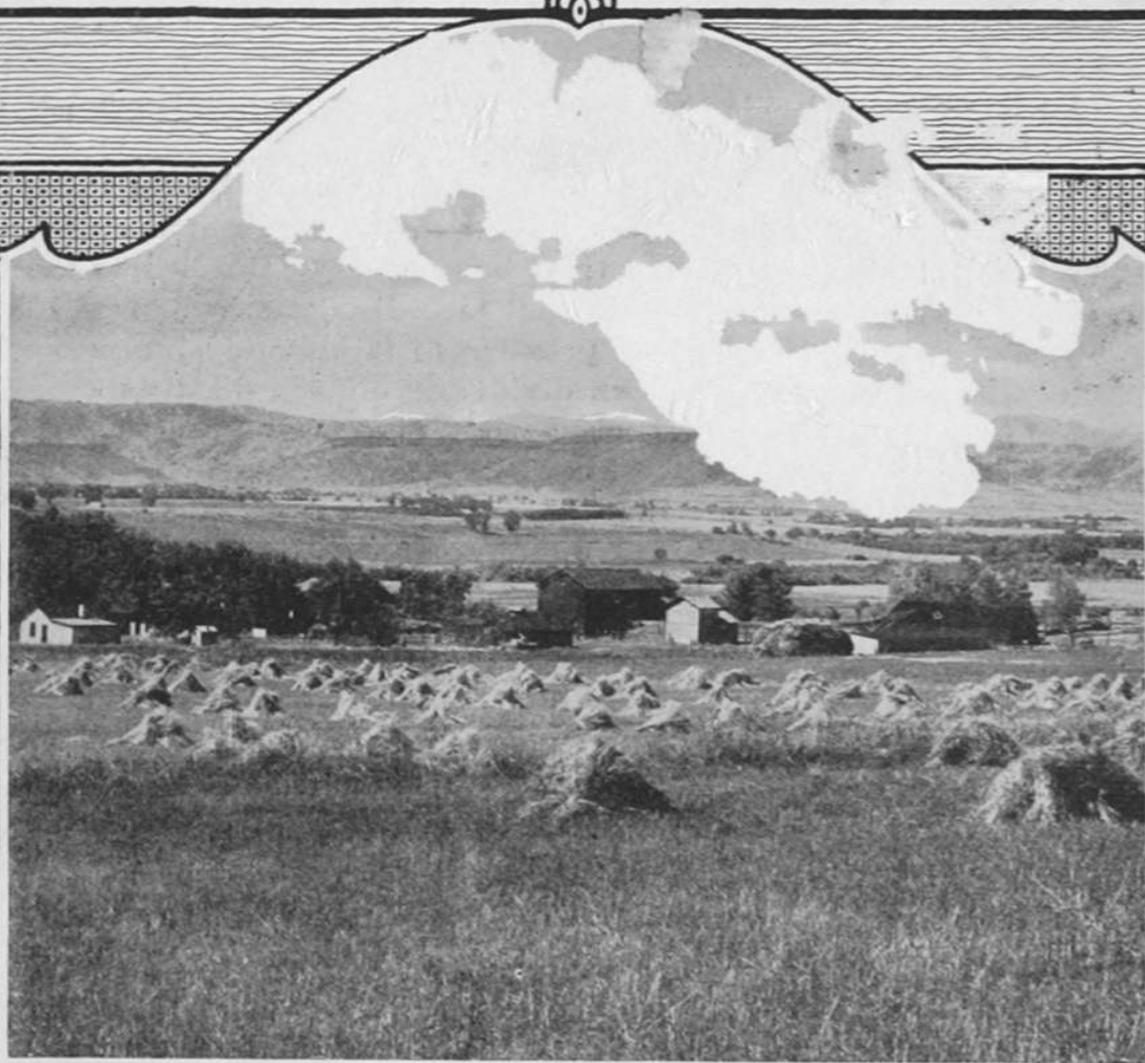


Colorado



THE
SAN LUIS VALLEY
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FOREWORD

The Colorado State Board of Immigration was established by an act of the Legislature in 1909 for the purpose of advancing, through publicity and in other legitimate ways, the development of agriculture, mining, manufacturing and other industries in Colorado. Its field has expanded year by year until at the present time it is the recognized authority of the state on all questions within its scope.

The contour, climatic conditions and industries of the state vary widely because of the natural boundaries established by the Rocky Mountains, and in order that each district may be treated with reference to conditions peculiar to it because of altitude and climate, the state has been divided into seven districts, each of which includes counties where conditions are approximately uniform. The districts are known as the South Platte Valley, Eastern Colorado, the Arkansas Valley, the San Luis Valley, the San Juan Basin, the Western Slope and the Northwest Plateau, each being treated in a separate booklet.

Every effort is made to secure information of an authoritative character and to avoid the optimistic predictions of the enthusiast. It is the purpose of this department to furnish to the prospective citizen of Colorado authentic information concerning conditions in any part of the state. The department has no land to sell, nor does it represent, directly or indirectly, anyone having land to sell.

The department invites correspondence from anyone who is thinking of making Colorado his home. No state in the Union offers better opportunities for those of limited means if they possess energy, industry and intelligence. The truth about Colorado needs no exaggeration.

