor, half-monitor, gambrel, or gable. Walls of the hog house must include original construction materials of either frame or concrete. Roof framing should consist of 2 X 4 or 2 X 6 material. The design style should be either community or portable, although the latter may have been removed from its original site.

The poultry house should be placed with the long axis east and west, and may be located closer to the farmhouse than other buildings. It must be located on a pre-1930 farmstead and should have been used to house laying hens on a working farm prior to 1930. Construction materials should be timber frame, however, hollow tile walls were also in use prior to 1930. The design should follow either the colony or community style, both were common during the pre-1930 period. Colony type houses should possess a shed roof, whereas the community style houses may be either shed, gable, or half-monitor. Windows should be placed in the south wall of the poultry house to furnish sunlight.

Sheep and beef cattle barns should be located on a pre-1930 farmstead and should be placed near silos, cribs, or main barn. They should stand on their original construction sites and should have been used for housing and feeding sheep and beef cattle on a working farm operation prior to 1930. These barns should contain original construction materials, either wood or stone, and should follow one of the pre-1930 designs--open-shed, monitor, or closed. The open-shed barn should be a single-shed either closed on three sides and open to the south, or L-or U- shaped open to a yard. The monitor style should be 16 to 24 feet wide with sheds 14-20 feet wide on either side. The closed barn should be two stories with the second floor used for hay storage.

GRANARIES AND CRIBS

I. Description

Grain was a principal crop on a large number of farms in Region 2 prior to 1930. The market value of grains made it essential that care be taken to preserve and market the crop in the best condition. Lack of proper structures to house grain resulted in losses due to weather condition, rodents, and fluctuating prices. Moreover, a good grain storage facility made it possible to hold the crop for favorable prices.

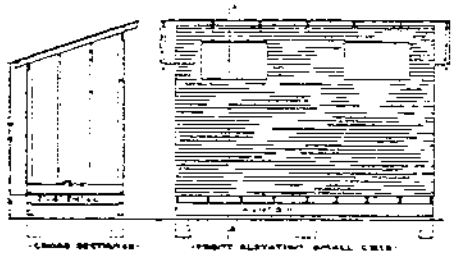
The three types of storage buildings for grain are the corn crib, granary, and combined crib and granary, or farm elevator. If corn is the only product to be stored, the separate crib for ear corn, with possibly a tight bin for shelled corn is all that is required. The separate granary is used for small grains. The building is tightly constructed with strong walls and heavy floors. All granary designs should be figured for wheat storage as it is the heaviest grain.

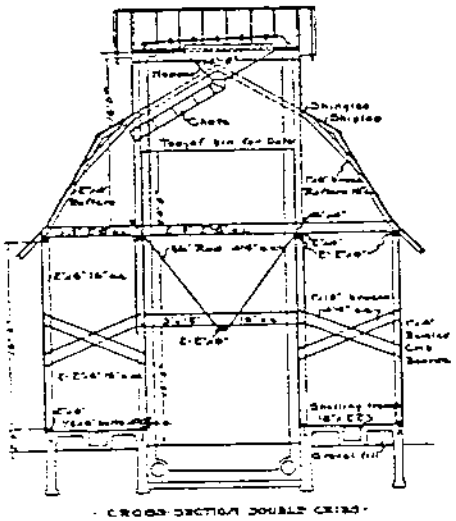
The width of the corn crib is determined by the condition of the corn when cribbed. In most sections of the country, the corn is cribbed before it is fully dry. To prevent spoiling and allow for thorough drying, the width should be between 8 and 9 feet. Double cribs have a driveway 10 to 14 feet wide. Grain bins should not be more than 10 feet wide for convenience. The double crib and granary will be from 20 to 30 feet wide. A length of 36 feet will accommodate the grain on most farms. Ten feet is about the maximum height of bin or crib for hand shoveling. With elevating machinery, the height may be made as desired. The best height is from 16 to 20 feet from foundation to eaves. The capacity of the building is determined by the yields, acreage, kind of grain, and type of farming. The total yield should be calculated, and the grain storage designed to hold the crop.

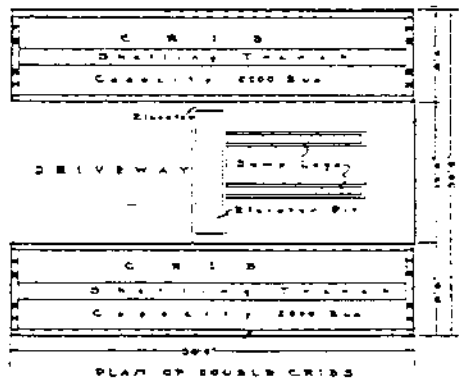
The most common shape for the combined crib and granary is square or rectangular. Frame construction is easiest to handle in the rectangular building. Hollow tile and concrete were especially adapted to round buildings, and for this reason the round crib and granary have been used.

Individual granaries are characterized by a lack of windows and its elevation on several short piers of wood, stone, or cement block. Both of these features are to make the structure as animal proof as possible and to raise the structure above the damp ground. The interior of the granary was usually divided into a series of bins or compartments for ease of grain holding and to permit storage of more than one grain (see Figure 20).

Individual corn cribs were constructed of logs, timber frame, masonry, or metal. One of the functions of the corn crib was to permit the slow drying of the corn in order to reduce losses from mold and mildew. To accomplish this, the crib must possess certain basic design features, which can be used to identify the structure. First, the walls must contain a high proportion of open area, usually attained by use of widely spaced, narrow slats. Second, the structure must be narrow in order to ensure adequate circulation of air. Widths ranged from 6 to 10 feet in the Great Plains. The earliest corncribs used unhewn or split logs of small diameter, usually laid up with saddle notching. The bottommost logs were placed on log or stone piers. Although many often were left open, the best cribs had wood-shingle, gable roofs. At a second stage of development, in order to provide the maximum weather







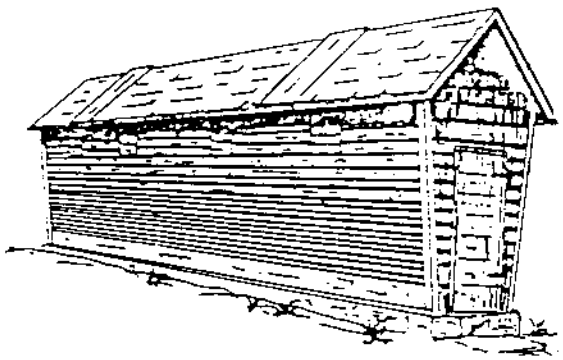


Figure 20

Single and Double Corn Cribs

protection and, at the same time, to assist in gravity unloading, the sides were constructed to slant outward toward the top, giving the crib a coffinlike gable profile (see attached photo in Figure 21). The largest opening is usually a man-size door in the gable wall. A final diagnostic element of the early corncrib design was the use of an overhanging skirt of lumber or metal, about a foot or two above the ground. This was a device to reduce as far as possible the depredations of rats, mice, and other small animals.

Granaries and cribs should be located on a pre-1930 farmstead in a rural setting and should stand on their original construction sites. They should be located near the feeding barns, hog house, and poultry house in the farmstead plan. They should be located so that a wagon may be driven through it, or pass alongside.

II. Significance

Granaries and cribs as agricultural structures were an important class of resources because corn, wheat, and oats were principal crops raised on farms in Region 2 before 1930. By 1930 two counties (Alfalfa and Garfield) produced more than 3 million bushels of wheat each year and three counties produced more than 2 million bushels of wheat (Grant, Woods, Ellis, and Harper). Kay County produced over 1 million bushels of corn. The market value of these crops made it imperative to preserve and market them in the best condition. Lack of storage facilities resulted in losses due to weather conditions, rodents, and fluctuating prices.

III. Registration Requirements

To be eligible for listing in the National Register of Historic Places, granaries and cribs should be located on a pre-1930 farmstead near the feeding barns, hog house, and poultry house. The buildings should be located so that a wagon may be driven through it, or pass alongside. Granaries and cribs should be located on a working farm of the pre-1930 period and they should stand on their original sites. Original construction materials must remain intact. Either timber frame construction for square or rectangular plans, or hollow tile for round plans, must be present to be eligible. Dimensions should be approximately 8-9 feet wide, 36-40 feet long, and 10 feet high. Corn cribs must possess certain design features to be eligible including widely spaced, narrow slats or sides; narrow in width in order to enhance air circulation; and an overhanging skirt of metal or lumber to protect against rodents.

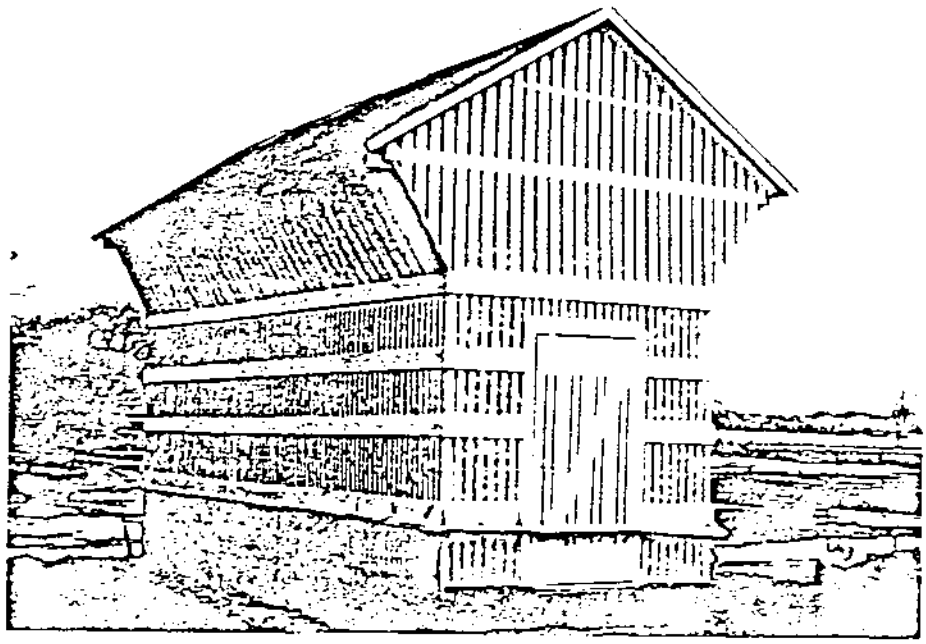


Figure 21

Corn Crib of Unusual Design

IMPLEMENT AND MACHINE SHEDS

I. Description

Farm equipment storage facilities were necessary on the farms in Region 2 in the 1920s. The necessary qualifications for machinery sheds were to give protection, afford convenience in storage, and provide plenty of space. To meet the requirements of protection, the machine shed should be tightly enclosed on all sides and have a tight roof. Continuous doors along one side are preferable to the open shed. Windows at intervals will supply light by which to work. A concrete or plank floor is desirable as an added protection. In terms of convenience, correct width, proper location of doors, and large openings are needed. The grouping of machinery according to seasonal use is recommended. Sufficient space dictates taking an inventory of machines, and measurements made to determine the size of the building. A sample inventory of the 1920s is shown in Figure 22. An even width between 18 and 30 feet is customary. The length should be made in units of 10 or 12 feet for best results in storing. Ten feet is the maximum height to accommodate the usual farm machines.

The open-shed building afforded a cheap protection from rain and snow, but was not as desirable as the closed type. The shed was open to the east for best results. The closed building with doors along one side afforded full protection, and was recommended as the best. Two-story buildings had loft space for small machines and tools.

