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# NEBRASKA NEBRASKA



AGRICULTURAL SERIES No. 12

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UNITED STATES RAILROAD ADMINISTRATION

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7-25-1919  
1919

Messages from State Officials

I have always advised the people of Nebraska that there were no greater opportunities for success in industry, agriculture and home building than are to be found in this State. The very same reasons that I have offered in connection with that statement are the ones which I have offered to people outside the State, who are seeking a new location.

Even now, though Nebraska is a young state, it stands foremost among the agricultural states of the Union. More important still, however, is the fact that the agricultural products that are grown here are those which enter most prominently into the very life of the Nation.

Wheat is an essential food product. In its production Nebraska stands second. Corn and alfalfa represent the most economic ration for producing beef, pork and mutton. In these Nebraska stands well toward the top in the quantity and quality produced. Grazing land is essential in the economic production of cattle, and, of course, Nebraska has a very large area of the finest pastures in the world.

Of very great importance in connection with the permanent agriculture, is the ability to produce crops which at once provide for the maintenance of soil fertility and the rotation of crops. The crops which I have above enumerated facilitate both of these ends, so it is possible for the Nebraska farmer to not only grow abundant crops, but to maintain the productiveness of his land while he is doing it.

There are not large areas of land open to entry in this State, nearly all of the land being deeded, but it may still be bought at reasonable prices and there is abundant opportunity here for further agricultural development. I know of no State in which the opportunities are so great.

Very truly yours,

*Samuel R. McKelvie*  
Governor.

There are good possibilities under the climatic limitations of Western Nebraska for men who will establish themselves there and work in accord with Nature; but it requires intelligent effort for success. Naturally, there must be a relation between the returns from the land and the cost of production, all of which is governed by prices of land, labor, material, and the products raised. The man who is to win must not be hampered by false hopes that climatic conditions will change or have changed, nor must mere theory govern his practice. He cannot carry with him hard and fast rules by which to farm. Under the erratic climate conditions obtaining, any system of farming to be successful must be sufficiently elastic to meet conditions as they arise. All factors that influence production and profit must be considered.

Whenever men move into new sections and unfamiliar conditions, there is a certain amount of risk through attempting to grow the same crops and employ the same methods they formerly used. One of the biggest factors insuring success is the adaptation of crops and practices to local conditions. Nature sets the limits and we should try to meet her conditions. In going into new localities, therefore, one should first attempt to familiarize himself with those conditions and to learn what the best practices are.

This can be accomplished by observing what the successful farmers in the new locality are doing. The farm practices of the best farmers in established districts are usually sound. Most counties now have a county agricultural agent who will be able and glad to furnish information and whatever assistance he can in aiding newcomers to establish themselves. The State also maintains experiment stations—the central plant at Lincoln and substations at North Platte, Mitchell, and Valentine. It has been the business of the experiment stations to study crops and methods. Any information they may have will be gladly furnished to any one calling or writing for it.

NOV 26 1919  
*W. W. Burr*  
Acting Dean, Agricultural College.



Headquarters on a Western Nebraska ranch. There are many large ranches now being cut up and placed upon the market at prices ranging from \$25 to \$100 an acre

## THE PURPOSE OF THIS BOOKLET

### HOW THE RAILROADS CAN HELP THE HOME-MAKER

This booklet is issued by the Agricultural Section, Division of Traffic, United States Railroad Administration, J. L. Edwards, Manager, Washington, D. C.

The information was compiled by the Nebraska Agricultural College and representatives of the following railroads: Atchison, Topeka & Santa Fe, Chicago, Burlington & Quincy, Chicago Great Western, Chicago, Rock Island & Pacific, Chicago, St. Paul, Minneapolis & Omaha, Chicago & North Western, Missouri Pacific, and Union Pacific.

The purpose of the booklet is to help to direct ambitious and industrious home-makers and producers, desiring to better their condition in life, to localities in which they should meet with success, in proportion to their resources and ability.

Our mission is to help industrious men and women to become farm owners and to enable them to lay the foundation for a home and eventually independence for the family.

Bear in mind that none of the agricultural departments of the railroads above mentioned has any interest in the sale of lands nor are they engaged in the land business.

They are, however, greatly interested in the development and general prosperity of the districts served by their respective lines.

The interests of the railroads and the communities served by the lines are identical and interwoven. Prosperous communities mean prosperous railroads. A well satisfied settler is a good asset. A misplaced man is a liability. Our interest does not cease with

## NEBRASKA BEEF, BREAD AND BUTTER STATE



Corn is grown in every part of the State. It is a leading crop in Western Nebraska on non-irrigated land, at yields ranging from 20 to 40 bushels an acre

the location of the settler. We are deeply interested in his success. We stand ready at all times to help the newcomer with his problems. Much valuable knowledge of farm practices and opportunities has been gained by observation and experience which will prove helpful to farmers. This is available to all inquirers.

The railroad agricultural representatives have for years made a careful study of conditions and keep in direct touch with their respective territories.

Owing to limited space, detailed information is not attempted in this booklet, but should the reader desire special information on any subject connected with any branch of farming or stock raising in Nebraska, it may be secured by writing to, or calling upon, the Representative whose name and address are stamped on page 36 of this booklet.

State fully just what is desired. Prompt and dependable information will be furnished.

### NEBRASKA FACTS

Nebraska has no bonded debt.

Its total taxable wealth approximates four billion dollars.

The value of its property has doubled in the last ten years.

The per capita wealth of the State is about \$3,000.

The average income of the farm families of the State, in 1918, was \$5,280.

The annual value of Nebraska crops is approximately \$750,000,000.

Nebraska stands first among the states in the production of beef, pork, wheat, and corn, per unit of population.

In total production it is second in hay, third in cattle, third in corn, fourth in hogs, and fifth in beet sugar.

Alfalfa production is 2,528,000 tons.

Potatoes, 10,500,000 bushels.

Nebraska's annual poultry and egg production reaches \$40,000,000.

Annual dairy products are valued at \$30,000,000.





A small flock of sheep will prove profitable on every farm. Expensive shelter is not necessary

Nebraska farms carry more than 2,000,000 beef cattle, 500,000 milch cows, 2,000,000 hogs, and 500,000 sheep.

The money value of the live stock reaching its chief market center annually is more than \$100,000,000.

Nebraska having the largest butter market and the largest creamery plant in the world, and being one of the largest alfalfa producing states, it may be understood that dairying is one of the outstanding agricultural features.

Nebraska's altitude ranges from approximately 1,000 feet on the east to 4,500 feet on the western border. It has an area of 76,800 square miles and is 415 miles long and 205 miles wide. The rural population averages but a little above 10 per square mile. It is, therefore, very evident that her farm population may be easily doubled without bringing about a crowded condition.

### Climate

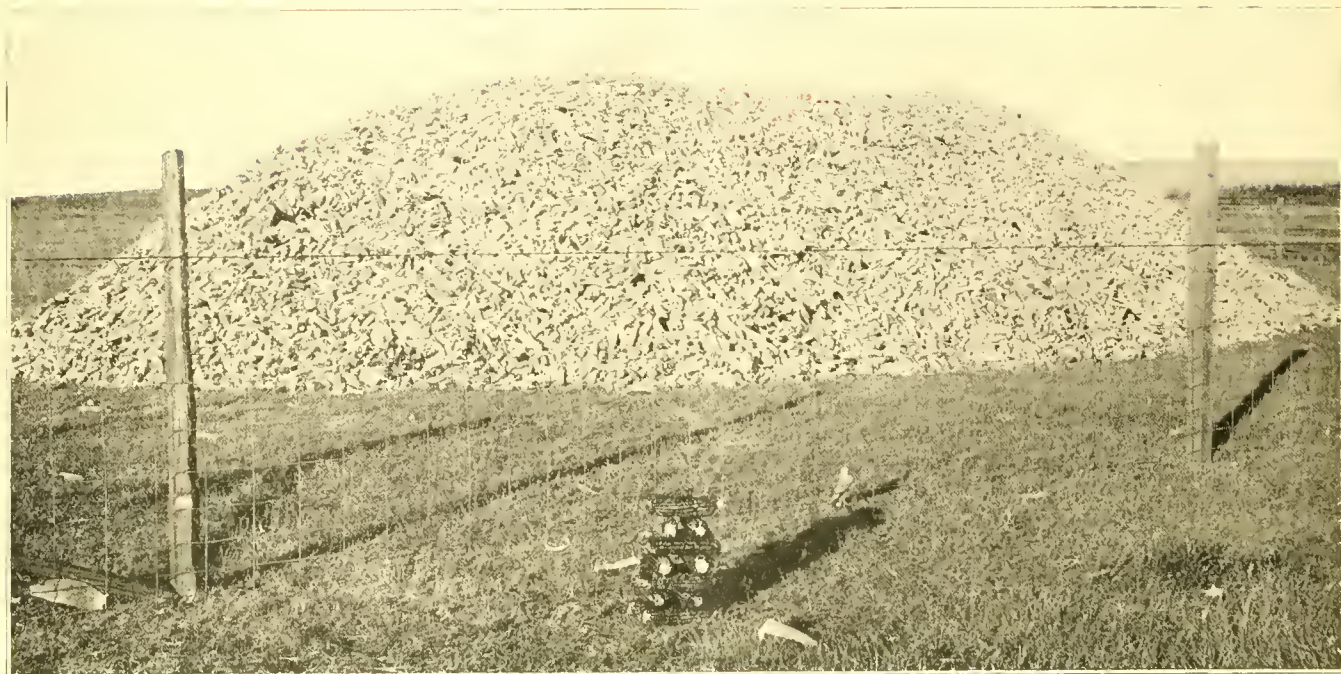
Western Nebraska is a region of rather limited