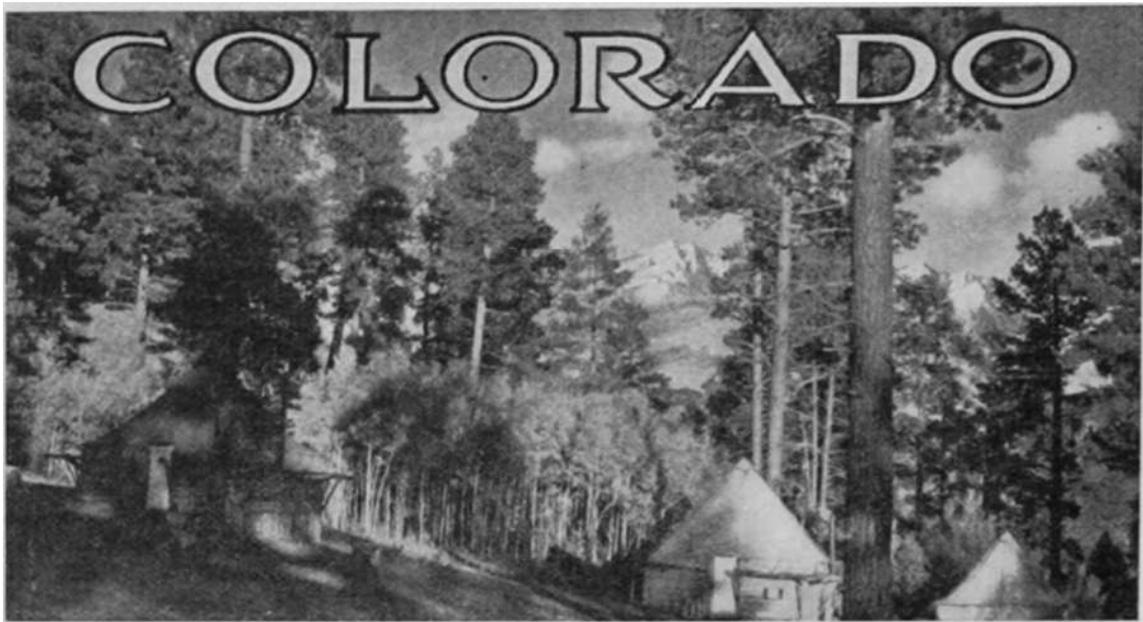
EDWARD D. FOSTER, *Commissioner of Immigration,*

TOLBERT R. INGRAM, *Deputy and. Statistician.*

STATE BOARD OF IMMIGRATION

THE GOVERNOR, *President*

L. WIRT MARKHAM, Lamar ARTHUR H. KING, Sterling



COLORADO lies in the east-central part of the Rocky Mountain region and contains the most elevated portions of the Rocky mountains in the United States, though there are higher altitudes in both California and Washington, in the Cascade mountains, than are found in Colorado. The United States geological survey assigns to two peaks in Lake county the honor of being the highest points in the state. These are Mount Elbert and Mount Massive, each having an elevation of 14,420 feet. The highest point in the United States is Mount Whitney, California, 14,501 feet. Colorado has the highest mean altitude of any state, only about one-fourth of its area being below 5,000 feet, while approximately two-thirds of it ranges from 6,000 to 14,000 feet. It has at least 43 peaks that tower 14,000 feet or higher above sea level, and approximately 600 having altitudes of more than 10,000 feet. The eastern two-fifths of the state lies in the Great Plains, and is a level or broken prairie, crossed by the valleys of the Arkansas and South Platte rivers and their numerous tributaries, and rising gradually from the state line westward to the foothills of the Rockies. The main range of the Rocky mountains passes north and south through the central part of the state, with numerous secondary ranges and spurs running in all directions, giving Colorado the greatest extent and widest variety of mountain scenery found in any state. The western part lies in the Pacific watershed and

contains the largest streams in the state. Its surface is much more broken than that of the eastern part, embracing numerous high mesas and fertile, narrow agricultural valleys, and rising to the rugged and wonderfully picturesque San Juan mountains in the southwest. In outline the state is almost a perfect rectangle, having the most regular form of any state in the Union. It ranks seventh in size, with a land area of 66,341.120 acres or 103,658 square miles. Its water area is 290 square miles, making the total area 103,948 square miles. It is more than twelve times as large as the state of Massachusetts, nearly twice as large as Iowa and about the same size as New York, Ohio, Connecticut and New Hampshire combined. Its extreme length east and west is about 387 miles, or 37 miles more than the distance from New York City to Portland, Maine, and its width approximately 276 miles, about the same as the distance from Chicago to St. Louis.)

Natural Divisions—As a result of its large size and the extreme irregularity of its surface the state is divided into a number of districts that show considerable variation in topography, soil, climatic conditions, industries and products. The most important of these are the following: The non-irrigated prairie section in the eastern part of the state, popularly referred to as "Eastern Colorado"; the South Platte valley, in the north and northeast; the

Arkansas valley, extending through the southern part of the eastern half of the state; the San Luis valley, a vast basin, the bed of an ancient lake, lying in the south central part of the state, almost wholly surrounded by mountain ranges; the San Juan basin, in the southwest; the valleys of the Colorado river and numerous tributary streams in the central-western part; the rugged plateau districts drained by the White and Yampa (Bear) rivers, in the northwest; the mountainous, mineral-bearing districts, extending in a broad, irregular belt across the central part of the state from Wyoming to the New Mexico line; and the mountain park districts, chief of which are North park, in Jackson county; Middle park, in Grand county; and South park, in Park county. These last are very similar to the San Luis valley, but all have higher average altitudes and consequently enjoy less intensive agricultural development. In topography and climatic conditions the South Platte and Arkansas valleys are very similar to the non-irrigated sections of eastern Colorado, but by reason of the fact that a large supply of water is available in these valleys for irrigation they enjoy the most extensive agricultural development found in the state and produce a wider range and greater yield of crops than the non-irrigated districts. The San Luis valley has very light rainfall, but an abundant water supply for irrigation is derived from the Rio Grande del Norte and its tributaries. The average altitude is more than 7,500 feet, which limits the range of crops grown, but the fertile soil, abundant water supply and good climate make this valley one of the finest general farming and stockraising districts in the state. The San Juan basin is a region of from moderate to heavy rainfall, having a considerable area of irrigated land in the river valleys and much good non-irrigated agricultural land on the higher mesas. This is also an excellent stock-raising district. The valleys of the Colorado, Gunnison, Uncompahgre and other rivers and smaller streams of the Colorado river basin contain the principal fruit-growing areas of the state, as well as a large amount of the fine general agricultural land. The rainfall in this area is generally inadequate for farming without irrigation, but the water supply is adequate for

all land that can be irrigated, and recently farming without irrigation has been undertaken successfully on some of the higher mesa lands, where rainfall is somewhat heavier than in the valleys. The northwest part of the state is less developed than any other district, chiefly because of lack of transportation facilities, but it contains some of the best agricultural and grazing land in Colorado. The mineral area is very extensive, but the principal producing areas are somewhat restricted.