Frame construction was most commonly used. Hollow tile or cement products may be used in the wall construction as in any other building.

The roof shape is usually of the shed, gable, gambrel, or combination type. The combination roof has two unequal slopes with the object of securing greater headroom with the least material.

In terms of construction, the frame walls are made of 1" siding or boarding on 2" x 6" studding spaced 2' apart, with nailing strips and braces between. The walls should be carried to a height of 10' to the plate. The roof frame must be cross braced and trussed for strength. The kind of framing will depend on the width.

The floor may be of plank or concrete. Doors should be strongly built, and set on a good type of track and rollers. For the continuous door it is possible to secure a parallel track outfit which makes it possible to open up any part of the building (see attached sketches of implement shed in Figure 23).

Implement and machine sheds should be located on a pre-1930 farmstead and should stand on their original construction sites.

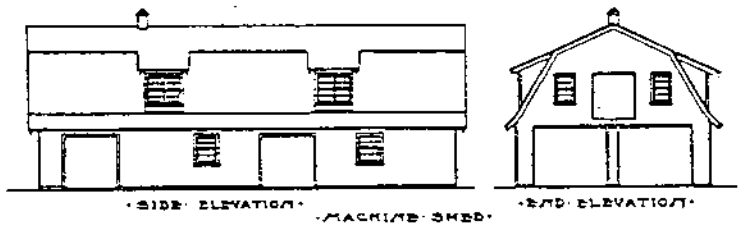
II. Significance

Implement and machine sheds were significant structures in Management Region 2 in the pre-1930 era because farm machines needed care and housing. When farm equipment was simple in construction and low in cost, the loss was not serious and a small space in the barn or crib was sufficient to house the more important implements. However, by the 1920s, farm machinery was becoming

Implement	Width	Length
Walking plow	2′	7′
Gang plow	5′	9′
Engine plow, 4 gang	7′ 6″	12′
Harrow, per section	1′ 6″	5
Disk harrow	8′	4′
Land roller	8′	3′
Grain drill, 8 hoe	5′	10′ 6″
Corn planter	6′	5′
1-row cultivator	5′	7′
2-row cultivator	7′ 6″	7′
Sulky rake	5′	11′
Side delivery rake	10′ 6″	12′
Sweep rake	10′	12′
Hay loader	9′	10′ 6″ 10′ high
Mower	6′	6′
Binder, 7′ cut	9′	14′
Silage cutter	7′	12′
26-inch thresher	8′	26′
Wagon	7′	14′
Buggy	6′	9′
Tractor	7′	12′
Automobile		12′

Inventory of Machines
ca. 1925

Figure 22



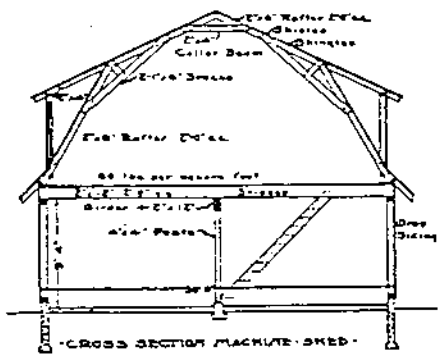


Figure 23

Machine Shed Construction

expensive and the equipment lost value rapidly when constantly exposed to the weather. U.S.D.A. reports in 1922 placed the annual loss, in depreciation due to lack of shelter, at more than 100 million dollars. The value of shelter for machinery was estimated at increasing the life of farm implements by five years or more, a savings which paid for the cost of shelter in a short time. Sheltered machinery, therefore, proved to last longer, retained better appearance, and was more efficient than neglected equipment. The necessary qualifications for machine and implement sheds were that they provided protection, afforded convenience in storage, and allowed for plenty of space.

III. Registration Requirements

To be eligible for listing in the National Register of Historic Places, implement and machine sheds should retain integrity in setting, design, and materials. The machine and implement sheds should be easily accessible from the fields and horse barn. A location on the lane or drive to the fields is desirable. The shed must be located on a pre-1930 farmstead and must have been used to store farm implements and machinery prior to 1930. To be eligible, the shed must be located on its original site.

Construction should consist of original timber frame materials with no major additions or alterations. It should be free of any synthetic siding or other materials which would detract from its architectural integrity. Original roofing materials may have been replaced with corrugated metal, however, the original roof lines should remain intact.

The design of the machine shed should be about 18 to 30 feet wide, length should be in units of 10 or 12 feet, and height should be 10 feet. The roof shape should either be shed, gable, or gambrel, all were used in the pre-1930 period. Interior space should be arranged with the idea of storing machinery by groups according to seasonal usage. Doors should be located on each side of building in order that wagons, spreaders, and tractors may be driven in and out of the shelter without hand labor.

To be eligible, the machine and implement shed must be associated with a farming operation that existed prior to 1930.

SILOS

I. Description

The silo as a property type is one of the most important buildings on the farm for the preservation of green forage. Construction materials are of either wood or masonry. There are five types of wood silos: (1) wood-stave, (2) panel, (3) triple-wall, (4) wood-hoop, and (5) creosoted-stave. Masonry silo types include: (1) brick, (2) hollow tile, and (3) concrete. Concrete silos may be concrete block, cement staves, or monolithic concrete.

The most common wood silo is the wood-stave type. The staves are made from a high grade of cypress, white pine, redwood, fir, or hemlock. The size of the stave is about 2" x 6", and each one is beveled to fit the curve of the silo, and tongued and grooved to give a tight fit. Bracing by means of stay wires is necessary to prevent the silo from blowing down.

The panel silo consists of ribs or uprights set 20-24" apart, and matched boards set horizontally between the ribs. Steel hoops are placed around the silo and hold the boards in place. This silo is not round, but is in the form of a many-sided polygon, each panel being straight.

The triple wall silo is the ordinary stave type with a layer of insulating material over the staves, and a thin drop siding bent to form, and nailed over the outside. The siding serves as hooping, and protects the staves.

The wood-hoop silo is made by building large wooden hoops, from four to five thicknesses of thin wood, bent to the circle. They are spaced 24 to 30 inches apart, and matched flooring is placed inside and outside the hoops. This affords a double wall with dead air space.

The creosoted-stave silo is the wood stave type treated with creosote preservative to lengthen the life of the wood. The three methods of creosoting are painting, dipping, and immersing under pressure. The latter method is preferable as the creosote is forced into the pores of the wood.

The brick silo is the most common of the masonry group. Paving brick are used in the construction of the brick silo. The chief difficulty is to secure proper horizontal reinforcing in a 4-inch wall, with a narrow mortar joint. A flat bar, crimped on the inner edge to form a curve, is used. The bar is about 1/8" x 1 1/2" in size, and bonds well into the joint. The wall should be laid up carefully as it is not porous. The interior is plastered with a cement mortar to insure a smooth, tight wall.

The use of hollow tile or clay blocks was first used in 1908. The blocks used are 4" to 6" thick. One or more air spaces are formed in the block. Some blocks have special grooves to receive the reinforcing. The silo blocks are curved to the form of the silo wall. The reinforcing consists of heavy steel wire embedded in the mortar joints. Reinforced concrete jambs are used, and these are tied across at intervals, to prevent spreading. The continuous door is used. The mortar joints should be pointed both on the inside and outside wall as a precaution against leakage. Since the vertical joints are the weakest part of a tile silo, care must be taken to fill the joint and secure a good bond. As an additional safeguard the silo should be given a

wash of pure cement and water inside to fill the pores. Either the conical or gambrel roof may be used (see Figure 24).

For the concrete block silo, any number of patented blocks may be used for construction. Some are curved, and have imitation rock faces. Others are made in various forms, and named from the form. Reinforcing is either embedded in the block or placed in the mortar joint. Stucco is sometimes applied to the surface for appearance and to fill up the pores. A pure cement wash is applied to the interior.

The cement-stave silo was first used in 1904. The Playford cement stave is book-shaped, 2½" thick, 10" wide, and 28" long. The Interlocking patent has an interlocking end joint. The Caldwell block has an end step joint and reinforcing in the block. The Perfection block has a hollow side joint which is filled with mortar. The staves are set with the end joints broken, or interlocked, and the silo staves bound with steel hoops, similar to the wood staves. In medium or large silos, it is advisable to place a hoop at the middle and end of the stave, or about 15" apart. This requires special door spreaders for the hoops. The hoops are 9/16 to 5/8 inch in diameter, and threaded at the ends. After the silo is erected, the hoops are tightened, and the interior given a cement wash.

Monolithic concrete silos are of solid concrete. Standard forms are used, and the entire work is done on the building site. The walls are usually built of a rich mixture of concrete in the proportion of 1:2:4. It should be well spaded to give a smooth wall, and prevent the aggregates from separating. The reinforcing is embedded in the wall (see Figure 25).

The solid concrete foundation is the most common of all silo types. It should be made 10" wide, and extend from below the frost line to a point several inches above grade. A 1:2:4 wet mixture of concrete should be used. The trench should be laid out to the diameter of the silo. The foundation should be 3½ to 4 feet deep.

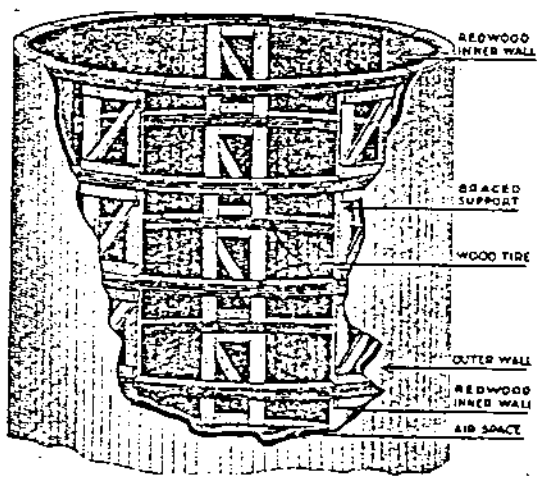
Doors for the silo may be of the individual or continuous type. The individual doors are spaced at intervals of about 4 feet on centers, each door set in a separate frame. The continuous door has sides, or jambs of masonry or steel, and cross-ties prevent the jambs from spreading, the ties serving as a ladder in many silos.

Chutes are used to cover the doors, and afford a means of throwing down silage without trouble from the wind. Chutes may be of wood, metal, or concrete.

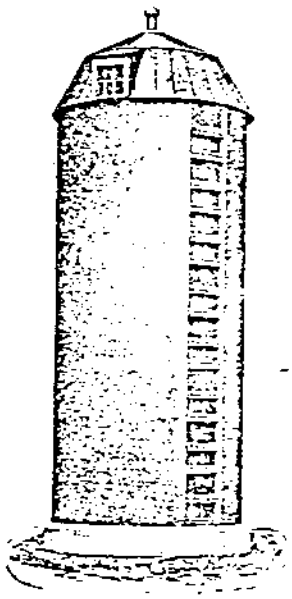
Roof types of silos vary and in many localities no roof is used. The two roof types commonly found are the low conical and the round gambrel, sometimes known locally as the "hip" roof. The conical roof may be made of wood, concrete, or metal. The wood roof is of ordinary frame construction, using 2" x 4" rafters, sheathing, and shingles. The gambrel roof is made of frame construction. The metal roof is a commercial product. Concrete roofs must be reinforced and supported until concrete has set.