rainfall, which occurs mostly in the summer when the crops are growing rapidly; of strong contrasts of temperature between summer and winter and between day and night; of rather strong winds which in winter at times are severe and cold, but which in summer render the heat less uncomfortable; of skies with a relatively small percentage of cloudiness and of a large percentage of sunshine; of a rather dry, healthful atmosphere whose summer heat is less oppressive than in some other states of the same latitude, not only because of the nearly constant movement of the atmosphere, but also because it is less nearly saturated with moisture; and whose winter cold for the same reason is much less severely felt than in the moisture-laden atmosphere of most other states.

### Temperature

January is the coldest month, with a mean temperature of 25 degrees in the southeastern corner, and 20 degrees or a little more in the northern portion. In the coldest days of winter the temperature usually falls to between 10 and 20 degrees below

## NEBRASKA - BEEF, BREAD AND BUTTER STATE



Nebraska stands third among the states in total production of corn. It stands first in production per unit of population. This pile contains 4,000 bushels of corn, raised on non-irrigated land in Duval County, Nebraska

zero, while on rare occasions 30 degrees below zero occurs.

During the summer months the temperature ranges from 70 to 78 degrees. The maximum temperature frequently exceeds 95 degrees and a few times each summer it exceeds 100 degrees. The hottest days in summer mostly occur in the last half of July, but the hottest spell of the year sometimes comes in August or September. The high temperatures seldom last more than a few hours in the middle of the day. Usually there is a fresh wind blowing and the air is quite dry, making the high temperature less oppressive than the figures would seem to indicate. From the middle of September the temperature decreases rapidly—approximately one-third of a degree a day until December.

### Frosts

Light frosts, sufficiently severe to kill tender vegetation or a few of the less vigorous fruit blossoms,

are likely to occur throughout May, and sometimes early in June, especially in the northwestern counties. The average date when the last freezing temperature or frost sufficiently severe to kill staple crops occurs, is the first week in May, in a line drawn from the northeast corner to the southwest corner of the State. The date becomes earlier southeastward to the southeastern corner of the State, where it is about April 15th, and later northwest of this line to the middle or latter part of May, in a large part of the more elevated portions of the northwestern part of the State, where the altitude is about 4,000 feet.

Light frosts, not sufficient to cause any practicable damage to vegetation, have occurred in a few years in the very last days of August, and several years in the first half of September. Such frosts, and in some years more severe ones, are to be expected during the last half of September. The average date of the first killing frost in the fall is the last days of September, for a line drawn from the northeastern

## U. S. RAILROAD ADMINISTRATION



North Platte, Nebraska, near Scotts Bluff and a portion of the Gering farming district in the distance. Scotts Bluff and Gering are thriving Western Nebraska cities

corner of the State to the southwestern corner of the State. This date becomes later southeast of the line to the southeastern corner, where it occurs the middle of October, and earlier northwest of this line, where, in the greater part of the northwestern portion of the State, it occurs near the middle of September.

### Precipitation

The rainfall for the year in Nebraska has a wide range in different parts of the State. It is greatest in the southeastern corner, where it is between thirty-two and thirty-five inches. It is least in the extreme western portion, near the center of the State, where it is less than sixteen inches. Most of this precipitation is rain. The snowfall for the year averages only about twenty-five inches, equal to a little more than two inches of water, or less than one-tenth of the annual precipitation. In fact, the year may be divided into wet and dry seasons; May, June, and July constitute the wet season, with 46 per cent. of the annual precipitation falling during

these three months. November, December, January, and February are the dry months, with but 11 per cent. of the total amount falling during these three months. The other 43 per cent. falls during the remaining five months, or approximately one-twelfth of the annual amount each month. As this indicates, very little rain or snow falls during the late fall and winter months. A slight decrease occurs in March, but the spring rains begin in April. The period of heaviest rainfall is during the month of June. This is also the period when the rainfall is most certain; that is, least likely to vary from the average. In July the showers are slightly farther apart, although the monthly rainfall is nearly as large as in June.

The rainfall for the crop season, April to August, inclusive, exceeds twenty inches along most of the Missouri Valley and decreases regularly westward to a little more than ten inches along the Wyoming border. It will thus be seen that a very large percentage of the annual rainfall occurs during the



A typical country church. There are thousands of such churches scattered over the western part of the State, offering ample opportunity for religious services

growing season and in this respect Nebraska compares favorably with the great agricultural states of the Union. Records of rainfall have been kept in Nebraska for more than sixty years, and there is no indication of a progressive change, either towards an increase or a decrease of rainfall, although there are wide variations from the normal—some wet years when the average rainfall for the State has been nearly thirty-six inches, or about 50 per cent. above the normal, and some dry years when it has been about fourteen inches, or nearly one-half the normal. However, in a great majority of years, the State averages near the normal.

### Sunshine and Cloudiness

March, April, and May are the months of greatest cloudiness, when the sun is obscured about one-half the time. The cloudiness decreases rapidly in June, July, and August, giving a large percentage of sunshine during the period of maturing crops.

### MARKETS

Nebraska is well supplied with railroads; no part of the State is more than twenty-four hours from a profitable market. This is a very important consideration for the farmer. Most of the state products are shipped to the Missouri River markets—Omaha, St. Joseph, Kansas City. Sioux City is the leading market for the northeastern part of the State. Chicago furnishes a market for many products produced in the entire State, while all of the Western and Southern States consume immense quantities of her corn and corn products, also her packinghouse products.

Omaha is the principal market within the State, yet there are numerous other towns which furnish satisfactory markets for produce grown locally.

The following railroads and their branches serve this State:

Atchison, Topeka & Santa Fe; Chicago, Burlington & Quincy; Chicago Great Western; Chicago,

## U. S. RAILROAD ADMINISTRATION



A typical consolidated school. The State has been one of the foremost in educational progress. There are more than 300,000 children enrolled in public schools in the State

Rock Island & Pacific; Chicago, St. Paul, Minneapolis & Omaha; Chicago & North Western; Missouri Pacific; St. Joseph & Grand Island, and Union Pacific.

### COMMUNITY LIFE

Organized agriculture in Nebraska has developed rapidly in recent years, and along with this development came splendid neighborhood social life. There are thousands of farmers' co-operative organizations throughout the State. A large number of Nebraska communities now have county agricultural agents and farm bureaus, and the newcomer should make himself known as soon as possible after his arrival, get in touch with the county agricultural agent and join the farm bureau.

The newcomer will find congenial home surroundings. There are thousands of churches of all denominations in the State, and in many sections the church is the center of the community life of the district.

School consolidation is developing rapidly, and in all parts of the state the people take a keen interest in the improvement of social conditions. Good roads are the rule and make social life pleasant.

### SCHOOLS

Possibly no state in the Union has made greater progress along educational lines than has the State of Nebraska. Less than half a century ago there were three schools in the State that were doing work higher than the twelfth grade in our present high schools. These schools were located at Peru, Lincoln, and Fremont and each had but one building. Since that time Peru has many times doubled and quadrupled itself and it has turned out hundreds and thousands of teachers in the State. The university is recognized as one of the leading universities of the United States. Fremont has given back to the State over 3,500 teachers.

To-day the State has 300,011 children attending public schools. The number of counties is 93; the



Land of this character furnishes excellent grazing for cattle and sheep. Pioneer stock men were attracted to this country because of the good natural shelter for stock, as well as the nutritious grasses. There are good farming lands tributary to these grazing lands

total number of school districts, 7,216; total number of schoolhouses, 7,681.