Early History—That part of Colorado lying east of the Rocky mountains was included in the territory acquired by purchase from France in 1803, usually referred to as the Louisiana Purchase. All the southeastern part of the state, lying south of the Arkansas river, and a narrow strip extending north through the mountain district into Wyoming, was claimed by the state of Texas and became a part of the United States when Texas was annexed in 1845. This included a considerable amount of the territory belonging to the Louisiana Purchase, but the controversy regarding the northern boundary of Texas was settled long before Colorado became a state. The western part of what is now Colorado and an additional strip lying west and south of the Rio Grande del Norte was ceded to the United States by Mexico in 1848, following the war with Mexico. The actual settlement of Colorado began with the discovery of gold in the summer of 1858, at which time most of the eastern half of the state was included in Kansas territory under the name of Arapahoe county. The boundaries of the county were very imperfectly defined, and the settlers in the new gold camps, moreover, objected to being governed by a set of territorial officials 400 miles away. They appealed to the federal government for the organization of a new state or territorial government, and finally, in February, 1861, the territory of Colorado was organized, about a month after statehood had been conferred upon the territory of Kansas. The boundaries of the territory were substantially the same as are those of the state at present. In 1876 Colorado was admitted to the Union as the thirty-eighth state.

Population — The population of Colorado has increased steadily and rapidly since its actual settlement began immediately following the discov-

ery of gold in 1858. The census bureau estimates the state's population as of July 1, 1926, at 1,058,722. The following table shows its growth from 1860 to the present time, as compared with the growth for the entire country, all figures being taken from census reports:

Year	Population	Pct. Of Increase Over Previous Census	Pct. Of Increase For United States
1860	34,277
1870	39,864	16.3	22.6
1880	194,327	387.5	30.1
1890	413,249	112.7	25.5
1900	539,700	30.6	20.7
1910	799,024	48.0	21.0
1920	939,629	17.6	14.9

During the two decades following 1860 the population was confined largely to the mining districts and to the city of Denver. The cities of Pueblo, Colorado Springs and Trinidad did not make their appearance in the census population statistics until 1880, when the three had a combined population of less than 10,000. During the early 80's the period of agricultural development began and the decade ending with 1890 was in many ways the most important in the history of the state. During that period 24 new counties were organized and scores of new towns were laid out in the agricultural districts. The percentage of increase in population dropped off materially in the succeeding decades, but remained considerably greater than the percentage of increase for the country at large. In 1910 the density of population for the state was 7.7 per square mile, as compared with 30.9 for the United States. Denver County ranked first in this respect, with 3,679, and Dolores and Jackson counties were tied for last place, with 0.6. The 1920 census showed the density of population for the state to be 9.06 per square mile. Denver still holds first place in this respect, with 4,422.26, and Jackson county ranks last, with 0.81. The rural population in 1910, including all people except those living in incorporated places of 2,500 population or more each, was 394,184, or 49.3 per cent of the total. The rural population as shown by the 1920 census was 486,370, or 51.76 percent of the total. In 1910 the foreign-born white population was 15.9 per cent of the total, the principal foreign nationalities then being, in the order named, as

follows: German, Italian, Russian, Austrian, English, Swedish, Canadian, Irish and Scotch. In 1920 the foreign-born white population was 12.4 per cent of the total, the principal foreign nationalities being Russian, Italian, German, Mexican and Swedish.

Land Classification—Colorado is the seventh state in the Union in size, with a land area of 66,341,120 acres. It is divided into 63 counties, of which Denver county is the smallest, with an area of 37,120 acres, and Las Animas county the largest, with 3,077,760 acres. The records of the several county assessors showed a total of 35,195,619 acres of patented land on the tax rolls in 1925, including railroad rights of way and town and city lots. The records of the federal and state governments at the same time showed a total of 23,785,026 acres of non-patented land, including national forests, homestead areas, national parks and monuments, Indian lands and state land. This leaves 7,360,475 acres of land not definitely classified as to ownership, but none of which is on the tax rolls. Included in this is state land that has been sold but not yet fully paid for and for that reason not yet patented. There is also approximately 4,945,831 acres of government land temporarily withdrawn from homestead entry. The balance is principally homestead land that has been filed upon but not yet proved up and for that reason not yet on the tax rolls. The area of patented land in the state is increasing at the rate of about 800,000 to 1,000,000 acres annually, through the patenting of homestead land, mineral and oil claims and other lands of the public domain under various classifications. In the mining counties there is considerable mineral land that has been filed upon but not yet patented, all of which comes in the unclassified list. Of the privately owned land in the state, 2,283,110 acres is classed by county assessors as irrigated farm land, including 30,352 acres of improved fruit land; 261,525 acres as natural hay land, 11,640,466 acres as non-irrigated farm land, and 19,552,156 acres as grazing land. The remainder is chiefly producing and non-producing mineral land, railroad rights of way and town and city lots.

Drainage and Water Supply—Containing, as it does, the most elevated portions of the Rocky mountains, Colorado is quite naturally the source of

many of the important streams in the West. The Continental divide crosses the west-central part of the state, and the streams in the western part flow to the Pacific, while those in the east find their way to the Gulf of Mexico. The streams of the western slope are all tributaries of the Colorado River, from which the state derives its name. The Colorado (Grand) river, the largest stream in the state, has its source in Grand county. The Green river, which was regarded as one of the two streams forming the Colorado when the upper course of the Colorado was called the Grand River, flows through the northwestern corner of Moffat County. The northwestern corner of the state is drained by tributaries of the Green river, chief of which are the Yampa (Bear) and White rivers. The principal tributary of the Colorado river is the Gunnison, which has its source in Gunnison county and enters the Colorado at the city of Grand Junction. The southwestern corner of the state is drained by the San Juan and Dolores rivers, both tributaries of the Colorado. The south-central part of the state, including the San Luis valley, is drained by the Rio Grande del Norte. The southeastern part is drained by the Arkansas River and its tributaries, and the northeastern part by the South Platte river. The North Platte River has its headwaters in Jackson County and unites with the South Platte in Nebraska to form the Platte River. The Republican River, a tributary of the Kansas, drains a considerable area in the eastern part of the state. These streams have hundreds of small tributaries, most of which have their sources in the mountains where the snowfall is heavy. They furnish the principal water supply for irrigation and for the development of hydro-electric power. Water for domestic purposes is obtained principally from these streams, but in most agricultural sections wells are utilized as a secondary source of domestic water supply. Most of these wells are pumped, but there is a well-defined artesian belt in the San Luis valley and artesian water is found in numerous other places. There are several thousand artesian wells in the state, fully two-thirds of which are in the San Luis valley.