During the pre-1930 period, silos ranged in diameter from 10-20 feet and were 28 to 40 feet high.

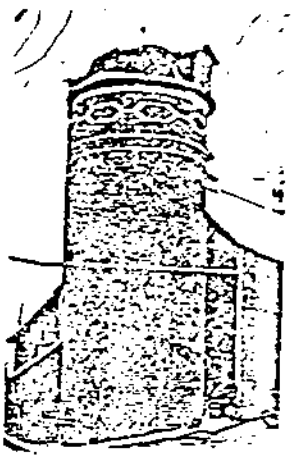




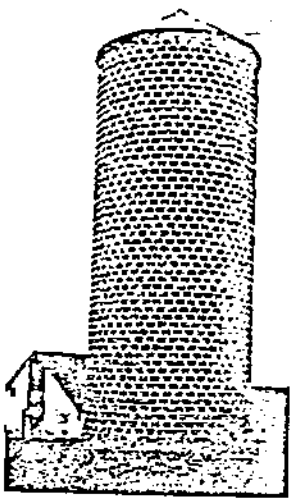
Wood Hoop Silo Construction



Wood Hoop Silo

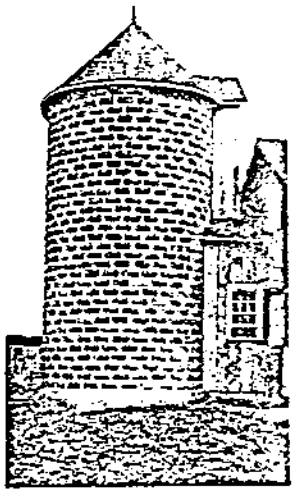


Brick Silo

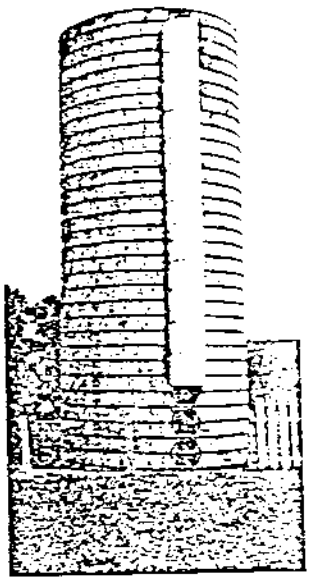


Hollow Clay Silo

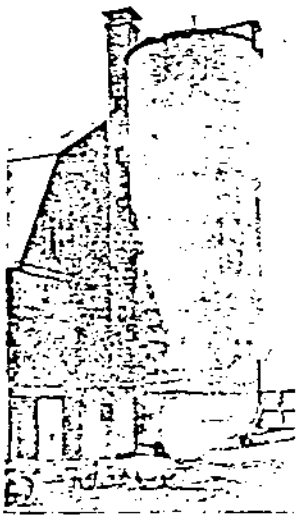
Figure 24



Concrete Block Silo



Concrete Stave Silo



Monolithic Concrete Silo

Figure 25

Silos should be located on a pre-1930 farmstead near the dairy barn or beef-feeding structure. They should be located on their original construction site.

II. Significance

Silos played an important role in the agricultural history of Management Region 2 because they allowed farmers to preserve green forage. The silo afforded an economical storage, preserved the corn or forage crop in a succulent, palatable condition, and utilized the crop completely as a feed. A silo must possess several features essential to insure good, sweet silage.

Essential features include strong, smooth, and tight walls. Walls should be made sufficiently strong, by reinforcement, to resist the bursting pressure of the silage. During settlement of silage, the silage slides down the wall. Projections or rough joints hinder free and easy settlement, and air pockets are formed, which causes spoilage. Silo walls must be air and water tight--retention of moisture inside the silo and exclusion of air.

III. Registration Requirements

To be eligible for listing in the National Register of Historic Places, silos should retain integrity of setting, materials, and design. The silo should be located on a pre-1930 farmstead near the dairy barn or beef-feeding structure. It must stand on the original site of construction and should have been used to store silage.

Original construction materials must be present. The wood-stave type should be constructed of cypress, white pine, fir, or hemlock. The size of the stave should be approximately 2" X 6", and each one should be beveled to fit the curve of the silo, and should be tongued and grooved to give a tight fit. The panel silo should consist of wood ribs or uprights set 20-24" apart with matched boards set horizontally between the boards. Steel hoops should be placed around the silo to hold boards in place. The wood- hoop silo should be made of large wooden hoops, from 4-5 thicknesses of wood, bent to the circle and spaced 24-30" apart. The brick silo materials should include paving brick walls, usually 4" thick, with a narrow mortar joint. It should also contain a flat bar, crimped on the inner edge, to form a curve. The bar should be 1/8" X 1½" in size and bonded into the joint. The interior should be plastered with a cement mortar. The hollow tile or clay block silo should consist of blocks approximately 4-6" thick. Reinforcing should consist of heavy steel wire embedded in the mortar joints. The mortar joints should be pointed on both the inside and outside walls.

In terms of design, silos should range in diameter from 10-20 feet and 28-40 feet high. Roof types should be either low conical or round gambrel, both were common in the pre-1930 period. The conical roof should be constructed of wood, concrete, or metal. The wood roof should be made of frame construction, using 2" X 4" rafters.

The silo to be considered for eligibility must be associated with a farming operation in Region 2 prior to 1930.

WELLS AND WINDMILLS

I. Description

Farmsteads in Region 2 prior to 1930 depended upon wells for their water supply. In the simplest instances, the water is raised from a dug well covered by a well-head structure, which may be round or square, about 3 feet high to prevent accidental entry, but low enough so as not to hinder water drawing, and covered usually by a gable roof raised up on wooden pillars. In other wells, water is lifted by mechanical pumps usually placed on a simple, square wooden platform. The labor involved in operating the pump to lift water was so considerable that the power of the wind was frequently harnessed to serve as the driving force. Windmills became the most conspicuous farm structures, especially in the Great Plains. Derived from the European wind-driven gristmills, the American windmill used to lift water was invented in the middle of the nineteenth century in Connecticut.

Rapidly adapted by farmers in the Great Plains to lift water, for livestock especially, they also were later used to generate electricity. The standard farm windmill consisted of a light, but strong, steel frame of four sloping legs, braced at intervals. A steel ladder provided access to the blade and rudder mechanism which required periodic maintenance, repair, and especially lubrication. Unlike traditional European windmills, which had enormous paddle blades, the American windmill possessed a series of curved steel blades set in a rosette pattern. The advantage which the American windmill had over European counterparts was that only the blades and rudder rotated and these were designed to automatically follow any wind shifts. Thus, the windmill worked constantly no matter what the wind's direction.

Windmills should be located over a deep water well usually near a pre-1930 farmstead, or in a livestock field on a working farm operation of the 1893-1930 period. It should stand on its original site. The windmill should be associated with a pre-1930 farming operation and should be located on its original site.

II. Significance

Windmills were significant historic resources in Management Region 2 because farmers used it to modify the physical environment of the land. With little surface water available, windmills furnished the power for tapping the ground water of the region which was used for several purposes pertinent to agriculture. They furnished water for the boilers of the first railroads into the region which were needed to bring agricultural equipment and supplies as well as to ship agricultural produce to distant markets. They made it possible for farmers to wean their livestock from their close proximity to the region's few streams and push the livestock onto otherwise dry upland pasture. Finally, they provided farm families with the vital liquid of life.

III. Registration Requirements

To be eligible for listing in the National Register of Historic Places, windmills should retain integrity of setting, materials, and design. The windmill should be located over a deep water well usually near pre-1930 farmstead, or in a livestock field, dependent upon its primary function. The materials should be either wood or steel. During the first two decades of

American windmill manufacture (1870-1890), all mills were wooden. By the 1890s, the production of steel had become less expensive to allow its use in increasing numbers. However, wood windmills continued in production until the 1940s and Oklahoma was one of the last strongholds of wooden mills because farmers believed they were more durable, easier to repair, and pumped more water than their steel competitors. In terms of design, there were more than 100 different types of windmills (wooden and steel) marketed prior to 1930. A Field Guide to American Windmills by Baker (see Bibliography) should be consulted for specific design details. A common farm windmill should consist of several features: strong steel or wood frame of four sloping legs, braced at intervals; a wood or steel ladder providing access to the blade and rudder mechanism, and a series of curved blades set in a rosette pattern.

The windmill should be associated with a pre-1930 farming operation and should be located on its original site.

FARMSTEADS

I. Description

The farmstead is defined as the individual locations of buildings, arrangement of buildings in relation to one another, and the location of driveways, trees, and other features which comprise the total picture. There were two types of farmsteads in use prior to 1930: concentrated and distributed.

The concentrated group includes all of the buildings under one roof, or all of the buildings connected, that is the structures are connected to form a sheltered yard or court. The advantage of this type is in economy of construction and the convenience of handling the work. The disadvantages are that fire risk is great, animal odors are objectionable in the house, and the yard space for stock is restricted. Few farmsteads of the concentrated type were used in Oklahoma prior to 1930.

The distributed system of farmstead was the type most commonly found in Oklahoma prior to 1930. The buildings are far enough apart to avoid stable odors in the house, fire risk is decreased, and better sanitary conditions exist. The buildings should, however, be located closely enough together to reduce to a minimum the labor required.

The best farmsteads usually arrange the out-buildings around a rectangle, somewhat to the rear of the house, and on one side. The house is the most prominent building with the main barn next in importance. The object in the grouping is to plan the buildings in such a manner that all may be entered without passing through gates. The feed lots should be located to the rear of the barns and away from the house.

Aside from the main grouping of buildings, others should be located near each other according to their uses. The tool shed, machine shelter, and garage should be near each other because of similarity of uses. The corn crib, hog house, and cattle-feeding shed should be near together for convenience in feeding.

The farmhouse should be nearer to the public road than other buildings with the object of showing the house to the best advantage. The barn, public road, and part of the fields should be visible from the farmhouse. The best distance from the road to the house is between 100 and 150 feet. This location affords a reasonable large lawn, and places the house away from the dust of the road. The facing of the house is usually made with respect to the road, and an east or south front is usually preferred. The lawn should be fenced in order to keep poultry and small animals away.

The stock barns should be set with the long axis to the north and south, for best lighting, and to form a protection for a sheltered yard. The barn should be 150 to 200 feet from the house, and if possible, in the direction away from the prevailing summer winds.

If hogs are raised, the hog house should be farther from the house than the barns, on account of the odors, but near the cribs, for ease in feeding.

The granary and corn crib should be located for convenience in filling from the fields, and convenient for the sheller and grinder. For feeding work, the grain buildings should be near the feeding lots and hoghouse. There should be a driveway leading to and from the grain buildings. A location between the main barn and the hog house is most desirable.

Machinery shed should be located for convenience in getting the equipment in and out of shelter. These buildings may be nearer the house than the barns, while the garage should be near the house.

The poultry house may be nearer the dwelling than other buildings, but should be kept away from the barns and grain storage buildings. It should face the south and be located on porous, well-drained soil. The ice house, milk house, and pump house may be located between the house and the dairy barn.

In regard to landscaping, an evergreen windbreak to the north and west of the buildings is desirable. The south side of the buildings should be nearly free of trees in order to take advantage of the summer winds. Fruit trees, shade trees, and flowering plants and shrubs are desirable additions to every farmstead. The farm home should have an orchard and a garden. Most of the planting should be along the side and back of the lawn rather than in front of the house.