Number of teachers employed in the public schools, male, 1,150; female, 12,098.

Total amount of money received from all sources for school purposes, including bonds, fines, and licenses, non-resident pupils, and other sources, \$14,520,934.33.

The last Legislature passed a law which provides for the redistricting of the State of Nebraska for consolidation purposes, as consolidation here is in its infancy. Last year the assessed valuation of the consolidated districts amounted to \$12,058,682.

### STATE AND GOVERNMENT LANDS

All the major portion of the homestead lands, suitable for diversified farming, in Nebraska, were taken up years ago and there are no such free government lands available at the present time, with the exception of the irrigated homestead lands on

the United States Reclamation Project in North Platte Valley.

Government irrigated lands in the North Platte Valley are thrown open for settlement, from time to time, as the canals for the delivery of the water are constructed. These lands (which are chiefly in Scotts Bluff County) may be had in 80-acre units. Three years' residence, of seven months per year, are required to secure title to these lands. The settler must pay for the cost of the water which amounts to about \$70 per acre, and is allowed twenty years' time in which to make these payments, without interest charge.

Information about these irrigated homestead lands can be secured by addressing the Project Manager, U. S. Reclamation Service, Mitchell, Nebraska.

The lands owned by the State of Nebraska are not offered for sale, but may be leased. Information about these State lands may be secured by addressing the State Commissioner of Lands and Buildings, Lincoln, Nebraska.



Experiment Station for the benefit of farmers at North Platte. This station is maintained by the State for the purpose of testing varieties of crops and to determine the most profitable ones for Western Nebraska

### How the Extension Service May Assist the Settler

The type of farming varies greatly in the different sections of Nebraska, due to soil, rainfall, topography, and altitude. In Western Nebraska rainfall of half that of Eastern Nebraska, and an altitude of 4,000 feet greater, necessitates radically different farming methods.

Many failures of farmers in the past have been due to an attempt to force nature; whereas, harmonizing methods with nature has usually brought success.

Experiment and experience have, in the course of years, proven what practices are safe to follow under a given set of conditions.

The Extension Service of the Nebraska College of Agriculture seeks to disseminate, among the farmers of the various sections of the State, the most approved practices of successful farmers in those localities; and to make known the successful practices, as proven by the experiment stations and the farmers themselves.

This is largely done in two ways: Through resident extension representatives, namely county agricultural agents and home demonstration agents; and by extension specialists in the subject matter departments of the College of Agriculture. The county agent and the home demonstration agent work under the direction of the County Farm Bureau co-operating with the Extension Service and the United States Department of Agriculture. The most efficient work of the extension specialist can be done in those counties having a farm bureau organization, but prompt and careful attention is given to all inquiries from unorganized counties.

These agencies of the extension service are at the disposal of the new settler. One of the most serious problems confronting the farmer, who locates under a set of conditions differing from those to which he has been accustomed, is that of obtaining properly adapted seed and a knowledge of successful cultural methods. The farm bureau and county agent are especially valuable in assisting the newly located farmer in obtaining seed and live stock and, what is



A ranch headquarters in the Sand Hill region of North Central Nebraska. Land similar to this may be bought for \$10 to \$50 an acre. The low-lying lands furnish excellent hay and produce good yields of other crops.

even more valuable, in acquainting him with successful farmers of that locality. Discouragement and failure may thus be avoided.

The Extension Service stands ready, at all times, to respond to the inquiries of the farmers of Nebraska and takes a deep interest in newcomers, since their success contributes to the welfare and greatness of the State as a whole, and makes for general happiness and prosperity. Every new settler is invited to become a member of the farm bureau in the county in which he locates. The newcomer should make himself known to the bankers and business men of his town, and get acquainted with the county agricultural agent at the earliest opportunity.

### EASTERN NEBRASKA

To make clear the value of Nebraska lands for specialized or general purpose farming, a dividing line, beginning on the northern boundary and following the eastern edge of Holt, Wheeler, Custer, Dawson, Gosper, and Furnas counties, may be adopted. The area to the east may be classed as fully settled and offering nothing to the newcomer, unless he has

means greater than the average man who leaves his field of acquaintance and settles in a new location to carry on farm operations.

The eastern part of the State must be seen to be appreciated. In a large percentage of it comfortable and beautiful homes are built, roads are improved, and the network of railroads leaves no farm distant from market. It is an area comparable with the best of the Corn Belt, and while lands range in price from \$100 to \$300 an acre, all familiar with the territory know it has not reached the top. Eastern Nebraska lands are good investments.

### NORTH-CENTRAL NEBRASKA

Arthur, Blaine, Boyd, Brown, Cherry, Garfield, Grant, Holt, Hooker, Keya Paha, Loup, Logan, McPherson, Rock, Thomas, and Wheeler counties make up the northern group and cover the great native hay area of the State.

Chiefly the lands are sand and sandy loams. Broad valleys flank the streams and extensive basins without surface stream drainage grow a very high quality hay that serves well as a cash crop, since



## U. S. RAILROAD ADMINISTRATION



Alfalfa yields from two to five tons an acre under irrigation. Productive irrigated lands with excellent water rights may be purchased for \$100 to \$300 an acre

the insistent demand for it at central markets assures a top price.

These valleys are separated by ranges of hills that are covered with buffalo, gramma, and other grasses that furnish excellent pasturage, and their character and soil has caused the area to be widely known as the "Sand Hills." This is primarily a stock country and some of the largest herds of the best bred cattle of the State are found here.

These counties cover more than 12,000,000 acres of which approximately 1,000,000 acres are cultivated. Potatoes are a principal commercial crop and garden vegetables of every kind are grown in great abundance. More corn, wheat, rye, oats, and barley are grown than local demand absorbs, and hundreds of thousands of bushels are shipped to the central markets. This surplus grain, the great prairie hay production, the hogs, cattle, and horses bred and grown in these counties, the large volume of dairy products originating here and the vast quantity of eggs and poultry supply a marketable

tonnage that probably excels any other agricultural section of like area that has no greater percentage of its land in tillage.

Boyd, Keya Paha, the north half of Holt, and a section of Brown, are chiefly "hard soil" lands, and a large part of the area is in cultivation. These lands carry a higher valuation than do areas where the major part is pasture land. Several other counties, too, have smaller areas of this character of soil that locally considered is of much advantage, but affects the whole county very little. For such areas market prices range from \$40 to \$125 an acre, while the range for the sandy lands runs from \$10 to \$50 an acre. There are 10,000 farms in these counties. Many small ranches, with stock and equipment or without such, are offered by retiring owners at such prices that the normal earnings from the ranch and the increasing value will, in a very few years, pay for the ranch. Large holdings, too, must be divided for more profitable operation, and to supply the demand for a ranch of such size that the farmer and his family can handle it.



Northwestern Nebraska counties produce two-fifths of the State's 10,500,000 bushels of potatoes. Dry land seed stock yields approximately 24 per cent higher than seed grown in other sections of the State

### NORTHWESTERN NEBRASKA

Banner, Box Butte, Cheyenne, Dawes, Deuel, Garden, Kimball, Morrill, Scotts Bluff, Sheridan, and Sioux counties form the northwestern group, and are commonly known as the "Pan-Handle" of the State. On account of the large irrigated area and the large acreage of sugar beets and other specialty crops grown, this group contains some of the highest priced land in Nebraska. The northern two-thirds of Garden County and the southern half of Sheridan County are of the same character as the sand hill group, with a broadening of the hay valleys and a corresponding recession of the hill ranges, as the western extremes of the sand hill country is reached.

In each of the counties there are scattered parts of sand areas or rough clay and rocky areas, and while such lands have lower values than adjacent prairie they are very desirable for the range stockman on account of the natural shelter they afford.

The timbers from the cañons and rugged slopes furnished the early homesteader fuel, posts, and other building material before railroads made it

possible to supply this need. The rough areas are only a small percentage of the total area. They stand in bold outline and sometimes give the newcomer the impression that they typify the country, while the major part of the lands is gently rolling prairie farms and ranches growing successfully all of the common field crops.

This group of eleven counties contains approximately 11,000,000 acres of land, 75 per cent. of which is tillable. Within it are some of the largest and most highly developed ranch properties of the State; likewise, some of the smallest and most intensively cultivated farm units.

For the entire group about one-eighth of the area is cultivated. The non-irrigated lands range in price from \$15 to \$100 an acre.

This group of counties embraces the chief potato district of the State. The average acre yield is 120 bushels, while the state average is 86 bushels. These counties produced two-fifths of the State's 10,500,000 bushels.