National Parks and Monuments— There are two national parks and three national monuments in Colorado. Rocky Mountain

national park, with an approximate area of 254,327 acres, lies in Larimer, Boulder and Grand counties, and includes some of the most picturesque portions of the Rocky Mountains. It is one of the newest of the national parks, having been created by an act of Congress, approved January 26, 1915. Its highest point is Longs Peak, 14,225 feet, and there are within its boundaries thirteen other mountain peaks more than 13,000 feet above sea level. It is the most accessible of the large western parks and this fact, together with the wide range of picturesque mountain scenery and its delightful climate, has made it the most popular of the nation's great public playgrounds. The report of the secretary of the interior places the number of visitors to this park in 1915 at 31,000. The following year the number had increased to 51,000, and in 1917 it was 117,186. The nearest approach to this was recorded at the Mount Ranier national park, which had 35,568 visitors in 1917. In 1925 the number of visitors in the Rocky Mountain national park was 233,912.

Mesa Verde national park is located in Montezuma County and is especially noted for the ruins of homes and villages of the ancient Cliff Dwellers, supposed to have been the earliest inhabitants of this part of the continent. Travel to this park has increased very materially in the past few years as the result of the construction of good highways leading to it. It was established by an act of congress June 29, 1906. Its area is 49,280 acres.

The Colorado national monument in Mesa County, near Grand Junction, was established by presidential proclamation on May 24, 1911. Its area is 13,883 acres. The site is in a picturesque canon which has been a popular scenic feature of that part of Colorado. The formation is similar to that of the Garden of the Gods at Colorado Springs, but it is generally conceded to be much more picturesque. There are many caverns in the monument, several of which have not yet been explored.

Wheeler national monument, located in Mineral County, northwest of Creede, was established by presidential proclamation on December 7, 1908. Its area is approximately 300 acres. It is especially noted for its weird and very picturesque rock formation, un-

like anything found elsewhere in Colorado. "Hovenweep," an Indian name meaning "Deserted Valley," is the third of the national monuments. It is situated on the Colorado-Utah line in western Montezuma County and contains within its area of 285 acres four remarkable groups of ruins similar to those in Mesa Verde national park.

Industries—The principal industries of the state are agriculture, stock-raising in its various branches, dairying, bee-keeping, manufacturing, mining, quarrying, lumbering and commerce. The production of oil and gas is also becoming a leading industry.

Mining, the industry which first attracted the attention of the world to Colorado, has resulted in the production of tremendous values. Since the beginning of the metal mining industry the state has produced gold, silver, copper, lead and zinc worth considerably more than \$1,500,000,000 in addition to which hundreds of thousands of dollars worth of tungsten, radium, vanadium and other precious and semiprecious metals has added to the wealth of the industry. The coal fields of the state contain fuel deposits officially estimated at not less than 372 billions of tons, while coal actually mined to the end of 1925 was 304 millions of tons. Oil totaled more than 13,879,000 barrels to the end of 1925, and development is now getting under way on a large scale.

Stockraising, dairying and other industries allied to agriculture combine to make farming the most important feature of the state's development during the past three decades. The estimated value of manufactured products in 1923 was \$255,182,504, the highest mark ever reached except during the height of the World War demand. Agriculture, including only crops, totaled approximately \$137,630,000 in 1925, and with the addition of livestock, dairy products, honey and other farm values, is unquestionably the leading industry of the state today.

Climatological Data—As a result of its great size and the extreme irregularity of its surface, the climate of Colorado is wonderfully varied and cannot be described in detail here. The mean annual temperature for the entire state is 44.6 degrees, but it varies from about 31 degrees in some of the higher mountain districts to 54 degrees in parts of the Arkansas valley.

The average annual precipitation for the state is 17.54 inches, but there is also a very wide range here in the different sections of the state. The lowest average precipitation is about 6.5 inches, in the San Luis valley, and the highest above 30 inches in the San Juan mountains. ("The delightful and wonderfully healthful qualities of Colorado's climate are well known throughout the country. Rainfall is comparatively light in all sections of the state and the percentage of sunshine is very high. The range of temperature is wide. The amount of moisture in the air is always low and as a result the unpleasant effects of extremely low or high temperatures are greatly modified. The relative annual humidity ranges from 45 to 60 per cent, being lower than in any other state except Arizona and Nevada. The high altitude is another important factor in governing climatic conditions in the state. As a result of this high altitude and the correspondingly low atmospheric pressure, impurities in the air are quickly dissipated and the depressing effects common at low altitudes, especially during periods of warm, damp weather, are entirely foreign to this state.

Railroad, Telegraph and Telephone Facilities—There are 31 railroad companies represented in Colorado, operating an aggregate of 5,044 miles of main line track. Every county in the state has some railroad mileage, though the railroad facilities of some counties, particularly in the northwestern and southwestern part of the state, are inadequate. The total value of railroad property in the state as returned by the state tax commission for the year 1925 was \$160,404,460.

Ninety-six telephone companies operate in the state, owning an aggregate total of 421,731 miles of telephone line. Most of these companies are small and operate in but one or two counties. The Colorado & Eastern Telephone & Telegraph company operates in 19 counties in the eastern part of the state, and the Mountain States Telephone & Telegraph company operates its own lines in all but two counties in the state, Baca and Dolores, and has a total of 409,021 miles of line in Colorado. Four telegraph companies operate a total of 28,113 miles of line in the state.

THE SAN LUIS VALLEY



THE district described in this book-let lies in the south-central part of the state, between the Sangre de Cristo or Culebra mountain range on the east and the San Juan mountains, which here form the Continental divide, on the west. It is chiefly a mountain valley, the largest in the state, and very similar in general characteristics to the smaller mountain valleys further north, known as South Park, Middle Park and North Park.