The garden should be near the house, and not closer to the road than the house. The use of a show pasture in front, or to the side of the farmstead will serve a dual role of displaying the best animals, and providing a clean, permanent pasture near the house, instead of cultivated, dusty fields (see Figure 26).

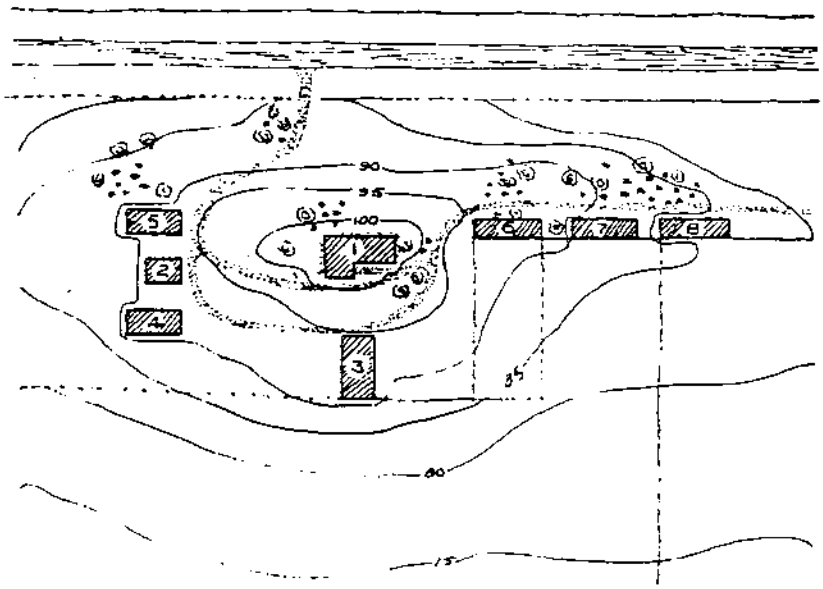
The farmstead should be located on a pre-1930 farm and must be on its original site.

II. Significance

Farmsteads as a property type were significant resources in Management Region 2 in the pre-1930 period because by 1900 each of the ten counties contained between 2,000 and 3,000 farms. By 1930 the total acreage in farmland in Region 2 had reached to more than 6,000,000. The development of a good farmstead plan was advantageous to the farm family because of efficiency, appearance, and sanitation. Efficiency was gained in grouping the buildings in order to reduce the amount of farm labor. Planning of the location of gates and fences as well as distance to the fields had a noticeable effect on the efficiency of the worker. Appearance of the farmstead played an important role in the value of the farm and affected the farmer's standing in the community. Sanitation was affected by the contour of the land, drainage, and soil texture. The relationship of the stock barns to the dwelling was also an important factor in sanitation.

III. Registration Requirements

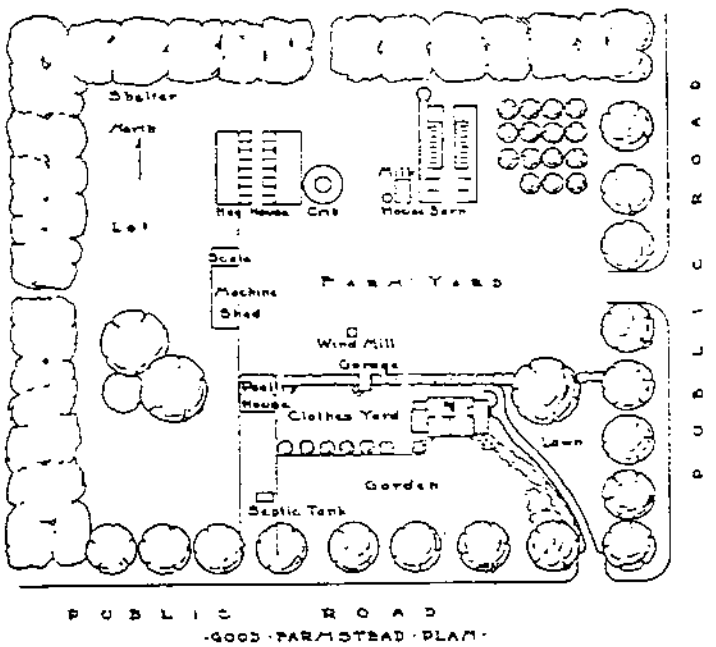
To be eligible for listing in the National Register of Historic Places, farmsteads should retain integrity in setting and design. Farmsteads should be located with three factors under consideration: outside concerns, natural conditions, and relation of the buildings within the group. Outside concerns



A North Frontage is Desirable in Oklahoma

If we have a slope south of a highway the opportunity for attractive lawn plantings is increased because of protection from south wind; our best shrubs and trees develop on the north side of a building.

1. Residence on the crest of the knoll and protected by conifers from the northwest wind, with deciduous trees to break the hot afternoon sun.
2. Haybarn between the stables.
3. Machinery shed south of the house.
4. Horsebarn close enough to encourage leaving implements at the shed.
5. Dairy barn on well drained soil; a basement barn can be readily built
6. Poultry close enough to be seen from the kitchen.
7. Sheep on the southeast slope.
8. Swine near land level enough for rape and alfalfa.



-GOOD FARMSTEAD PLAN-

Figure 26

should focus on transportation and access to schools, churches, and neighbors. In terms of natural conditions, a water supply source was necessary as well as proper drainage. The farmstead should be located so that surface water is carried away from the buildings. The barnyard should not drain toward the house, or toward a well. A light porous soil is desirable over heavy clay. A timbered area or hill in the direction of prevailing winds in winter affords an excellent windbreak. The distributed system of farmsteads, the most common in Region 2 prior to 1930, should have the outbuildings arranged around a rectangular, somewhat to the rear of the farmhouse, and to one side. The house should be the most prominent building with the main barn next in importance. The buildings should be arranged so that all may be entered without passing through gates. The feed lots should be located to the rear of the barns and away from the house. The machine shed and garage should be located near each other because of similarity of uses. The corn crib, hog house, and feeding barns should be grouped together for convenience in feeding.

The farmstead should be associated with a pre-1930 farming operation and should have been used as the focal point in coordinating farm activities, providing shelter for the farm family and farm animals, and storage for farm produce and machinery. The farmstead should stand on its original site.

GRAIN ELEVATORS

I. Description

Grain elevators as a property type may be divided into two classes according to the arrangement of the bins and elevating machinery: (1) elevators which are self-contained, with all the storage bins in the main elevator or working house, and (2) elevators having a working house containing the elevating machinery, while the storage is in bins connected with the working house by conveyors. The working house is usually rectangular in shape, with square or circular bins; while the independent storage bins are usually circular.

With reference to construction materials, grain elevators may be divided into (1) timber, (2) steel, (3) concrete, and (4) tile, and (5) brick. Timber was the earliest material used in building grain elevators, and was still extensively used for small county elevators in the early twentieth century in Oklahoma. The working house is a plank and frame structure usually about 70' x 120'. The first story is built of heavy post and girder work; on top of this are the bins, 45' deep, made of 2" laminated planking, and the bins are surmounted by a cupola five stories in height. The walls are covered with galvanized corrugated steel, and the roof is covered with a tar and gravel roofing. The foundation of the working house is a monolithic concrete slab reinforced with steel rods. All timber shall be of yellow pine, furnished rough. The bins shall be constructed of planking in courses laid as follows: all walls shall be laid up plumb and true, forming square corners in the bins. Each course of planking shall be securely nailed with 30-d wire nails $4\frac{1}{2}$" long. At all interior crossings two nails shall be driven in each end of each piece of plank in the 4" and 6" walls. The floors shall consist of two thicknesses, the first to be 7/8" shiplap, the second layer to be a 2" x 6" dressed on one side and matched through the trackway, and the second layer over the balance of the floor shall be a 1" x 6" flooring. All flooring should be thoroughly dry yellow pine. The floor of the engine house shall have the bottom thickness of 7/8" shiplap and the top thickness of 1" x 2" dressed and matched hard maple flooring (see Figure 27).

During the early part of the twentieth century, steel became the principal material for grain elevators. In designing steel grain elevators, particular attention should be given to the horizontal joints of the bin, and to the strength of the bin to act as a column to support the grain. These elevators generally consisted of a steel working house having a bin capacity of approximately 240,000 bushels and eight steel storage bins having a storage capacity of around 100,000 bushels each, making a total storage capacity of over 1 million bushels. The steel working house is approximately 64' x 70' with 14' sheds on two ends and one side. The sub-story of the building is 26'. The bins are approximately 65' high and are supported by steel columns. The spouting story is 24' high; the garner and scale story is $26\frac{1}{2}$' high; and the machinery story is 13' high. The walls below and above the bins are covered with No. 24 corrugated steel laid with $1\frac{1}{2}$ corrugations side lap and 3" end lap. The roof is covered with No. 22 corrugated steel laid directly on the steel purlins and 2 corrugations side lap and 6" end lap. The eight steel storage bins are 44' in diameter and 80' high and rest on separate concrete foundations. The bins are constructed of steel plates stiffened with Z-bars. The bins are covered with a steel plate roof supported on roof trusses. A conveyor gallery 10' wide and 8' high extends from the working house over the bins (see Figure 28).