Thirty-five of the 44,000 acres of sugar beets grown in the State were grown here, and three of the



Thousands of high-grade dairy cows have been shipped into the State in the past few years. The dairy business appeals to the newcomer because it requires but little capital to make a start and it offers an immediate cash income. It is a safe line of farming to follow.

State's four sugar factories are located here. Three of these counties produced 100 per cent. more wheat than the average of the State. The potash produced in these counties is one-half of the total production of the United States. Nine thousand farms are operated, 6,000 of them by the owners.

These "Pan Handle" counties have 211,000 acres of irrigated land, and form one of the most important irrigation districts of this country, involving millions of dollars for canal and lateral systems, dams, and other structures needed in operation, and adding tens of millions each year to the production of this area. Land values for irrigated farms range from \$100 to \$300 an acre, and deliver an income every year warranting these prices and guaranteeing increasing value as further development takes place. Dawson, Dundy, Hitchcock, Keith, Lincoln, and Red Willow have a total of 69,000 irrigated acres. Several other counties have small areas but are of local importance only, since the irrigated land does not materially affect land values for the county of which it is a part.

### SOUTHWESTERN NEBRASKA

These counties may be divided into three groups of somewhat uniform conditions. The counties divided by, and lying to the south of, the Platte River

Custer, Dawson, Gosper, Furnas, Red Willow Frontier, Lincoln, Keith, Perkins, Chase, Hayes, Hitchcock, and Dundy—are chiefly "tight lands." Wheat and corn are the principal cash crops. Ninety per cent. of the surface is tillable, and 10 per cent. has only grazing value. Hogs and beef cattle are extensively raised and dairying is constantly in favor. The all-year return from milking cows is a strong argument for enlarging this industry. Large tonnages of sorghums and kaffirs are grown to supplement corn and alfalfa.

These counties embrace about 9,000,000 acres, 2,500,000 acres of which are cultivated in 16,500 farms. The area thus has an average of more than 500 acres per farm, and taking into account the relatively small acreage cultivated, it is at once apparent that there is considerable room for develop-



The estimated 1919 wheat crop is 80,000,000 bushels and wheat is a leading crop in the State. Winter wheat is an important crop on the non-irrigated land

ment. One hundred sixty and 320-acre farms and ranches, running up to 1,500 or 2,000 acres, are on the market at a range of prices from \$20 to \$100 an acre.

The farmer in this territory, who has based his operations on grain production, in connection with feeding cattle and hogs or milking cows with poultry as a side line, is the outstanding example of success. The farming business in these counties is well organized and undergoing a healthful extension. Hundreds of these thriftily managed farms yield their purchase price every few years.

There is no abrupt change in the land or climatic conditions between Eastern and Western Nebraska. The change is gradual. Counties to the west have much in common with neighboring counties to the east. Forty counties in the western part of the State offer special opportunities to the man of limited capital, where he may secure a home of his own.

These forty counties have nearly all of the 23,000-, 000 acres of unimproved land of the State. They

have one-quarter of the corn acreage, one-third of winter wheat, and one-half spring wheat acreage, three-fifths of the potatoes, seven-twelfths of the wild hay, one-sixth of the alfalfa. They have one-third of the milch cows and one-half of other cattle.

Land values vary greatly in these western counties.

Western Nebraska is settled to an extent so that its value as a profitable farming section is proved; yet there is room for double the number of families now living in that part of the State.

The homebuilder will find few more inviting locations. The climate is healthful, water for domestic use easy to secure, good roads the rule, rural mail routes, telephone connections throughout, a school system second to none, colleges and high schools, state normals, agricultural schools, experiment stations, and churches—all well supported and thoroughly representative. Fast growing towns fully meet the trade and market needs. There are several towns of 5,000 population.

# U. S. RAILROAD ADMINISTRATION



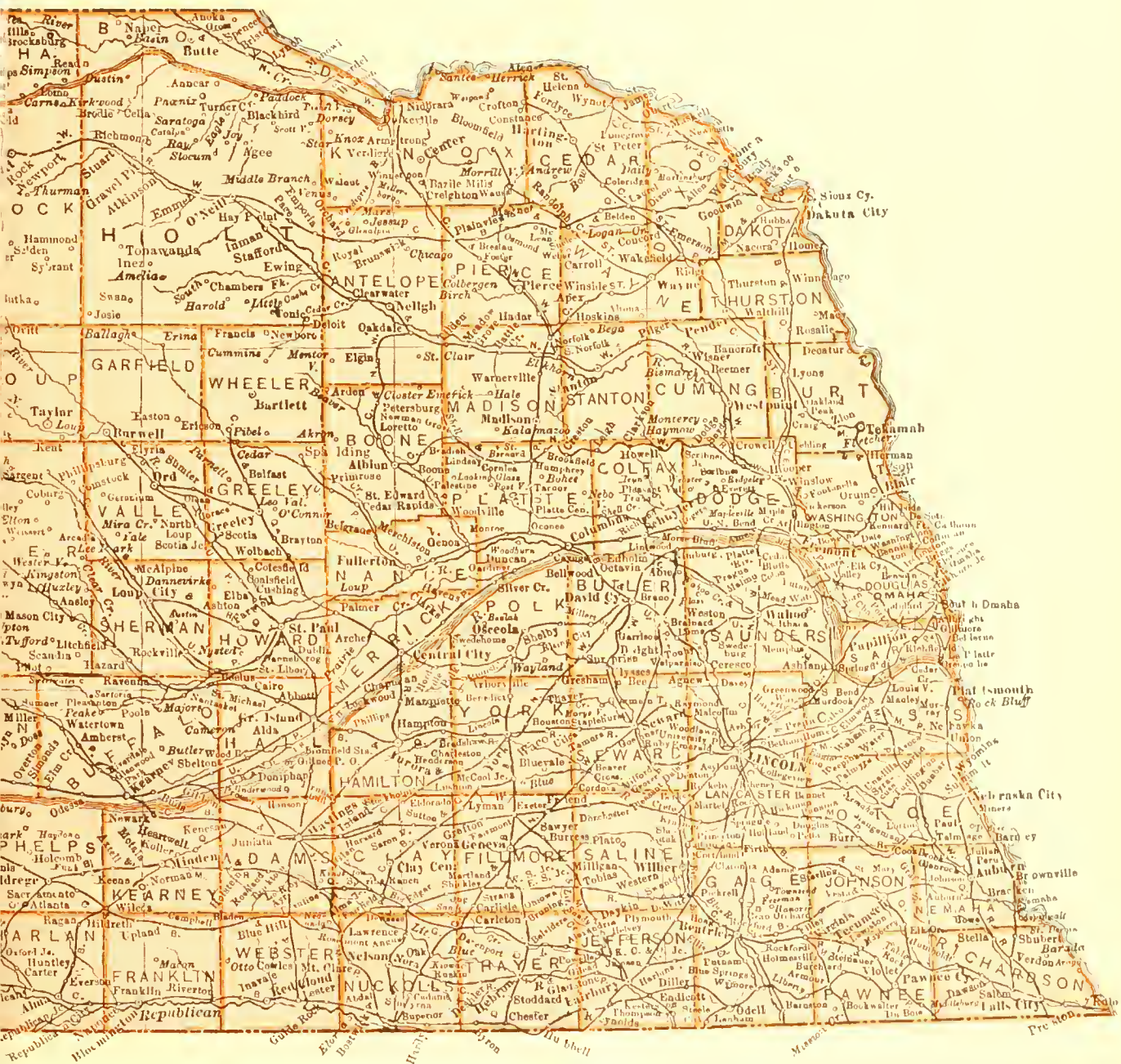
A Western Nebraska sugar beet factory. There are four of these factories in the State. Where sugar beets are grown, land values are high

The following tables contain detailed information of production and development:

North Central Counties 1918	Alfalfa Total Tons	Wild Hay	Milch Cows	Other Cattle	Horses	Hogs	Sheep	Potatoes Bushels
Arthur County	2,240 0	44,239 5	1,740	11,552	2,989	1,640	43	35,000
Blaine County	244 0	36,948 0	1,527	9,059	2,997	1,728	211	37,890
Boyd County	20,941 5	30,834 0	5,240	19,202	7,663	21,833	157	101,867
Brown County	3,465 0	49,460 0	3,550	25,422	8,491	4,850	2,182	280,500
Cherry County	14,896 0	237,855 2	6,203	178,249	28,907	11,917	2,237	323,739
Garfield County	8,052 0	46,076 0	2,634	15,863	4,092	4,849	67	38,988
Grant County	13,744 8	34,138 5	823	39,835	4,056	395	180	44,220
Holt County	22,398 6	252,831 6	11,624	92,375	19,307	20,006	2,238	171,440
Honker County	934 5	43,895 5	956	13,434	3,344	674	80	38,025
Keya Paha County	14,336 0	36,085 0	3,120	25,355	7,743	7,682	8	37,760
Logan County	1,377 6	17,248 0	1,597	16,413	3,929	4,282	313	41,895
Loup County	5,361 3	19,620 0	1,459	10,487	3,016	3,737	349	28,260
McPherson County	904 0	47,277 0	1,385	11,857	5,185	2,392	11	71,925
Rock County	2,431 0	62,873 3	2,978	31,872	6,578	2,387	651	56,700
Thomas County	959 4	23,526 0	1,114	9,908	2,445	917	79	53,900
Wheeler County	2,378 2	34,182 5	1,689	18,758	3,691	5,389	527	26,640
<b>Northwestern Counties</b>								
Banner County	19,514 0	3,780 8	714	16,793	5,257	1,610	1,427	34,832
Box Butte County	16,456 0	12,995 0	2,510	23,115	8,925	3,287	42	1,225,107
Cheyenne County	4,954 5	14,160 3	2,586	12,527	10,855	5,195	88	109,388
Dawes County	37,774 0	14,506 1	2,585	29,678	10,507	6,137	6,945	549,542
Deuel County	19,284 0	6,251 0	2,746	4,157	3,832	3,190	159	92,218
Garden County	8,857 5	3,567 0	1,013	44,412	11,544	7,900	1,412	57,950
Kimball County	3,643 1	1,870 0	1,439	8,574	4,846	1,621	5,287	149,380
Morrill County	19,994 0	28,201 5	3,197	39,284	13,118	5,200	350	445,278
Scottsbluff County	107,647 5	16,665 3	3,228	23,136	11,435	8,276	53,964	1,029,936
Sheridan County	34,746 6	61,758 9	3,979	65,960	19,632	11,258	2,465	1,388,760
Sioux County	51,142 0	21,908 7	2,796	51,566	12,179	3,608	21,965	406,953
<b>Southwestern Counties</b>								
Chase County	7,942 4	6,136 2	2,574	16,396	8,462	8,389	157	55,500
Custer County	83,878 2	56,723 1	15,564	93,817	36,925	71,461	5,266	150,243
Dawson County	121,020 9	17,026 1	10,193	34,370	17,310	35,515	4,579	90,104
Dundy County	8,810 2	9,021 1	2,890	20,716	7,693	10,045	35	22,300
Frontier County	6,009 3	11,506 0	5,673	27,547	13,676	14,996	1,031	44,250
Furnas County	31,418 5	5,640 0	6,435	21,430	13,582	16,004	4,984	30,800
Gasper County	6,518 6	8,352 8	3,944	18,350	7,715	14,582	94	30,470
Hayes County	3,756	11,409 6	3,448	13,998	7,492	8,103	1,074	49,720
Hitchcock County	9,279 6	3,198 8	4,269	10,714	7,291	7,090	40	40,827
Keith County	13,083 4	17,539 2	2,169	26,558	8,625	11,975	269	38,100
Lincoln County	41,091 3	135,151	7,794	61,604	21,170	19,418	4,359	185,900
Perkins County	7,051 8	9,288	2,650	13,709	8,934	5,644	1,538	46,531
Red Willow County	13,708 8	3,348	4,919	19,298	9,656	11,772	167	57,942



MAP OF



# NEBRASKA

# NEBRASKA BEEF, BREAD AND BUTTER STATE



Some good brood mares in the Chimney Rock district—an excellent stock and diversified farming section. Nutritious grasses produce strong boned, sturdy animals

North Central Counties 1918	Total Land Acres	Cultivated Area	Spring Wheat Acres	Winter Wheat Acres	Corn Acres	Barley Acres	Oats Acres	Rye Acres
Arthur County.....	553,600	25,300	225	350	16,344	.....	675	4,250
Blaine County.....	460,800	32,109	106	600	17,366	.....	1,870	10,757
Boyd County.....	340,480	115,158	26,576	1,401	65,599	3,481	29,473	1,961
Brown County.....	679,040	81,600	3,425	3,200	49,305	150	14,800	8,740
Cherry County.....	3,870,720	112,717	4,953	1,043	58,879	352	13,008	11,834
Garfield County.....	368,640	43,478	1,521	3,202	24,350	276	6,130	2,383
Grant County.....	460,800	6,012	32	30	896	.....	61	537
Holt County.....	1,561,600	216,334	12,057	5,807	117,245	1,169	37,541	22,823
Hooker County.....	460,800	18,633	68	89	7,655	22	231	6,299
Keya Paha County.....	460,800	79,441	4,635	2,529	35,317	1,602	7,285	6,000
Logan County.....	368,640	39,483	1,154	5,473	19,038	619	4,606	7,797
Loup County.....	368,640	30,505	873	882	12,784	61	3,564	4,214
McPherson County.....	1,013,760	33,699	292	536	18,822	.....	980	8,171
Rock County.....	675,840	41,478	964	536	20,499	45	4,377	4,638
Thomas County.....	460,800	15,573	82	304	7,320	.....	223	4,201
Wheeler County.....	368,640	32,998	1,983	335	16,674	6	4,749	5,533
<b>Northwestern Counties</b>								
Banner County.....	483,840	55,569	21,356	5,753	8,224	161	8,071	524
Box Butte County.....	691,200	78,120	15,172	5,834	20,250	2,357	11,524	8,170
Cheyenne County.....	1,692,800	178,891	52,556	66,965	25,354	1,355	12,932	1,851
Dawes County.....	898,560	69,165	14,543	2,928	29,716	1,081	9,682	9,672
Deuel County.....	960,000	168,330	24,976	87,319	22,726	4,754	9,040	1,744
Garden County.....	1,140,480	40,112	3,781	8,781	14,551	330	2,710	3,050
Kimball County.....	614,400	72,443	23,428	21,271	6,217	770	8,552	1,671
Morrill County.....	925,440	77,681	18,930	10,848	18,775	748	7,356	3,387
Scottsbluff County.....	483,200	165,609	17,571	6,688	13,396	3,708	13,033	565
Sheridan County.....	1,589,760	133,633	19,285	2,732	43,037	3,909	21,582	20,349
Sioux County.....	1,309,440	85,682	7,874	502	15,294	1,545	6,105	5,147
<b>Southwestern Counties</b>								
Chase County.....	568,320	127,171	9,112	40,757	45,388	7,432	1,949	5,726
Custer County.....	1,658,880	511,194	14,803	68,165	209,021	11,464	58,079	28,589
Dawson County.....	657,920	327,363	8,546	90,806	117,171	10,846	27,804	18,555
Dundy County.....	614,400	108,499	2,585	20,302	58,608	6,922	553	7,167
Frontier County.....	622,080	231,521	1,327	60,831	99,858	10,790	12,301	9,489
Furnas County.....	460,800	244,795	220	116,474	75,999	15,945	5,280	2,027
Gaspar County.....	296,960	136,718	932	41,659	75,226	1,352	5,732	1,393
Hays County.....	460,800	107,482	2,335	31,808	50,894	11,144	2,945	3,110
Hitchcock County.....	460,800	152,975	645	70,303	37,706	14,220	1,662	1,057
Keith County.....	725,760	79,408	10,988	21,317	32,503	5,682	5,222	4,434
Lincoln County.....	1,658,880	233,362	9,383	51,358	218,950	4,954	16,823	24,012
Perkins County.....	526,080	112,623	10,557	34,602	34,758	5,373	5,289	7,540
Red Willow County.....	460,800	214,351	281	83,978	78,200	12,548	5,461	1,824





Modern methods of plowing. Note the excellent tilth of this soil. Western Nebraska soils are deep, work well, and are easily handled

### Soils and Soil Management in Western Nebraska

In the production of crops, where the amount of moisture is rather limited, the soil is a very important factor. Since there are many different kinds of soil in Western Nebraska and the dry farming country in general, care must be taken in purchasing a farm. Some soils are good only for grazing purposes while others may be cultivated. The soils of Western Nebraska are generally divided into the "sand hills" and "hard lands."

Although all of Western Nebraska is more or less of a stock country, this is particularly true of the sand hills section which occupies the central and north-central parts of Western Nebraska. The sand hills proper are good only for grazing, but between the dunes or ridges are numerous valleys. In the northern and eastern portion of this section sheet water is generally close enough to the surface so that crops may be grown in the valleys by means of sub-irrigation. Some excellent yields of wild

hay have been reported, and where the valleys are of sufficient size they are often cultivated.