This valley was, in the remote geological past, the bed of a great inland lake, surrounded on the east, north and west by high mountain ranges and having its outlet to the south. The soil consists largely of detritus laid down by the waters of this ancient lake, and is generally very fertile and of great depth. It is principally a fine sandy or silty loam in the central parts of the valley, and about the edges, where the altitude is a little greater, it becomes much coarser and in some cases very gravelly.

The elevation of the district ranges from 7,300 feet in the southern part, at the outlet of the valley, to more than 14,000 feet at the summits of some of the peaks in the surrounding mountain ranges. These high mountain ranges which surround the valley proper have a very decided effect on the climate, breaking the force of the air currents to a considerable degree, and robbing the clouds of a large share of their moisture as they drift into the valley, so that the average annual precipitation here is the lowest in the state, being in some localities as low as 6.5 inches. The climate is milder than might be expected at the prevailing altitude of the valley, partly because of the sheltering effect of the mountain ranges and partly because of the extremely high percentage of sunshine. While

the precipitation is very light in the valley proper, it is extremely heavy in most of the surrounding mountain ranges, so that there is an abundance of water carried in the streams which have their sources about the rim of the basin. The principal stream is the Rio Grande del Norte, which rises in the rugged mountain district west of the valley and flows through the heart of the basin. This stream and its tributaries supply most of the water for irrigation in the valley, and they carry sufficient water for irrigating considerably more land than has ever been watered here. Domestic water in most parts of the valley is obtained from artesian wells, the flow being reached at depths varying from 100 to 500 feet. There are more artesian wells in the San Luis valley than in all other sections of the state combined. The water is of a uniform temperature the year round and is excellent for livestock, this being one of the factors that makes the San Luis valley one of the best stock-raising districts in Colorado.

The counties included in the district are Alamosa, Conejos, Costilla, Mineral, Rio Grande and Saguache. They have a combined area of 5,159,040 acres, which is a little more than the area of the state of Massachusetts. This includes a considerable amount of mountain land not in the valley proper, but there is more than 3,000,000 acres of level land, lying on the valley floor, nearly all of which would produce excellent crops if water could be placed upon it.

There is an excess of alkali in the soil in several sections of the valley, resulting chiefly from too free use of irrigation water, and especially from sub-irrigation. In recent years many small districts that were damaged by

excessive deposits of alkali have been reclaimed by drainage and by other methods, and new drainage projects are being undertaken each year. The homeseeker should be careful to make full investigation about the presence of alkali in any land which he may purchase in the so-called "seep" districts here, but the alkali is easily discovered by reason of the white deposits present on the dry ground at certain points and

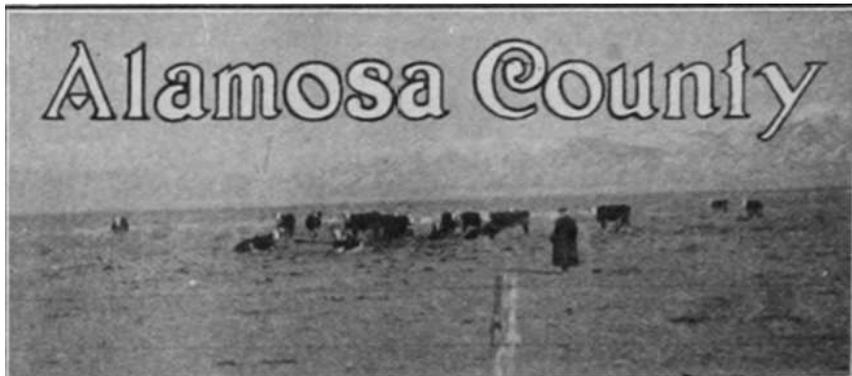
the effect which the alkali has on vegetation when it comes in contact with it, especially in the presence of moisture. It turns the vegetation black and the water standing in alkali districts generally is black or appears black. It should be borne in mind that the amount of land in the valley containing an excess of alkali is comparatively small and the presence of the alkali can always be detected.

GENERAL Description —

G Alamosa county lies in the south-central part of the state, in the heart of the San Luis valley. In outline it is an irregular pentagon, with an extreme length, east and west, of 30 miles, and an extreme width, north and south, of 27 miles. Its area is 465,280 acres, or about one-fourth less than the area of the state of Rhode Island. The surface is generally level except in the northeast, where it rises into broken hills which culminate in two massive peaks. Old Baldy and Sierra Blanca, on the boundary line between Alamosa and Costilla counties. The altitude ranges from about 7,300 feet in the south to above 14,000 feet at the summits of the peaks on the northeastern boundary.

The town of Alamosa, on the Denver & Rio Grande Western railroad, 252 miles from Denver by rail, is the county seat. The county was created in 1913, from parts of Conejos and Costilla counties.

Surface and Soil—The surface is very level, except in the extreme northeast. The soil in general is a sandy loam of great depth and wonderful fertility, with occasional patches of coarser, gravelly soil. Most of the area was at one time included in the bed of a great lake, and the soil is made up chiefly of silt and other matter deposited from its waters. There is an excess of alkali in the soil in some parts of the county, but drainage and other projects are now under way which promise successfully to carry off or neutralize the harmful salts. The only soil survey available is a general survey of the San Luis valley, made by the bureau of soils of the



United States department of agriculture, and published in 1904.

Population—Since Alamosa county was not created until 1913, there are no data available for giving the population of 1910. The population at the beginning of 1920, according to the federal census report, was 5,148, of which 3,171 was urban, found in the city of Alamosa. The percentage of foreign-born white inhabitants in 1920 was 4.4 of the total population. The principal foreign nationalities are German, Swedish and English. There are comparatively few Spanish-speaking people living in the county, mostly natives of Mexican descent. A good many of the early settlers were Mexicans, but there are at present almost no native Mexicans in the county.

Drainage and Water Supply—The Rio Grande del Norte flows through the southwestern part of the county, and with its tributaries furnishes the drainage and water supply for irrigation. This stream and the various small tributaries in the county carry a good supply of water the year round, sufficient for the watering of nearly all irrigable land. Reservoirs impound considerable water for use

during the drier parts of the summer. Water for domestic purposes is obtained chiefly from artesian wells, the flow being reached at depths ranging from 100 to 600 feet.