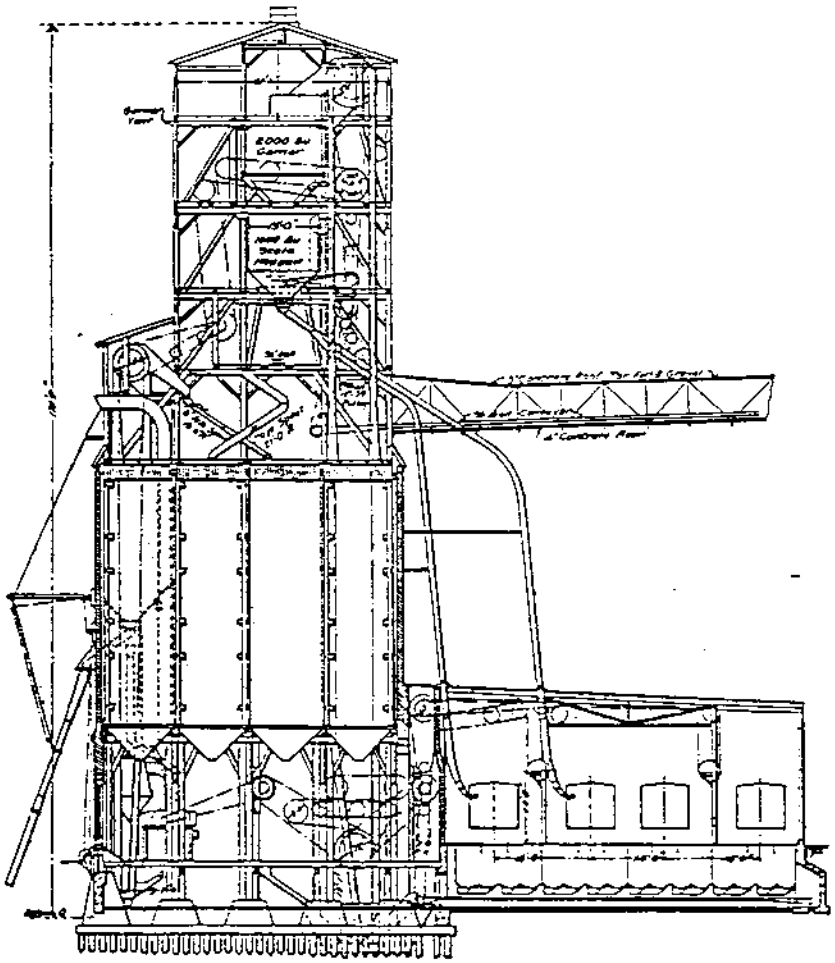


Figure 27

Transverse Section of Timber Working House

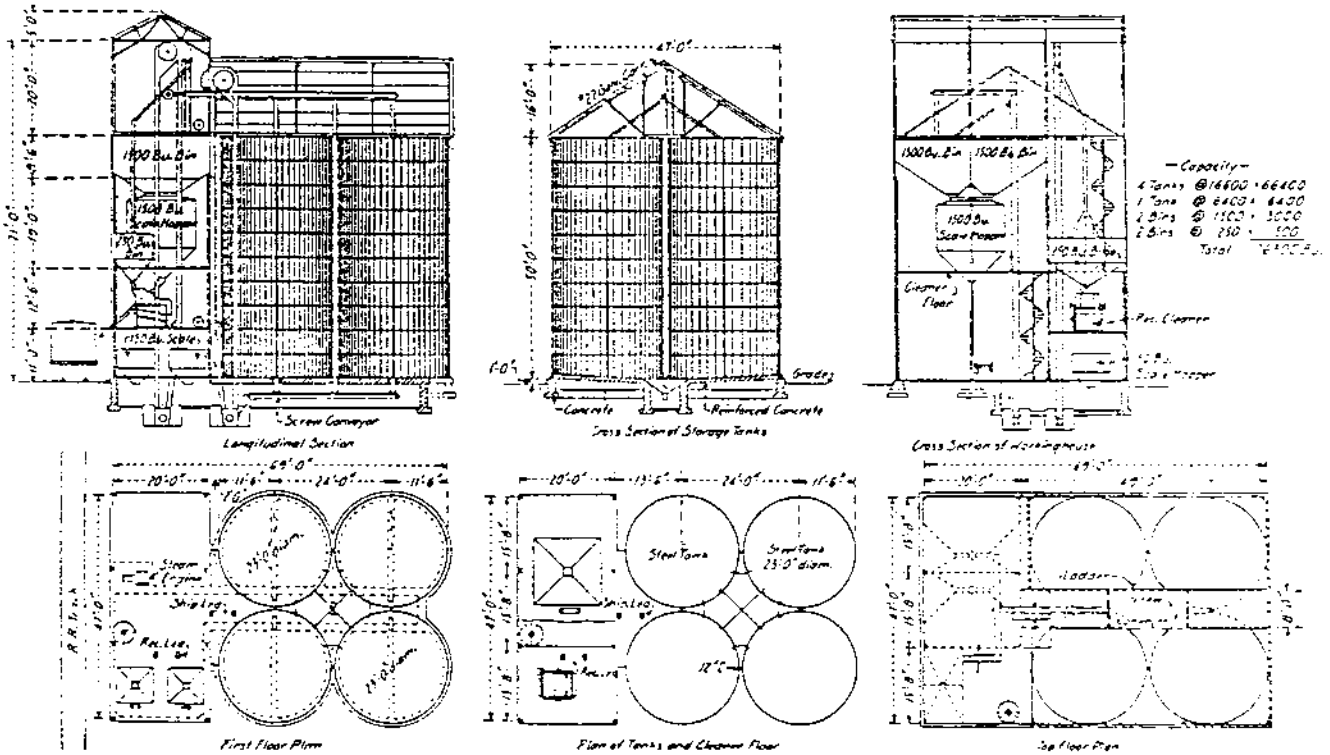


Figure 28

Steel Country Elevator

Reinforced concrete elevators were in use by the time of statehood in Oklahoma in 1907. They were commonly built following Type 2, i.e., elevators having a working house, which contained the elevating machinery, connected to the storage bins by conveyors. The working house was usually built of steel or timber, and the bins of reinforced concrete. The circular concrete bins were approximately 42' outside diameter and 80' high with walls of concrete 9" thick reinforced with steel rods. Horizontal reinforcing rods were 3/4" in diameter and vertical rods were 5/8" in diameter. The lapped portions of the horizontal rods and the crossings of the horizontal and vertical rods were to be fastened together with No. 14 annealed wire, or steel clips. The roofs of the tanks are to be made of 3" book tile supported by steel purlins, covered with a tar and gravel roofing. The floor of the conveyor gallery is to be made of 3" book tile, supported on a steel framework, and covered with a top dressing composed of one part Portland cement and two parts sand.

In the tile grain elevators, the working house is constructed of steel or timber and the bins of tile. The storage tank walls will consist of special semi-porous hollow tile made to conform to the circular nature of the tank. The main wall tile shall be 12" x 12" x 6", the channel tile 12" x 4" x 5", the outside facing tile made of similar material, but semi-glazed and 12" x 12" x $1\frac{1}{4}$". The wall tile shall be set in the wall with cells running vertically and all set with full flush mortar joints sides and bottoms. The channel tile shall be set to break joints with the wall tile. Each course of channel tile shall contain at least two complete steel bands. The facing tile are laid in courses with a full mortar bed and are tied to the main wall of tanks by wire fabric (see Figure 29).

In the brick circular storage bins, the wall is a three course wall, the two inner courses being laid solid, a space of 3" being left between the two inner courses and the outer course, making a wall 16" thick. The outer course is bonded to the two inner courses by wire bonds, passing through the air space. A channel is formed every 12" in height in the inner wall by splitting a course of brick, making the channel about $2\frac{1}{2}$" wide and a brick high, and a brick from the inner surface. The steel reinforcement is placed in this channel, and is grouted with one to two Portland cement grout. Rectangular storage bins of brick were made as follows: the bins are made rectangular in sets, with brick pilasters at the outside corners, and columns at the interior corners of the bins. Bars passing through the walls are made of brick arches, with the concave side of the arch outside.

Grain elevators should be located in a small town and along a railroad track used prior to 1930, and should stand on their original site.

II. Significance

Grain elevators were an important cultural resource associated with the agricultural history of Management Region 2 because of the large quantities of grain (wheat, corn, and oats) being produced in the area prior to 1930. Farmers needed storage facilities in order to handle these quantities before shipping to markets beyond the local elevator. Traditionally, the surplus grain, i.e., that amount produced above the farmer's need for feeding his own livestock, was hauled to the country/small town elevator in wagons. The small town elevator was always located at or near the railroad station. The wagon was weighed and driven up an incline onto the dump; here the back end of the wagon was dropped and the front end raised so that the grain ran into the dump

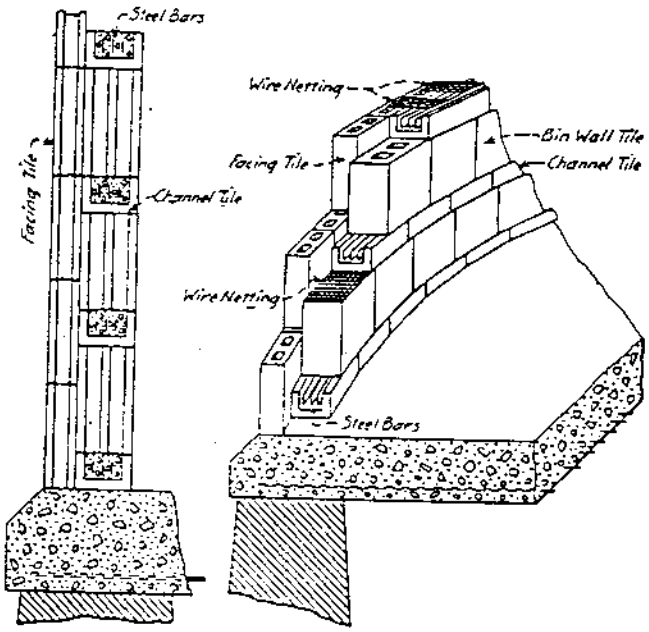


Figure 29
Details of Tile
Grain Bin

hopper, the empty wagon was then weighed and the amount of grain determined. If the grain in the country elevator was to be stored for some time, it was conveyed to storage bins outside the main elevator. It was usually run through a cleaner where the dust and defective grains were removed. Country elevators allowed farmers to hold their grain for a better price, provided adequate storage of grain to prevent waste and spoilage, and were able to accommodate large amounts of grain during harvest season. Railroad cars would transport grain from the country elevator to a larger terminal elevator where it was reshipped by rail to milling facilities in the Midwest such as Kansas City or Minneapolis.

III. Registration Requirements

To be eligible for listing in the National Register of Historic Places, grain elevators should retain integrity of setting, materials, and design. The grain elevator in Region 2 must be situated in a small town, e.g., Medford, and along a railroad truck used prior to 1930. The grain elevator should stand on its original site to be considered for National Register listing. In terms of materials, the small town elevator, the most common in Region 2, should be constructed of timber frame, yellow pine furnished rough. The timber type elevator should consist of pieces of 2" X 4", 2" X 6", or 2" X 8" laid flatwise to break joints and find the structure together. Original materials must be intact to be considered for eligibility. Design elements should follow the self-contained model where the storage bins were located in the main elevator, or working house. The design of the working house should be rectangular in shape, approximately 70' wide by 120' long. The first story should be constructed of heavy post and girder work. The bins should be approximately 45' deep, made of laminated 2" planking. The total height of the timber elevator should be approximately 70'. The timber elevator to be eligible should be free of any major alterations and should not be covered with any synthetic siding or other materials that would detract from its architectural integrity. The elevator should be associated with a small town elevator operation that existed prior to 1930.

Annotated List of Historic Properties
Agriculture
Region #2

I. ALFALFA COUNTY

A. Aline

(1) Marshall McCully Sod House

Location: NW/4, Section 18, T23N, R11N
Date: 1894
Significance: This house is a two-room, 12'x24' sod house, with the outside walls being constructed of 2 thicknesses of sod. It is the only original example of its type in Oklahoma. Some believe it is the last sod house built by a homesteader (National Register of Historical Places).

(2) T5 Ranch

Location: SE/4, SE/4, SE/4, SE/4, Section 8, T24N, R12W
Date: ca. 1880-1893
Significance: Founded by the Texas Land and Cattle Company, this ranch covered southwestern Alfalfa County, southern Woods County, and western Major County. The cedar post foundations of the old T5 Ranch House were discovered when the house of homesteader W.B. McAdoo was torn down in 1983 (O.L.I.).

B. Cherokee

(1) Farmer's Federation Elevator

Location: Block 24, Lots 25-27
Date: 1917
Significance: This elevator is an example of using hollow red clay tile and brick as a more durable and "flexible" building material. The cylinderical bin is 30' high and is constructed of 5" thick hollow red clay tile. The elevator insured the financial stability of Cherokee as the county seat and symbolizes the importance of wheat in the area (National Register of Historic Places).

(2) Kiowa-Hennessey Cattle Trail

Location: Sections 2, 3, & 12, T26N, R11W
Date: Unknown
Significance: Located in the vicinity of Cherokee, this trail was traveled on in the early 1890's (O.L.I.).

(3) Drumm Ranch

Location: Sections 18 & 19, T28N, R11W
Date: 1870

ALFALFA COUNTY, Cherokee, continued

Significance: Built by Andrew Drumm, who was one of the first directors of the Cherokee Strip Livestock Association. It was a gethering site for cowboys during the annual spring roundups in the Cherokee Outlet. The Drumm Ranch was also know as the "U" Ranch (O.L.I.).