The sub-irrigated valleys are generally called "wet valleys." In the southern portion of the sand hills occur the "dry valleys." In these there is no possibility of sub-irrigation, but since they have received some run-off from surrounding lands they have grown better native grasses in the past than the hills, and contain a greater amount of organic matter. They produce a considerable amount of native grass for winter feed, and when properly handled, may be cropped to advantage. Probably the chief problem of this country aside from the limited rainfall is the tendency of the soil to blow. It should be kept covered with growing crops or crop residues, such as stubble, and should be supplied with organic matter.

It is important, in buying land in the sand hills region, that sufficient acreage be secured to pasture the number of stock desired and that sufficient valley land be obtained for growing winter feed.



Corn is the leading fodder and silage crop. The early maturing varieties are best for the western part of the State

In the hard land areas of Western Nebraska, which surround the sand hills, there are some sub-irrigated lowlands. Where the water table is at a sufficient depth excellent yields of alfalfa are obtained. There are also parts of the valleys which are irrigated.

In buying irrigated land, it is especially important to get soil that is of good depth, of the proper slope to irrigate easily, that will take the water well, and hold it well. Alkali lands, or lands that have a tendency to become alkaline, should be avoided. In the latter class might be placed lands lying just below a shelf or bench which is also irrigated. The seepage water from the higher lands tends to rise and cause an accumulation of alkali water on the lower lands. Irrigated lands are found chiefly in the North Platte Valley, although smaller tracts are found along the Lodge Pole, Republican, and other streams.

The greater part of the hard land section, however, is upland soil. Some of this upland soil is valuable only for grazing while other areas may be cultivated

to advantage. Any soil that will grow grass may be used for pasture, although the nature of the soil and subsoil has much to do with the amount of feed secured from an acre. A man should buy pasture land at a price comparable with the feed that it will produce in the average year. It is well, in buying land for any purpose, to make a careful examination of the soil to a depth of five or six feet. Soils that are to be put under cultivation should not be sandy enough to blow badly when uncovered, nor too fine to take in the rain well. The subsoil is extremely important in the storage of moisture. If gravel, coarse sand, or hard pan comes too near the surface, the capacity of the soil for holding water will be materially lessened. Crops grown on soils thus underlaid will not stand drought.

The best dry farming soil may be described as one that is of medium to slightly sandy texture at the surface and slightly heavier in the subsoil, so as to receive and hold water well. It should contain a relatively large amount of organic matter, considering



There are more than 2,000,000 hogs in the State. Alfalfa and corn, two of the leading crops of Western Nebraska, make a balanced ration for hogs. Omaha is one of the largest hog markets in the United States

the rainfall. Soils of the dry farming region should not be expected to contain as much organic matter, and hence are not as dark in color as soils of the more humid regions. A good amount of organic matter indicates a fair production of native vegetation in the past. Dry farming soils should have a depth of at least four or five feet—better, six or seven feet without gravel or hard pan. On soils having a hard pan, gravel, or coarse sand within three feet or less of the surface, crop production is more hazardous since no considerable amount of moisture can be stored and crops are very dependent upon the distribution of the rainfall. Such soil is probably better left in native grass.

After a good dry farming soil has been selected, the next thing in importance is to manage it properly. Crops should be secured that are suited to the climate and the soil. In his selection, a man must be guided by the experience of local farmers having similar soil conditions and by the results from nearby experiment stations.

Approved tillage methods in the dry farming country are rather simple, consisting largely in keeping the soil in the best condition to take in rainfall and preventing the loss of moisture through weed growth. The prevention of blowing must also be taken into account, since, with the higher wind velocity of the Great Plains region, most soils will blow, to some extent, when left smooth and bare. Especially is this true of soils rather deficient in organic matter.

In much of the dry farming country, manure has not been saved and applied as it should be. Although many farmers appreciate the superiority of new lands, they do not realize the importance of keeping the soil, if possible, as well supplied with organic matter and nitrogen as it was when broken up. There are probably three reasons for this: (1) manure applied to soils in dry climates, particularly to sandy soil, does not decay well unless the season is abnormally moist; (2) often no immediate favorable results are seen from the proper application



Thirty thousand acres of sugar beets are grown annually in Western Nebraska; average yields, twelve tons an acre. Sugar beet lands are the highest priced lands in the State and the beets are one of the most profitable crops grown. Several million dollars are paid out annually to sugar beet growers

of manure; (3) when manure is applied in too large quantities, particularly if plowed under, it may cause drying out of the soil and actual damage to the crop, especially in time of drought. This is a common experience of those coming from more moist regions, and attempting to use fertilizer practices to which they have become accustomed in the past.

### CROPS GROWN IN WESTERN NEBRASKA

In going from the southeast corner of Nebraska to the northwest corner, a considerable change of climate is observed. The rainfall decreases from a yearly average of about thirty-three inches to an average of about fifteen to eighteen inches. The altitude increases from less than 1,000 feet to more than 4,000 feet. The latitude, from north to south, varies three degrees. These climatic changes result in a shorter and less intense growing season. The average length of growing season in the northwestern part of the State is about 135 days. The nights are usually rather cool.

It is important that the climate as well as the soil be taken into consideration, when crops or varieties of crops are selected. Corn is produced in every county in the State, but, in the western counties, only the earliest varieties should be planted. Corn suited to Eastern Nebraska will seldom, if ever, mature in the western part. Varieties developed locally by the best corn growers are safest.

Barley has proved to be one of the most profitable feed crops on the better soils of Western Nebraska, and oats do relatively well in the extreme western and northern counties due to the rather cool climate.

Rye, both winter and spring, is grown on the western uplands. Winter rye is one of the best grain crops for the valleys of the sand hills, although corn is grown quite generally.

Wheat and potatoes are the most important cash crops of the region. The latter crop is considered elsewhere in this booklet.

Some spring wheat is grown in northwestern



The practice of growing alfalfa in rows under cultivation on non-irrigated lands of Western Nebraska is profitable. Seed of the finest quality is produced from alfalfa grown this way

Nebraska, but winter wheat is now grown in all the counties and bids fair to take the place of spring wheat within a few years. This part of the State is in the Durum wheat belt and quite an acreage is grown in some parts.

Pinto and early navy beans are early maturing and well adapted to the western counties. Emmer, commonly called speltz, grain sorghums, and millets are of minor importance. Grain sorghums are used to some extent in the southwestern part of the State. They are drought resistant and sure crops.

Alfalfa is of outstanding importance as a forage crop, where it is possible to grow it. It is especially well adapted to the irrigated and sub-irrigated valleys. It is grown on the uplands, also, both broadcast and in rows to be cultivated. The climate is especially favorable to seed production. Sweet clover has been going westward in the State and has prospects of becoming of considerable importance. It has not yet been generally determined how successful it will be on the uplands.

Amber cane is grown quite extensively for forage, giving good yields of excellent feed. Forage millets are used to a considerable extent in the northwestern counties.

Of the tame grasses, Brome is of importance in the lowlands and on the uplands of the northern counties. Timothy is grown in the valleys of the northern edge of the State and to some extent in the wet valleys of the sandhills. Red top is used on similar lands and is also found in some of the dry valleys of the sandhill section. Blue grass is extending westward in the valleys.

The most common wild grasses are blue stem, in the eastern part of Western Nebraska, buffalo grass and gramma grass on the original prairie, and western wheat grass often on the lands once broken and allowed to return to sod, particularly in the northwestern counties. A "black root" grass, also, is found on the uplands in the western counties. It is a typical short grass.



Western Nebraska dry land potatoes are in demand for seed stock—the average yield per acre being about 100 bushels. Yields under irrigation range from 200 to 400 bushels an acre

Flax is grown to a limited extent as a sod crop on the western uplands. It is quite well adapted to the climate.

#### POTATO DEVELOPMENT WORK

The total output of potatoes in Nebraska is approximately 12,000,000 bushels. This places the State tenth in potato production. A large percentage of the total yield is grown in the western counties, including Scotts Bluff, Box Butte, Sheridan, Dawes, Kimball, Banner, Morrill, Sioux, and Brown. Approximately 2,000,000 bushels are grown under irrigation in Scotts Bluff, Morrill, Sioux, and Kimball counties.

On account of the climatic and soil conditions in these counties, it is probable that the potato will always be one of the principal agricultural crops. The high altitude insures a relatively low mean temperature. The season is well adapted to potato production. The soil is suitable and contains proper elements for potato production. These conditions are all favorable for the production of potatoes.