Industries—The principal industries are farming, stockraising, stockfeeding, dairying and manufacturing. Conditions in this county are especially favorable for stockfeeding, because of the open winters, excellent water supply, abundance of feed crops and good railway facilities, and the number of cattle and sheep fattened annually for market is increasing steadily. The town of Alamosa is an important railroad center and has large shops for the fourth division of the Denver & Rio Grande Western railroad system, which afford employment for a considerable number of people. This is also an important retail merchandise center and is beginning to handle considerable jobbing business. The dairy industry has been growing steadily for several years, and the city of Alamosa might still afford a market for considerably more milk than is being produced in the county. The value of all farm property in 1925 was \$6,140,557. The census bureau reported 14 manufacturing establishments in the county in 1919, with an output of products valued at \$423,618.

Crops—The principal crops in the order of their importance are hay, potatoes, wheat, oats, barley and sugar beets. The farm value of all crops in 1925 was \$1,673,588, of which \$773,251 was in hay, \$563,959 in potatoes, \$69,216 in wheat, \$55,273 in oats, \$25,711 in barley and \$24,390 in sugar beets. Of 51,244 acres under cultivation in 1925, 40 per cent was in alfalfa, 4.7 per cent in spring wheat, 8.6 per cent in oats, and 3.3 per cent in barley. Average yields per acre over a five-year period are, irrigated spring wheat, 20.4 bushels; irrigated corn, 25 bushels; irrigated barley, 25.2 bushels; irrigated potatoes, 130 bushels.

Mineral Resources—The county has few known mineral resources. Considerable deposits of clay exist, which have been utilized to some extent for brick making. Building sand is found in abundance and there is some stone of comparatively little commercial value at present. Salts of sodium and potassium are found in considerable quantities but have not been commercially developed.

Land Classification—Of a total area of 465,280 acres in the county, 334,566 acres is patented land in private ownership, of which 26,800 acres is irrigated land, 37,300 acres natural hay land, 112,150 acres dry farming land and 156,049 acres grazing land, the remainder being in town lots and railroad right of way. On July 1, 1926, there was 41,486 acres of government land open to homestead entry, 47,443 acres of unappropriated state land and 31,439 acres in national forests.

Transportation—The principal standard gauge railroad line is that entering the county from the east, running from Denver to Pueblo and Alamosa. A standard gauge line, known as the San Luis Valley branch, runs northwest through the valley from Alamosa to its terminus at Creede. Another line, narrow gauge, leads southward from Alamosa to Antonito, Conejos county, where it branches, one line running westward to Durango and the other directly south to Santa Fe, N.-M. Another narrow gauge line runs northward from Alamosa through the valley to a connection with the main line at Salida. All these roads belong to the Denver & Rio Grande Western system, centering at Alamosa, which is the headquarters of what is known as the fourth division of this system. They make Alamosa the principal railroad center in the San Luis valley and one of the most active railroad towns in the state. The county has 51 miles of railroad.

Highways—The principal state highway is the Spanish Trail, which follows the standard gauge line of the Denver & Rio Grande Western railroad and is surfaced entirely across the county. Another state highway is that passing north and south through the county by way of Alamosa along the route of the narrow gauge branch of the Denver & Rio Grande Western railroad. There are numerous county roads and trails generally not well improved, but level and passable almost the entire year. The county has 605 miles of state and county highways, of which 189 miles is surfaced with gravel and sand clay and 388 miles graded, the remainder being unimproved.

Educational—There are 22 public district schools in the county, employing 70 teachers. The consolidated

school at Hooper and the Alamosa high school each give a complete high school course, while the Star school near Alamosa, the Stanley consolidated school near Mosca, and the Carmel school near Alamosa each give one year of high school work. There are consolidated schools at Mosca and Hooper and at the Stanley district near Mosca. There are no private schools or colleges in the county. The Adams Normal school, a state institution, is located at Alamosa. Average daily attendance in the public schools in 1925 was 1,362. Average annual cost, based on average attendance, was \$142.17 in 1925, compared with an average of \$143.53 for the state. Of 14 school districts in the county, six had bonds, aggregating \$203,100, outstanding on January 1, 1926.

Climatological Data—Except in the extreme northeast the average annual rainfall varies from 7 to 10 inches. In the higher land near Sierra Blanca the precipitation is heavier, varying from 10 to 21 inches. The climate is ideal, the summers somewhat shorter than in the lower altitudes in the eastern part of the state, and the winters open. The normal annual mean temperature at Garnett is 41.2 degrees Fahrenheit, and the average number of days between killing frosts is 102, the last in the spring usually occurring between May 3 and July 7 and first in the fall between August 9 and October 11.

GENERAL Description — Conejos county lies in the south-central part of the state, and contains a portion of the southern end of the San Luis valley. The Rio Grande del Norte forms the eastern boundary and the main range of the Rockies forms the western. It is of rectangular outline, with an extreme length, east and west, of 45 miles, and an extreme width, north and south, of 30 miles. The area is 801,280 acres, or about 32,000 acres greater than the area of Rhode Island. The surface is a level valley in the east, rising rather abruptly in the west to the Continental divide. The altitude ranges from 7,000 feet in the extreme southeast, to more than 13,000 feet at

Cities and Towns—Alamosa, the county seat, is the largest city in the San Luis valley. Its population in 1920 was 3,171, compared with 3,013 in 1910 and 1,141 in 1900. Estimated population in 1926 was 5,000. The only other incorporated town in the county is Hooper, with a population of 156 in 1920. Alamosa has an altitude above sea level of 7,500 feet. Mosca is the only other post office in the county.

Taxation—The assessed valuation of all property in 1924 was \$9,260,459 and total revenue \$268,062. The county levy was 6.22 mills; average town levy, 16.37 mills; and average school levy, 14.87 mills. Average total levy was 28.95 mills, compared with 28.01 mills for the state. Taxes, licenses and permits and special assessments in 1922 were \$16.21 per capita, compared with \$17.23 per capita for the state.