C. Goltry

(1) Farmers' Exchange Elevator

Location: Block 22, Lots 14-17
Date: ca. 1920
Significance: This elevator is an example of the use of hollow red clay tile as an advance in building material technology. It consists of a 50' high square brick shaft flanked by 4 bins built several years later. The structure illustrates the role of wheat as the main source of income in the community (National Register of Historic Places).

D. Ingersoll

(1) Ingersoll Tile Elevator

Location: Block 47, Lots 2-5
Date: 1915-1925
Significance: Constructed using hollow red clay tiles, the facility consists of a shaft 50' high with a gabled composition roof, surrounded by 4-30' high cylinderical bins with composition shed roofs. The elevator helped assure that Ingersoll would remain a prominent center of agriculture in the county. The use of hollow red clay tiles in its construction provided for protection against fire and provided an example of advancing building material technology (National Register of Historic Places).

II. ELLIS COUNTY

A. Arnett

(1) Log Cabin

Location: Court House Square
Date: 1893
Significance: Built by Tom Black out of cedar logs, this two-story log cabin contains some logs 2 1/2' across. All of the logs are original except for two end logs. Once used as a law office, it is now used for Scout meetings (O.L.I.).

(2) Davison Ranch Bunkhouse

Location: Section 30, T18N, R22W
Date: ca. 1910

ELLIS COUNTY, Arnett, continued

Significance: Home of cowhands on the Davison Ranch, which at one time was the largest ranch in Oklahoma. It was founded by George Elbert Davison who, by 1920, owned 100,000 acres, which was one-eighth of Ellis County (O.L.I.).

(3) Davison Silo

Location: 20 miles southeast of Arnett
Date: ca. 1915
Significance: This silo is constructed entirely of wood except for its concrete pit. It has 14 sides, each one 6' wide and constructed of 2 x 4's laid flat. The basic silo is 36' tall; this, along with a 14-section roof, covered by a 14-section cone, and topped with a 5' rod, make this silo 55' tall. This is a memorial to George Elbert Davison and his ranching operation (National Register of Historic Places).

B. Camargo

(1) "T Bar" George Carr Log Ranch House

Location: NW/4, NE/4, Section 13, T18N, R21W
Date: ca. 1894
Significance: Rancher George W. Carr made his home here. The Carr Ranch, also known as the "T Bar" Ranch, was noted for its registered quarter horses and high quality cattle. At one time the ranch consisted of 39 sections of land. The Carr House was also significant in that it served as the social center for the surrounding area (National Register of Historic Places).

C. Fargo

(1) Pat Hamilton Cabin

Location: Section 14, T20N, R23W
Date: ca. 1890
Significance: Representative of early day log houses, this cabin was originally built west of Vici. In 1947, its logs were numbered and it was disassembled and moved to its present location south of Fargo. Later, three rooms were added to the structure giving it a total of nine rooms (O.L.I.).

D. Harmon

(1) Senator Josh Lee Log Cabin

Location: NE/4, Section 24, T18N, R21W
Date: 1890
Significance: Constructed of logs with a shingle roof, this structure was the headquarters for the Cheyenne and Arapahoe Cattle Company of the 1870's and 1880's. The cabin was built by George Carr, but was located on the site of the "Million Acre"

ELLIS COUNTY, Harmon, continued

Ranch, which was owned by Senator Josh Lee. The structure is presently used for alcohol and drug abuse rehabilitation (O.L.I.).

E. Shattuck

(1) Ingle Brothers Broomcorn House

Location: Block 1, Lot 9, Bush Addition
Date: 1900-1940
Significance: Built by the Ingle Brothers in response to the need for processing and storing broomcorn, this structure was one of the earliest used in the broomcorn business which flourished between 1900 and 1940. At first it was used for storage and processing only; then dying, cutting, and curing were also performed there. The building was used in the broomcorn business until 1970. It is historically significant because Shattuck was the broomcorn capital of the world in the early 1900's (O.L.I.).

(2) "Box T" Ranch

Location: NE/4, SE/4, Section 15, T21N, R26W
Date: Prior to 1893
Significance: The headquarters of this ranch was on Long Creek in the Cherokee Strip, close to the present-day site of Shattuck. There is no longer any sign of the actual ranch headquarters. The ranch was associated with the Dominion Cattle Company (O.L.I.).

III. GARFIELD COUNTY

A. Covington

(1) Kimmell Barn

Location: SW/4, SW/4, SE/4, Section 20, T22N, R3W
Date: 1906
Significance: This three-level, 40' by 60' barn was constructed of native sandstone which was quarried one mile west of its location. The structure has bullet-shaped windows with a plain hipped roof topped by a louvered cupola. The wood used in the construction of this barn was used in the 1904 World's Fair (National Register of Historic Places).

B. Enid

(1) Two-Bar Ranch

Location: NW/4, NE/4, Section 10, T21N, R6W
Date: 1883-1893
Significance: Located on Skeleton Creek east of Waukomis, the Two-Bar Ranch lost 14,000 head of cattle during the bitter winter of 1884-1885 (O.L.I.).

GARFIELD COUNTY, Enid, continued

(2) J H Circle Ranch

Location: SW/4, SW/4, Section 15, T22N, R6W
Date: 1889-1893
Significance: Founded by the Winsor Brothers, this ranch consisted of 60,000 acres. The headquarters of the ranch was part dugout and part log house (O.L.I.).

(3) Skeleton Ranch/Stage Stand Site

Location: NE/4, SE/4, NW/4, Section 33, T23N, R6W
Date: ca. 1874-1893
Significance: Served as one of the stage line stops between Fort Reno and Caldwell, Kansas, and was situated on the old Chisholm Trail (O.L.I.).

(4) Tuttle Ranch

Location: SE/4, NE/4, Section 34, T23N, R7W
Date: 1883-1893
Significance: Sol Tuttle founded this ranch northwest of Enid near the old Lakewood Park Site on Turkey Creek. "Mule shoe up, mule shoe down" was the memorable brand of the ranch (O.L.I.).

(5) Half-Diamond R Ranch

Location: 10 to 12 miles northwest of Enid
Date: 1880
Significance: This ranch reached from the Chisholm Trail on the east to the Salt Fork River on the north, and from near North Enid to near the western boundary of Garfield County. The Cragin Cattle Company of Boston founded the Half-Diamond R Ranch (O.L.I.).

IV. GRANT COUNTY

A. Jefferson

(1) Pond Creek Ranch

Location: SW/4, SE/4, Section 24, T28N, R6W
Date: ca. 1870-1893
Significance: The old Sewell Stockade was located on this ranch. It was a haven for travelers and cattle drivers on the Chisholm Trail before the Cherokee Outlet opened (O.L.I.).

B. Medford

(1) John Soucek's Blacksmith Shop

Location: Block 18, Lot 22
Date: Unknown
Significance: An anvil on the roof on the east end of the structure indicates the use of this building as a blacksmith shop.

GRANT COUNTY, Medford, continued

John Soucek was representative of the Czech presence in Medford (O.L.I.).

V. HARPER

A. Buffalo

(1) Farmer's Co-Op Elevator

Location: Block 5, Lots 19 (east half and north half), 20 (east half), and 21 (east half)
Date: 1920
Significance: Constructed of hollow clay tiles on a concrete foundation, this structure consists of a 50' rectangular elevator shaft flanked by three 30' cylindrical bins connected together. The elevator is historically significant because of the use of clay tiles in its construction (National Register of Historic Places).

(2) Feuquay Elevator

Location: Block 144, Lots 11, 13, and 15 (eastern half, except for the railroad right of way), Miller's Addition
Date: 1920
Significance: This structure consists of a 50' tall elevator with a gabled tin roof. Three cylindrical 30' tall bins surround this elevator, and clay tiles form supports and connect these bins to the elevator. Having never been painted, this structure is an excellent example of an elevator using clay tile construction (National Register of Historic Places).

(3) Old Miller House

Location: Tract #7, Section 12, T27N, R23W
Date: ca. 1913-1920
Significance: The "House of Seven Gables" was the nickname given to this house by local residents. It is a 2-story structure, with seven irregularly-spaced gables with walls of pressed concrete blocks that look similar to rough-cut stone. This structure is still considered a local landmark (O.L.I.).

(4) Victor Brown Soddy

Location: SE/4, Section 27, T29N, R23W
Date: 1907
Significance: Unique for its size and design, this structure has two stories with a hipped roof. It has four rooms, with wood-framed, glass pane windows. The clapboard that was put up over the sod shortly after construction is now starting to come off, and one side of the roof is caving in (O.L.I.).

HARPER COUNTY, Buffalo, continued

(5) Great Western Cattle Trail

Location: W/2, S/2, T29SN, R24W
Date: Unknown
Significance: Running from across the Red River at Doan's Crossing northward, this trail passed a series of resting places and springs until it reached Sherman's Ranch on the Kansas border. The trail was in an area in which Indians were anxious to exchange pasture for a few heads of cattle. It was relatively free of timber, and provided an easy route to Kansas cattle towns (O.L.I.).

(6) Page Soddy

Location: Northeast corner of section, 4 miles east and 4 miles south of Buffalo
Date: 1902
Significance: Constructed of 15" wide sod blocks laid side by side to form 30" thick walls, this sod house is 16' by 34'. It still has its original wood flooring and a cement coating has been applied to the outside of the sod blocks to help preserve them. It is one of the last remaining "soddies" in Harper County (National Register of Historic Places).

(7) Sod House

Location: 5 miles north on U.S. 183, 3 miles west, and 1/2 mile south of Buffalo
Date: Unknown
Significance: An exterior finish of "jip" and rock, along with an interior finish of wood make this sod house unique. Another interesting aspect of this structure is that grass is still growing in the sod (O.L.I.).

B. Laverne

(1) Casey Farmhouse

Location: SE/4, T28N, R25W
Date: 1912
Significance: The Casey Farmhouse is one of the best remaining examples of a rural, pyramid-roofed house. This type of structure was common in northwest Oklahoma during the early days of statehood. This particular structure is a frame, one-story clapboard house with a pyramid roof and double-hung sash windows (O.L.I.).

C. May

(1) Fleming Sod House

Location: North of road intersection occuring west of the Harper

HARPER COUNTY, May, continued

Valley and Bornholtz stores
Date: 1903-1904
Significance: This structure is typical of other dwellings that were found in the region during this time period. The structure is still standing, and has had a cement coating applied to its exterior (O.L.I.).

D. Rosston

(1) Old Settler's Irrigation Ditch

Location: Where ditch intersects U.S. Highway 283, 3 1/2 miles south of the state line, running west approximately 5 1/2 miles and east approximately 8 1/2 miles
Date: 1893-1905
Significance: Representative of the homesteaders' use of agricultural irrigation technology, this irrigation ditch allowed semi-arid land in northwest Oklahoma to be successfully cultivated. The ditch itself is approximately 14 miles in length and 12 feet wide at the bottom, except for the last few miles, where it is only 8 feet wide (National Register of Historic Places).

(2) Chain C. Ranch

Location: northeast of Rosston
Date: ca. 1892
Significance: C.T. Hering of the Cimarron and Crooked Creek Cattle Company founded this ranch by claiming land with a good water supply and then offering to buy other claims for $1,000 if well-watered and $500 if not (O.L.I.).