Despite the fact that moisture is the limiting factor for production, in certain years, the average yield per acre, under dry land conditions, is approximately 100 bushels.

It is not uncommon to get a yield of 150 bushels without irrigation. The average yield, where irrigation water is available, varies from 200 to 400 bushels an acre.

There are almost unlimited possibilities for extending the potato industry in Western Nebraska. Over one-half of the land suitable for potato production is still in native sod. A three or four-year crop rotation, with potatoes as one of the crops, makes it possible to grow potatoes indefinitely.

The general production of high quality seed potatoes, in Western Nebraska, is a possibility as yet only partially realized. It is generally known that potatoes, produced in a cool climate where the growing season is short, will give a heavier yield, when used as seed, than potatoes produced under warmer conditions. From a test at the State Experiment

## U. S. RAILROAD ADMINISTRATION



Nebraska farms and ranches carry more than 2,000,000 beef cattle. The grazing lands in the western part of the State offer excellent opportunity for the production of beef cheaply

Station extending over a period of ten years it has been shown that potatoes, produced in the northern states or in the high altitudes of Nebraska, will yield approximately 24 per cent. higher than seed that has been grown only a single year under warmer conditions. We have concluded from this work that the vigor of seed potatoes, as expressed by yield, is largely determined by the temperature conditions under which the potatoes were grown.

A comparison of the yielding qualities has been made, during the past two years, of seed produced under dry land conditions of Western Nebraska with seed from various other states. This comparison has been made in Eastern Nebraska, Central Missouri, and in Southern Texas. These tests indicate that seed stock, produced in the high altitudes of Western Nebraska, without irrigation, will yield favorably with seed produced in the more northern states.

A systematic attempt is being made by the experiment station to determine the varieties that are best

adapted to the different types of soil found in the commercial potato-producing counties. All of the important standard varieties are being grown at fourteen different places in the western counties. This work will be done on a comprehensive scale during four or five consecutive years.

The Nebraska Potato Improvement Association is an organization of growers striving to do all it can to promote the potato industry in Nebraska. It purposes to bring together all the agencies interested in the production, transportation, distribution, and utilization of potatoes.

### LIVE STOCK PRODUCTION

The live stock interests of Western Nebraska have always been, mainly, beef cattle production. While sheep and hogs are being produced in some regions, the greater part of the area described is devoted to cattle production.

On account of the comparatively dry winter, cattle need virtually no housing and, aside from a wind-



There are large areas of excellent pasture lands, which assist in the production of cheap milk and beef in Western Nebraska

break which is often afforded by a cañon, no protection is planned for most of the herds. Grazing conditions may be relied upon for practically the entire year, barring the intermittent stormy periods occurring during the winter months.

As the rainfall in this area is rather light, and in many sections the soil is of a light character and does not produce grass as abundantly as in eastern districts, and although the grass is more nutritious, we must count upon a considerably greater acreage per head to carry cattle.

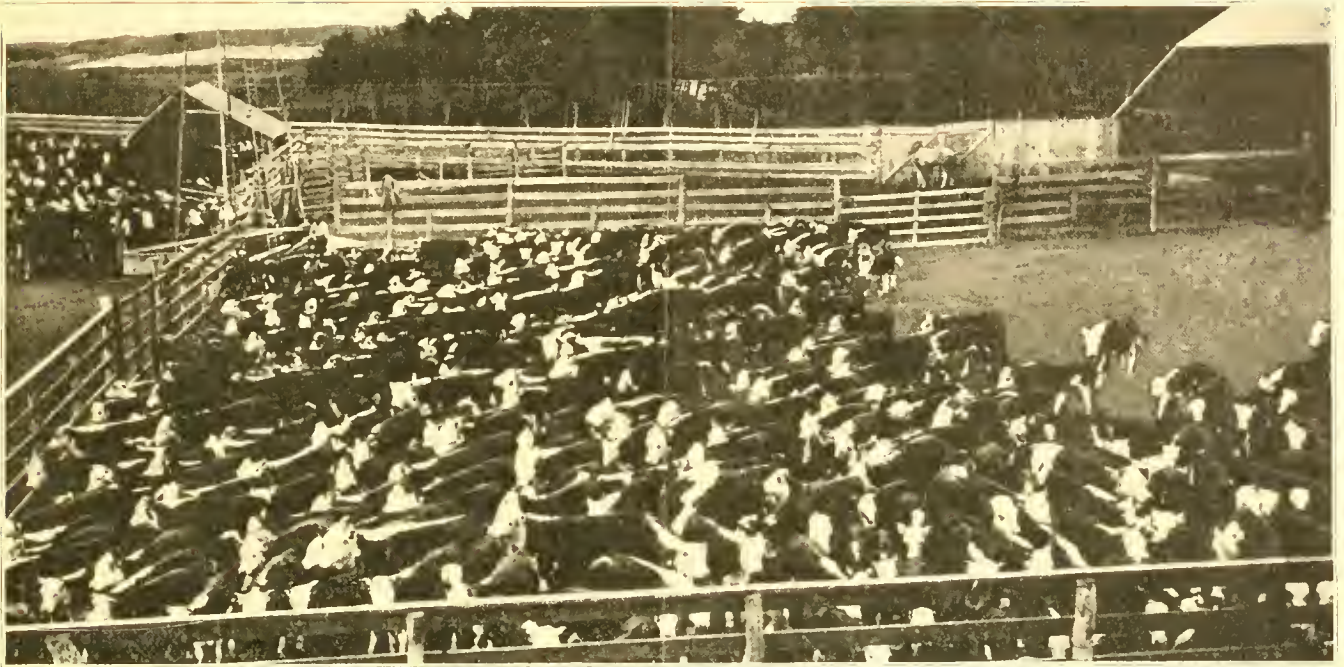
The most satisfactory pasture plan thus far worked out, where a part of each ranch is not pastured during the summer, is to allow the grass to mature and cure. This is then used for winter pasture and, very often, one is able to carry his herd through practically the entire winter upon this. Upon many ranches there is sufficient flat land, known as hay tracts, from which the rancher cuts enough hay to carry the herd through the greater part of the winter.

As a rule, the summer range is good, especially in the area north of the Platte River, and the problem of the cattle man is one of providing winter feeds. If he does not have sufficient acreage to reserve a winter range and does not have enough of the hay flats to produce sufficient hay to carry his cattle through the winter, then he should plant some crop which will produce a maximum amount of roughage.

Corn is, perhaps, the best crop for forage. This will make considerable tonnage and, when stored in the silo, makes excellent feed for all classes of cattle. Cane and the kaffirs make silage equal to corn and, on the dry lands, produce greater tonnage. On account of their drouth-resisting powers, they may usually be depended upon to produce well.

Upon practically every farm or ranch is at least a small area which is adapted to the production of alfalfa. Alfalfa is especially desirable for young growing animals. Alfalfa does not produce abundantly upon the high table lands, but can be grown in rows very successfully. Sweet clover is proving to be a good pasture crop for dry lands.





The grazing districts of Western Nebraska produce thousands of good cattle which are finished on farms producing corn, alfalfa, sugar beets, and grains

Hog producers should plant such crops as barley, rye, oats, and speltz. Any one of these grains makes good hog feed. They should all be ground and soaked for the hogs to get the most benefit from them. It has been found by experience that these grains, in most seasons, especially on the sandier lands, will produce more grain for hog feeding purposes than will corn.

Sheep are adapted to conditions prevailing over Western Nebraska, provided they are afforded protection from coyotes. Ten sheep will consume about as much feed as one mature steer.

Small ranches can be purchased in the western part of the state, well adapted to the production of any class of live stock that the settler wishes to produce.

The splendid climatic conditions, excellent grazing facilities, and the character of the feed crops which may be produced, put Nebraska in the front rank as a live stock state.

### SILOS

The silo is fast becoming a necessity to the live stock farmer in Nebraska. Farmers, in the western part of the state especially, have learned that the silo is the best possible insurance.

They have found that in this section a silo may be built at a very small expense. The pit silo—which is becoming very popular in the drier sections of the state—can be built without expert labor and at an actual cash outlay of not to exceed 25 cents a ton capacity for the cement and hoisting apparatus. It is very easily constructed and entirely satisfactory. It requires no expensive machinery for filling and can be filled with a small outlay of labor cost. The pit silo is practical for a man with a few head of live stock. By its use 100 per cent. of the crop produced can be saved for feeding.