Special Opportunities—There is much undeveloped agricultural land in this, as in all San Luis valley counties, so that the principal opportunities are for agricultural development. Since Alamosa is the chief distributing center for the valley, good opportunities will be offered in the various business and professional lines as the agricultural lands of the valley are further developed.



the summits of some of the mountain peaks near the western border. Conejos was one of the original 17 counties in Colorado territory and then was much larger than it is today. The town of Conejos, 281 miles by rail from Denver, is the county seat.

Surface and Soil—In the eastern part the surface is level and the soil

is very fertile, sandy loam of great depth. This section was at one time a part of an immense lake, and the soil is made up largely of mineral and vegetable matter laid down by its waters. Further west the surface becomes broken and rises rapidly to the San Juan range, which here forms the Continental divide. The soil here is coarser, being formed almost wholly by the weathering of the rocks of these mountains. There is an excess of alkali in the soil in some sections, but projects are now under way which promise by drainage to remove much of the harmful substances or to neutralize their effect by the use of gypsum or other similar substances. The only soil survey available is a general survey of the valley made by the bureau of soils of the United States department of agriculture and published in 1904.

Population—The boundaries of Conejos county have been changed since 1910 through the creation of Alamosa county and no comparison can be made between the populations returned by the census bureau in 1910 and 1920. The population at the beginning of 1920, as returned by the census bureau, was 8,416, all of which is rural, there being no city in the county having a population of as much as 2,500. The population of the county as it was constituted 1910 was 11,285. This included the city of Alamosa, now in Alamosa county, which at that time had a population of 3,013. The percentage of foreign-born population in 1920 was 1.5 of the total population. The principal foreign nationalities are Danish, English and German. A good many of the early settlers were Spanish or Mexican, and there is now a considerable number of Spanish-speaking people in the county, although most of them are native-born. The 1920 census showed but seven native Mexicans in the county.

Drainage and Water Supply—The Rio-Grande del Norte and its tributaries afford drainage and water supply for irrigation. The principal tributaries are the Conejos, La Jara and Alamosa rivers, all of which have their origin near the eternal snows of the San Juans and carry good supplies of water the year round. Artesian wells supply most of the water for domestic purposes and for livestock in the agricultural districts, the flow of water being reached at depths ranging from 100 to 600 feet.

Industries—The principal industries are agriculture, stockraising and dairy farming. There is some mining in the extreme northwestern part and lumbering and tie-making are followed to some extent in the mountain districts. There is considerable undeveloped agricultural land and the county would support a much larger agricultural population than it has at present. The value of all farm property on January 1, 1925, as reported by the census bureau, was \$6,686,817. The county had 15 manufacturing establishments, according to the census reports for 1919, with an output of products valued at \$1,081,839. Gold, silver, copper and lead production up to the end of 1924 aggregated \$72,669.

Crops—The principal crops in the order of their importance are hay, potatoes, wheat, barley, oats, sugar beets and beans. The farm value of all crops in 1925 was \$2,488,232, of which \$876,654 was in hay, \$787,280 in potatoes, \$182,963 in wheat, \$133,136 in barley, \$66,308 in oats, \$24,390 in sugar beets, and \$11,138 in beans. Of 74,458 acres in cultivation in 1925, 18.9 per cent was in alfalfa, 11 per cent in barley, 10 per cent in spring wheat and 8.9 per cent in oats. Average yields per acre, over a five-year period are, irrigated winter wheat, 21.4 bushels; non-irrigated winter wheat, 10.2 bushels; irrigated spring wheat, 19.9 bushels; non-irrigated spring wheat, 6 bushels; irrigated corn, 24.7 bushels; non-irrigated corn, 21 bushels; irrigated barley 30.4 bushels; irrigated potatoes, 124.7 bushels; non-irrigated potatoes, 35 bushels.

Land Classification—At the beginning of 1925 there was 251,790 acres of privately-owned land in the county, or 31 per cent of the total area. The records of the county assessor show that 86,950 acres of this is irrigated land, 9,920 acres is natural hay land, 151,843 acres is grazing land and the remainder mineral land, railroad rights of way and town and city lots. On January 1, 1926, there was 62,644 acres of unappropriated state land in the county, a small amount of which is irrigated and some of which will ultimately be irrigated. On July 1, 1926, there was 135,760 acres of government land open to homestead entry, most of

which is of little value except for grazing purposes. The national forest area is 270,472 acres, or 33.7 per cent of the total area.

Mineral Resources—The principal minerals found in this county are gold, silver, copper, zinc, granite, sandstone and other building stone, clays, sand and gravel. There has been some production of gold and silver, but the deposits that have been worked are remote from a railroad and the development has been but slight.

Timber—There is considerable timber in the mountains in the western part of the county, principally pine, spruce and cedar.

Transportation — A narrow gauge line of the Denver & Rio Grande Western railroad system coming from Alamosa, runs south through the county to Antonito, where it branches, one line running west to Durango and on to a connection with the main line of the system at Montrose, and the other running south to Santa Fe, N. M. The county has a total of 54 miles of railroad.

Highways—The principal state highway is that leaving south from Alamosa along the line of the Denver & Rio Grande Western railroad by way of Antonito and south to Santa Fe. At Antonito another state highway runs west by way of Cumbres pass, thence to a connection with the Spanish Trail at Pagosa Springs. Another state highway runs due south from Monte Vista in Rio Grande county to Capulin in Conejos county, and thence west by way of La Jara and Sanford to San Luis in Costilla county. There are numerous county roads in the eastern part of the county, generally unimproved but level and usually passable. In the western part of the county there are numerous mountain trails leading to the excellent hunting and fishing stations near the Continental divide and the old mining camps in the southwestern corner of the state. The county has 692 miles of state and county highways, of which 86 miles is surfaced with gravel and sand clay, and 502 miles is graded, the remainder being unimproved.