VI. KAY COUNTY

A. Newkirk

(1) Horinick House

Location: SE/4, Section 13, T27N, R3E
Date: ca. 1910
Significance: Built mostly of rock quarried nearby, this structure has been well-preserved (O.L.I.).

(2) Governor William W. Jenkins Homestead

Location: SW/4, Section 25, T27N, R4E
Date: 1893
Significance: This house was constructed using stone that was quarried locally. Today, only the 1st floor basement walls remain, and these are overgrown with shrubs and trees (O.L.I.).

KAY COUNTY, continued

B. Ponca City

(1) 101 Ranch

Location: SE/4, SE/4, SE/4, Section 25, T25N, R1E
Date: 1879
Significance: Once known as the White House, the ranch headquarters has been razed with only the floor of the first story and the foundation remaining. The 101 Ranch was at one time "the largest diversified ranch in the world" (National Register of Historic Places).

(2) "Big V" Ranch House

Location: NE/4, SE/4, NE/4, Section 27, T25N, R1E
Date: 1903
Significance: The famous Vanselous Family Ranch was once headquartered in this large 3-story structure. It contained 20 rooms, with the first floor containing the kitchen, dining room, lobby, and offices, the second floor containing family living quarters, and the third floor containing the single workers' living quarters. The ranch itself was famous for its drought-resistant variety of corn and its mules (National Register of Historic Places).

VII. MAJOR COUNTY - NONE

VIII. NOBLE COUNTY - NONE

IX. WOODS COUNTY

A. Waynoka

(1) Commanche Pool

Location: vicinity of Waynoka
Date: Unknown
Significance: Founded by a large group of Kansas cattlement, the Commanche Pool at one time contained about 150,000 head of cattle and covered most of Woods County. Blizzards in 1885, 1886, and 1887 destroyed a great deal of this herd and convinced those continuing in ranching that smaller herds could more easily be taken care of (O.L.I.).

X. WOODWARD COUNTY

(1) Eddleman Ranch

Location: Unknown
Date: ca. 1880-1890
Significance: Ira and Frank Eddleman founded this ranch, which at one time contained forty sections, making it the largest ranch in

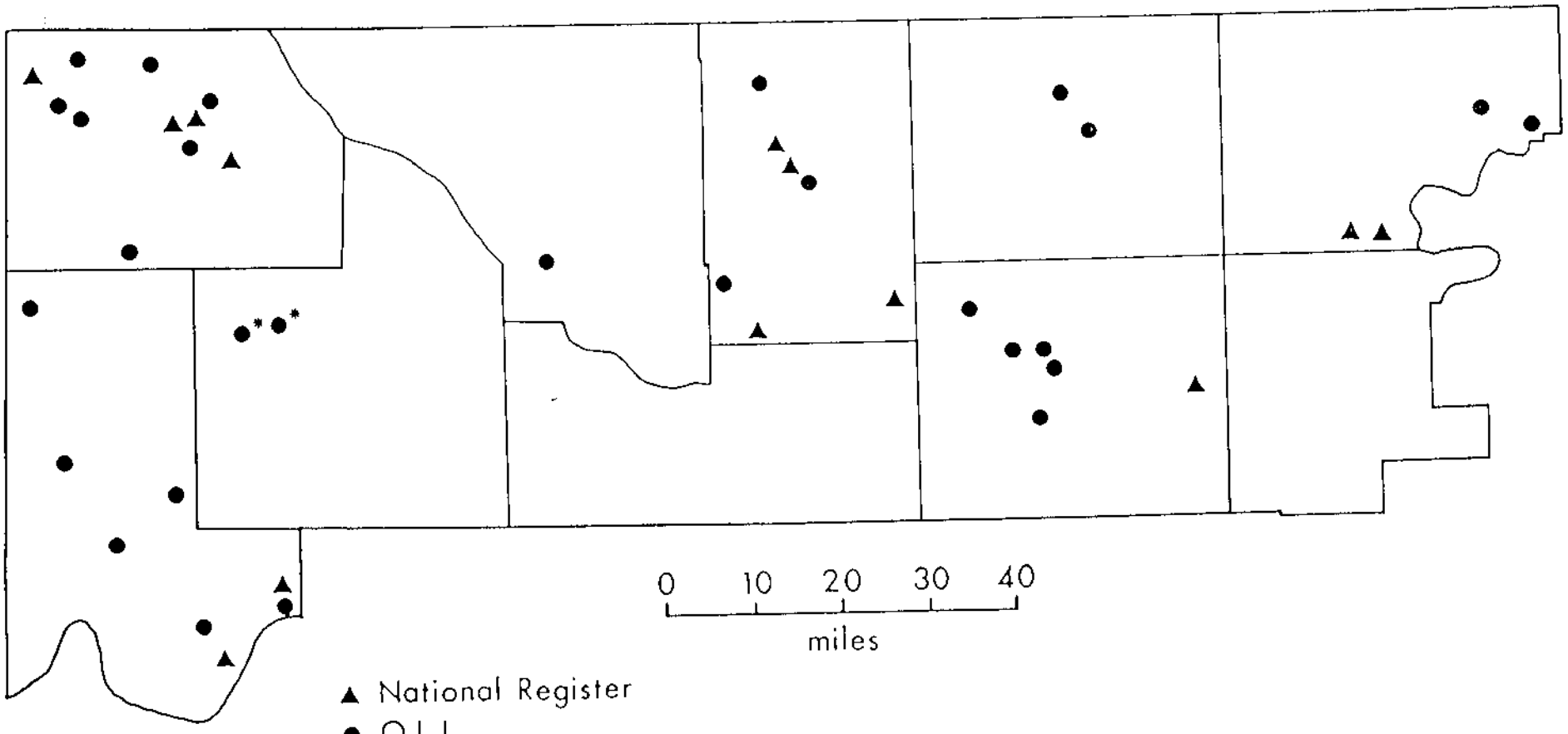
WOODWARD COUNTY, Eddleman Ranch, continued

Woodward County. The ranch headquarters were in the northwest corner of the ranch on the east side of Clear Creek (O.L.I.).

(2) Kilgore Ranch

Location: Unknown
Date: ca. 1890-1902
Significance: Founded by Charles and Hayden Kilgore, this ranch contained ten sections and existed until 1902, when settlers filled the pastures. When this occurred, the Kilgores sold their water rights (O.L.I.).

National Register and O.L.I. Properties
Management Region #2



*Exact location in Woodward County unknown

Source: State Historical Preservation Office
Oklahoma Historical Society
Oklahoma City, Oklahoma

MAP 11

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THREATS TO RESOURCES

Agriculture is one of the most important historical themes for the State Historic Preservation Office in Oklahoma to address in its comprehensive preservation planning activities. Agriculture has been and continues to be a major industry in the state. While it is so important in the historical development of the state, there has been relatively little research and study of agriculture. Also, the SHPO determined through a review of its inventory that agriculture-related properties are under-represented. The continued development of the agriculture context for this region, and other parts of the state, will help the SHPO and others gain a better understanding of the kinds of resources existing, what threatens them, and what preservation treatments may be the most workable.

Threats the SHPO staff has identified include simple neglect and lack of public awareness about the important of preserving barns, farmsteads, and other property types. Also, many agriculture-related buildings and structures become obsolete, and farmers must build new barns and sheds to accommodate new equipment or other needs. As the SHPO solicits public input for the further development of this context, and for refinement in subsequent years, other threatening factors will no doubt be determined.

GOALS AND PRIORITIES FOR RESOURCE PRESERVATION

The resources discussed in this historic context represent significant aspects of Oklahoma's past. Following are the priorities established to foster the highest possible levels of preservation for these properties. Estimated time frames for completion are also set forth. It is fully anticipated that additional priorities will be established as the context is updated to address changes in attitudes, changes in available financial incentives, developments in technology, and the simple passage of time.

PRIORITIES	PROJECTED COMPLETION DATE	ACTUAL COMPLETION DATE	METHOD OF ACCOMPLISH-MENT
Identification/Evaluation:			
Thematic Survey of Grain Elevators	1990		Subgrant

PRIORITIES	PROJECTED COMPLETION DATE	ACTUAL COMPLETION DATE	METHOD OF ACCOMPLISH-MENT
Registration:			
Implement a grant program with individual agriculture-related properties as priorities	1989	1989	SHPO Grants
Multiple property nomination for management Region #2	1992		Subgrant
Recordation (HABS/HAER):			

PRIORITIES	PROJECTED COMPLETION DATE	ACTUAL COMPLETION DATE	METHOD OF ACCOMPLISH-MENT

Protection:

PRIORITIES	PROJECTED COMPLETION DATE	ACTUAL COMPLETION DATE	METHOD OF ACCOMPLISH-MENT
Public Education and Awareness:			
Develop the Oklahoma Centennial farm and ranch program.	1989	1989	SHPO staff & Dept. of Agriculture
Promote Centennial farm program during Centennial of the run of 1993.	1993		SHPO staff & Dept. of Agriculture
Include a session on rural preservationat 1990 statewide preservation conference.	1990		SHPO
Establish a data base of information on agencies and organizations concerned with rural conservation.	1989	1989	SHPO

INCORPORATION INTO BROADER PLANNING PROCESS

As the Oklahoma Historical Society develops an agency-wide plan, materials generated from the historic context development, survey efforts, and National Register nominations, as well as HABS/HAER documentation will be available to those designing museum exhibits or preparing other public programs. Energy has been identified as one of the major themes of study for the Society's overall planning effort.

Additionally, the State Historic Preservation Office will provide a copy of the Agriculture context document to each community in Region #2 that becomes a Certified Local Government (as well as other contexts as they are developed) so that the local governments can use the regional information as they develop local plans for preservation of historic sources. The local contexts will follow the same format as that established by the SHPO for regional context documents.

Finally, through regular workshops on the preservation planning process, the SHPO will make information available to federal, state, and local agencies on the resources identified and their significance in the history of agriculture in Oklahoma so that these properties will be considered in other planning efforts.