The flow of milk from dairy cows can often be increased more than 30 per cent. by the use of the silage. The grain ration can be reduced at least one-fifth. The value of the forage crop produced



Nebraska grows her own dairy feeds, and climatic conditions are excellent for dairying. Good markets are near at hand and prices are good. The State has the largest butter and creamery plant in the world

can be doubled. The fact that silage, properly stored, can be kept indefinitely makes it possible to keep on hand a surplus of feed for future use. The man who milks cows or feeds cattle cannot afford to be without a silo. Every man who plans to move to Western Nebraska should consider carefully the pit silo. It is one of the great advantages of Western Nebraska. Pit silos will be found in considerable numbers in every dry land county. Newcomers will do well to visit farmers who have these silos and plan to put one down the first season for their own use, if possible. The county agriculturak agent will be glad to assist newcomers with silo problems.

### DAIRYING POSSIBILITIES

Dairying is proving very profitable in Nebraska. In the dry land sections, the uncertainty of rainfall makes it especially profitable to maintain a dairy herd. Rough feeds to winter stock can be produced every year, and, when put in the silo for winter feeding, make dry land farming safe.

Nebraska is a region of cheap, bulky feeds. Corn is grown in abundance in the eastern half of the state. Sufficient corn may be grown in other sections to furnish roughage, either as fodder or in the form of silage.

Alfalfa is grown from one end of the State to the other. Heavy yields are obtained in the eastern part of the state and in the valleys of the Republican and the Platte. The average yield per acre is more than three tons.

Wheat is so extensively grown that mill by-products from this grain are generally available.

Quantities of kaffir, sorghum, and millet are grown in the drier sections where they are especially adapted. From the cheaper lands, an abundance of prairie hay is produced. In much of the western part of the state cheap lands, with plenty of pasture and a long grazing season, enable the farmer to produce milk at a lower figure than can be done in eastern counties. It is essential, for best results, to



Climatic conditions are well adapted to poultry production. Every farm should produce poultry. Nebraska produces \$40,000,000 worth of poultry products annually

feed alfalfa, oil meal, or mill feeds with roughage in this portion of the state.

The production of so much roughage and other home grown feeds, and the excellent climatic conditions, make Nebraska an ideal dairy state. It is a significant fact that the eastern farmer can buy Nebraska grown hay and other feeds, and, by feeding them to dairy cows, realize a good profit upon his investment. Nebraska farmers have the advantage in that they grow their own feeds and the market for their products is just as good. The prices paid for dairy products in the east are little, if any, better than those received by western farmers.

The dairy industry in Nebraska is rapidly increasing. Thousands of high grade and pure bred dairy cows have been shipped in from eastern dairy sections for foundation herds. The dairy business especially appeals to the newcomer because of the fact that it offers an immediate cash income. The returns are certain. The importance of the dairy business, especially in Western Nebraska, cannot be

overestimated. Expensive buildings for shelter are not necessary. The climatic conditions are the best, markets are near at hand, and prices just as good as in the eastern communities. It requires but little capital to make a beginning in the dairy business.

## POULTRY

Successful poultry raising depends on favorable climatic conditions, plenty of good feeds at a reasonable price, good markets, and finally, of course, good management. Nebraska as a State is well adapted to poultry raising; the clear atmosphere and long periods of sunshine being especially helpful in keeping the flocks healthy and vigorous. Plenty of good feeds are also available for poultry feeding—corn, wheat, barley, oats, kaffir, and alfalfa are common home-grown feeds.

Most of the poultry and eggs, so far produced, are a by-product of general farming. Every Nebraska farm should have poultry. The farm



Winter rye is a sure and profitable crop on the non-irrigated lands of Western Nebraska, yields ranging from fifteen to thirty bushels an acre

flock is a very important source of immediate cash income. Eggs are readily saleable and the newcomer should plan to produce sufficient eggs for his table and also have a surplus for market. The importance of having a small flock at the beginning cannot be overestimated.

There is a healthy interest in better poultry; and with this interest comes a great opportunity for the pure bred poultry breeder. Several hundred thousand middle-west farmers constitute the buying population for the breeding stock and hatching eggs which these breeders produce.

We find instances of specialization in the milk-feeding establishments, which are located in about twenty communities of Nebraska. Here, market poultry, purchased from the general farms, is especially fed and finished for a short time before being dressed and sent to the best markets. Several of these milk feeding establishments have a capacity of from 30,000 to 40,000 birds at one time.

### FRUIT, HOME GARDENS, AND BEES

No farm home is complete without a family orchard and a home garden. Fruit sufficient to supply the family needs can be grown in all parts of the State. All common garden crops may be grown successfully, and a good home garden will do much to reduce the cost of living.

Bee keeping is a profitable side line for the Nebraska farmer. The climate of Western Nebraska is well adapted to bee keeping, and there is a place for bees on every farm.

### Amount of Capital Required to Begin Farming in Western Nebraska

Many men have gone into Western Nebraska with no backing but a strong body, a good reputation, a level head, and a willingness to work, and have



Progress of a Western Nebraska farm. At left, a typical sod-house of the early pioneers. At right, developed farm after a few years' residence

become independent. Others have started with considerable money and have failed. The individual factor is so variable that no fixed amount of money can be set as necessary for success. However, as a rule, if a man go on an unimproved farm, he should have enough to make the first payment on his land, equip himself with the necessary machinery and horses, secure three or four good dairy cows, two or three hogs, twenty-five or more choice hens, and a sufficient balance to build a small house and sheds and a well; and also to buy seed and feed to carry him until his crops come in.

A plow, a disc, a drill, a spike tooth harrow, and a wagon are necessary, at the start. A soil packer would be a good thing, but the disc set straight may be used instead. Other tools used only a short time each season may be bought co-operatively with neighbors and used jointly. The newcomer should have at least four horses. Such a layout will require from \$1,500 to \$2,500 capital, depending

upon conditions and the individual. The prospective settler should secure all the information possible as to local conditions, prices of materials, etc., in the locality of his choice and plan wisely his probable expenses, before selling the equipment he has on hand. A personal visit and examination of the land should be made before moving.

### HOW TO MAKE A START

Diversified farming, which means the production of several kinds of crops and live stock, is the most profitable and safest kind of farming to practice. Experience in farming in Nebraska shows that the man who produces a diversity of crops and live stock, so that his labor is well distributed throughout the year, and who has something to sell at all seasons, has the highest average income through a term of years. In Central and Western Nebraska live stock is especially important, and the man who is beginning farming with a small amount of capital should plan



A busy day on a dry land Western Nebraska farm. This wheat yielded thirty-five bushels an acre

on keeping some live stock from the start. This will make his income sure and protect him from uncertain weather conditions.

Before deciding what crops to plant the newcomer should make inquiry as to what varieties are best adapted to the particular section in which he is located and should secure seed of the very best. He should plan to produce some cash crops, such as wheat or beans or possibly potatoes, but should leave sufficient acreage for growing enough drought-resistant grain sorghum crops, such as kaffir, feterita, milo-maize, etc., to carry his live stock over winter. The grain sorghums produce feed for live stock in the driest of years and can be relied upon.

It is important that the beginner avail himself of every means to keep down expenses the first year. He should produce as large a share of his living from his farm as possible. A good home garden will reduce the grocery bills and a small storage pit, which can be cheaply built, will successfully keep

potatoes and other root crops through the winter months.

The dairy cow will undoubtedly give the quickest return on the money invested and will bring in a monthly cash income. It takes but a small amount of capital to purchase a few head of dairy cows, and because of the safety of this kind of farming, the bankers in the State are showing a disposition to loan money to industrious farmers for the purchase of dairy cows. Every farmer should have a few dairy cows to supply milk and dairy products for his own table and to furnish a surplus for an immediate and regular cash income.

He should also have a small flock of hens to produce eggs for his table, thus reducing the cost of his living and to furnish a surplus which is always readily saleable. He should have a few hogs—sufficient to take care of the waste products on the farm and to produce his winter meat supply. The combination of the garden, cows, chickens, and hogs,



The sun flower is an excellent silage crop in the higher altitudes. Fifteen to twenty tons of ensilage with a feed value equal to corn may be produced to an acre

with the growing of drought-resistant feed crops will insure success to any industrious man of reasonable judgment.

The pit silo (where the water-table is not too near the surface, or the subsoil is not rock or sand), in connection with the above combination, makes success even more certain. By means of a silo a man can save the entire feeding value of his crop in such shape that it will be convenient for winter feeding.

Progressive men, looking for a new home, will bear in mind the important fact that Nebraska is not a ONE-crop State; that it produces a great diversity of crops; that climatic conditions are, on the whole, excellent; **that opportunities in the United States are not excelled in any country in the world.**

Nebraska offers special opportunities that you, for your own best interests, should investigate.

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