REFINING THE CONTEXT

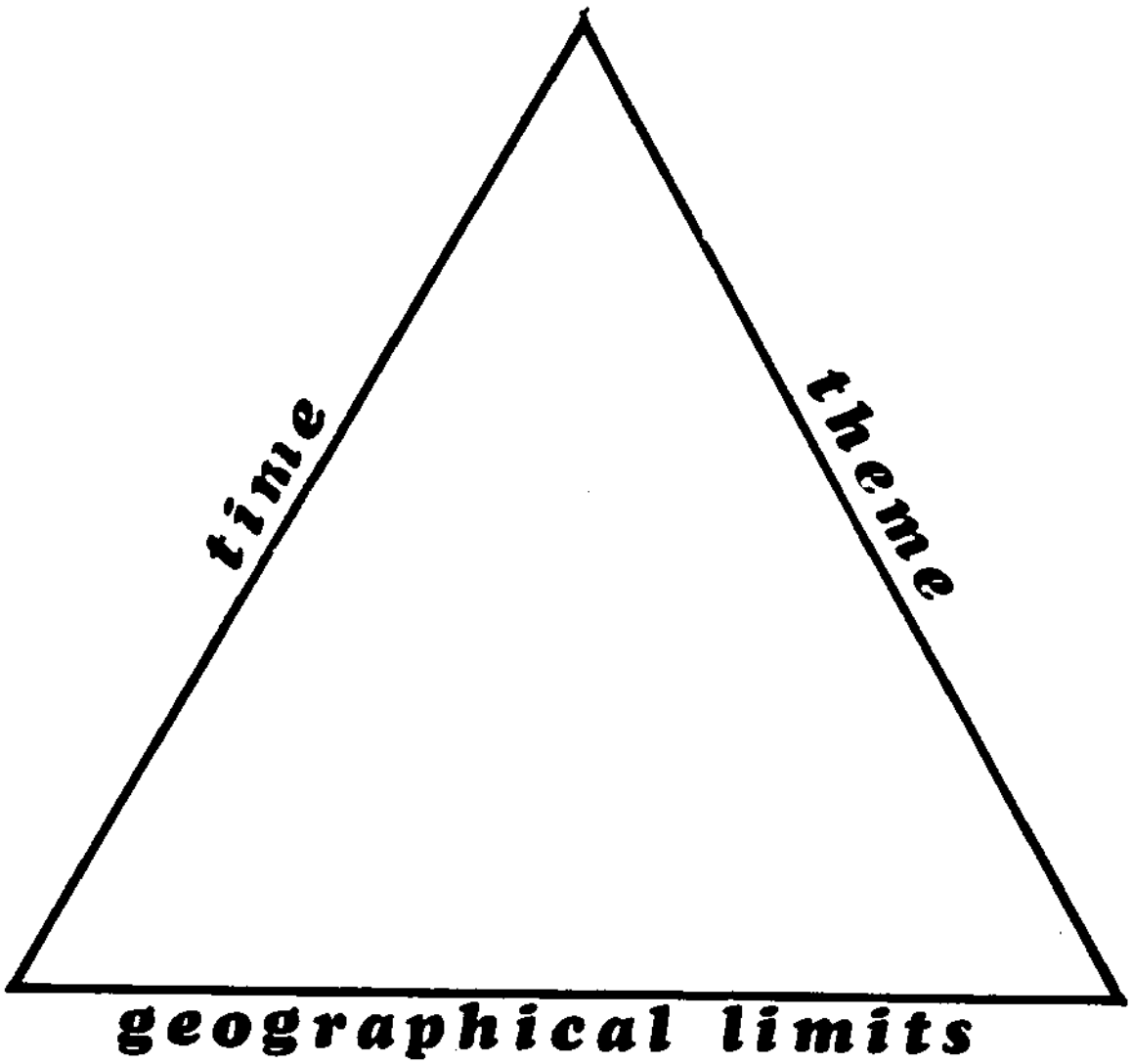
Every three years, the context will be reviewed. Additional information about scholarly research in the field will be incorporated. Data obtained as the results of other survey efforts through subgrants, CLG's, and review and compliance activities will be included in the list of known properties. The public will be asked in the Fall of 1989 to participate in the further development of the operating plan for this context. Similar efforts will be repeated during the tri-annual context review. The revised document will be distributed as described above.

As the context document was developed through a subgrant, publicly advertised, public input has been a major factor in this planning effort. The revised context will be submitted to professionals for review.

A CALL FOR PUBLIC INPUT

HISTORIC PROPERTIES ASSOCIATED WITH AGRICULTURE

MANAGEMENT REGION #2



Oklahoma Historical Society
State Historic Preservation Office
Wiley Post Historical Building
Oklahoma City, OK 73105

PLANNING TO PRESERVE THE PAST

To often the phrase "long range planning" brings to mind the image of an expensively produced volume of unrealistic goals and objectives no one will ever take from the shelf. The, when planning efforts are well defined and concerned interest participate in the planning process, results will be useful. The "Secretary of the Interior's Standards for Preservation Planning" provides the State Historic Preservation Office an outline for developing priorities for protection of Oklahoma's important historic and prehistoric resources.

There are three basic principles for preservation planning. First, important historic properties cannot be replaced if they are destroyed. Second, in order for preservation planning to be effective, it must begin before identification of all significant resources is completed. Third, for such planning efforts to be meaningful, public participation is essential.

Preservation planning results in documents that provide a framework for determining where resource surveys are needed, what types of properties are most important, what standards must be met for properties to be eligible for the National Register of Historic Places, and what preservation strategies should be used for particular resources. The basis for preservation planning is the historic context. Every context consists of a historical theme, geographic limits, and chronological period. Contexts can be developed at the state, regional, or local level. The planning document contains a narrative description of the

MANAGEMENT REGIONS FOR OKLAHOMA'S COMPREHENSIVE PRESERVATION PLANNING PROCESS (HISTORIC COMPONENT)

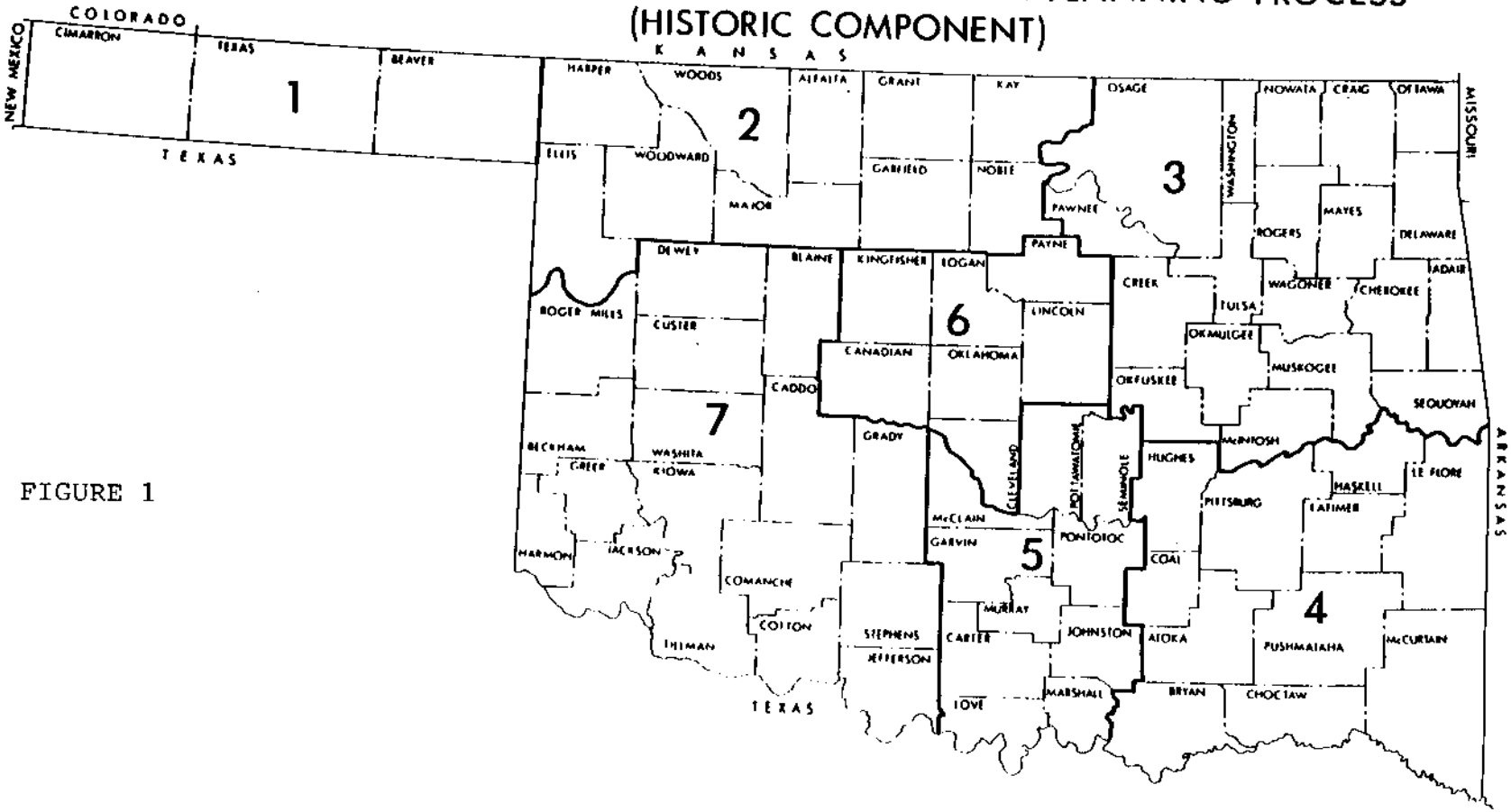


FIGURE 1

historical theme, bibliography, list of known associated properties, property type analysis for evaluating specific resources, and goals and priorities for treating significant properties.

Among the broad themes identified as important in Oklahoma's past is agriculture. Currently under study is agricultural development in northwestern, northeastern, and central Oklahoma (shown as Management Region #2, #3, and #6 in Figure 1). The historical narrative, bibliography, list of known properties, and property type analysis are completed for Management Regions #2 and #6. Management Region #3 will be finished by August, 1990. At this time additional public input will aid the State Historic Preservation Office to set goals and priorities for important resources associated with the agriculture preservation theme in these areas.

OKLAHOMA HISTORICAL SOCIETY
STATE HISTORIC PRESERVATION OFFICE

HISTORIC CONTEXT FOR AGRICULTURE
IN MANAGEMENT REGION #2

QUESTIONNAIRE

1. Which types of agriculture-related properties do you consider most important to preserve? (Number in order of importance.)

___Farm Houses
___Livestock Handling Facilities
___Barns
___Stock Pens
___Sheds
___Equipment Storage Facilities
___Farmsteads
___Silos
___Elevators/Mills
___Irrigation Systems
___Dairy Barns
___Cooperative-Owned Business Buildings
___Agricultural Research Stations
___Conservation Projects
___Other_____

2. Which property types do you think are the most threatened? (Please number in order of the most threatened.)

___Farm Houses
___Livestock Handling Facilities
___Barns
___Stock Pens
___Sheds
___Equipment Storage Facilities
___Farmsteads
___Silos
___Elevators/Mills
___Irrigation Systems
___Dairy Barns
___Cooperative-Owned Business Buildings
___Agricultural Research Stations
___Conservation Projects
___Other_____

3. In your opinion, what are the greatest threats to historic resources associated with agricultural development in this part of Oklahoma? (Use additional sheets if needed.) Provide specific examples.

4. Do you think any of these threats can be alleviated? If so, through what means?

5. Are you involved in efforts to preserve resources related to agriculture in this region of Oklahoma? If so, what are these efforts? If not, would you like to participate in programs designed to preserve these properties?

6. Do you know other individuals or organizations who/that would be interested in the preservation of Oklahoma's agriculture-related resources? If so, please list.

7. Listed below are several "preservation treatments". Please number in order of most importance to the preservation of threatened agriculture-related resources.

_____Nomination to the National Register of Historic Places.
_____Documentation through high quality photographs.
_____Documentation through Historic American Engineering Record (HAER) drawings.
_____Publication of information about the importance of these resources.
_____Public presentations on the importance of these resources.
_____Acquisition of resources by concerned preservation organizations.
_____Acquisition of easements to the property.
_____Other:

8. In your opinion, what are the three (3) most important properties in this region of Oklahoma associated with the history of agriculture?

1. _____

2. _____

3. _____

9. Would you like to be informed of further developments in the State Historic Preservation Office's work on this historic context? _____Yes _____No

10. Name _____

Address _____

_____

Please return to:
State Historic Preservation Office
ATT: Melvena Heisch
Oklahoma Historical Society
Wiley Post Historical Building
Oklahoma City, Oklahoma 73105

Due Date: January 31, 1990