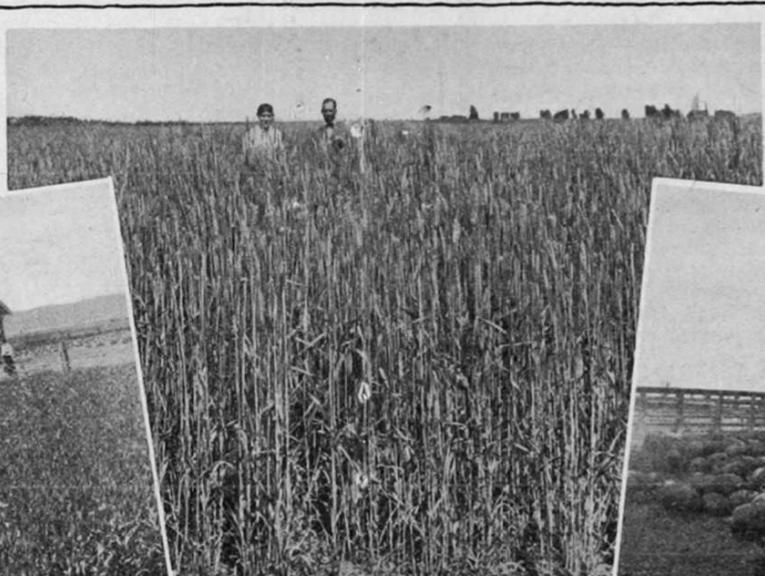
Educational—There are 41 public district schools in the county, employing 101 teachers. The schools at La Jara and Antonito give a full

high school course, while the schools at Romeo and Sanford, and the Norton school near Sanford each give two years of high school work. There is a consolidated school at La Jara. The San Luis State Academy, a parochial school, is located at Manassa. The average daily attendance in the public schools in 1925 was 1,903. The average per capita cost, based on average attendance, was \$69.70, compared with an average of \$143.53 per capita for the state.

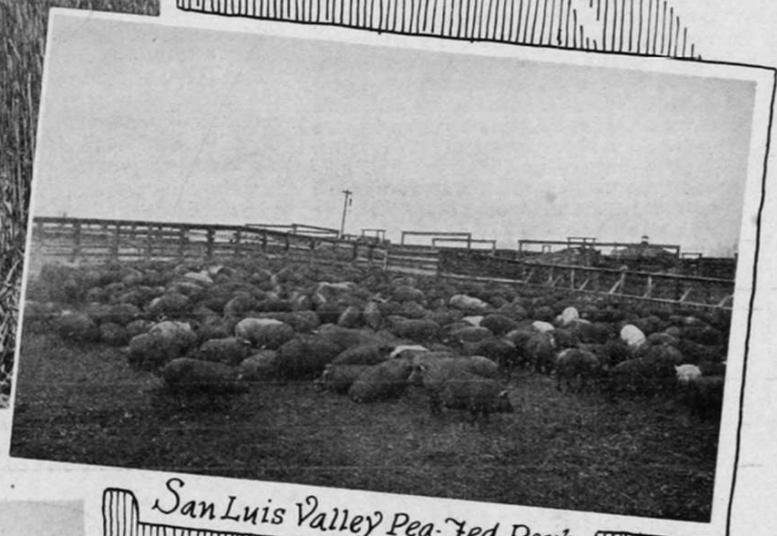
Climatological Data—The average annual rainfall in the eastern part of the county varies from 6.5 to 10 inches, being too light for profitable farming without irrigation. Westward it increases rapidly as the elevation increases, being above 25 inches near the summit of the main range on the western boundary. These regions of high rainfall contain the headwaters of the streams that irrigate the valley lands of the county. The climate in the valley section of the county is equable, the winters being open and especially favorable for stock feeding. Further west, in the higher altitudes, the climate is more irregular, with extreme cold in winter. The normal mean annual temperature at Manassa is 42.2 degrees Fahrenheit and the average number of days between killing frosts is 97, the last killing frost in the spring usually occurring between May 19 and June 20 and first in the fall between August 2 and September 25.

Tourist Attractions — There is a wealth of beautiful mountain scenery in the western part of the county, which is visited each year by larger numbers of tourists and particularly by hunters and fishermen. Scores of beautiful lakes near the Continental divide and numerous small streams afford excellent fishing, and small game is plentiful in the district. Numerous lodges and cabins have been erected in this territory in the last two or three years for the accommodation of visitors.

Cities and Towns—There are four incorporated towns in the county, of which Antonito, in the southern part, is the largest and most important. Its altitude above sea level is 7,888 feet and its estimated population on January 1, 1926, was 1,050. It is on the Denver & Rio Grande Western railroad. La Jara has an altitude of 7,600 feet and a population of 500. It is a shipping point for a large agri-



A big yield of spring wheat



San Luis Valley Pea-Fed Pork



A San Luis Valley farm home



No finer field peas grow anyplace



Putting up alfalfa



Potatoes - 400 bushels to the acre

cultural area. Manassa has an altitude of 7,700 feet and a population of 1,100. Sanford, which is about six miles east of the railroad, has a population of 500. Other post offices in the county are Capulen, Cumbres, Espinoza and Osier.

Taxation—The assessed value of all property in 1924 was \$8,433,945 and total revenue \$241,890. The county levy was 9.65 mills; average town levy, 11.32 mills; and average school levy, 13.76 mills. Average of all levies was 28.68 mills, compared with an average for the state of 28.01 mills. Taxes, licenses and permits and special assessments in 1922 were \$9.90 per capita, compared with \$17.23 per capita for the state.

GENERAL Description —

Costilla county is located in the south-central part of the state, and includes a portion of the southern end of the San Luis valley. The Rio Grande del Norte forms a part of the western boundary, the Sangre de Cristo mountain range the northern and eastern part, and the state of New Mexico the southern part. The area is 758,400 acres or about 100,000 acres more than the combined areas of the state of Rhode Island and the District of Columbia. The county is of an irregular rectangular shape, with an extreme length, north and south, of about 54 miles and an extreme width, east and west, of about 32 miles. The surface in the southwest is a level valley, which rises rather rapidly toward the east and northeast, culminating in the high peaks of the Sangre de Cristo range. The altitude ranges from about 7,500 feet in the southwest to more than 14,000 feet at the summit of Old Baldy and other peaks of the Sangre de Cristo range. Costilla was organized as one of the original 17 counties of Colorado territory in 1861, being at that time larger than now. San Luis, 248 miles from Denver by rail, is the countyseat. It is not, however, directly on a railroad.

Surface and Soil—The surface is level in the southwest, but becomes more broken as it rises toward the summits of the Culebra range,

Special Opportunities—The principal opportunities offered here are along the line of agricultural development. There is perhaps 150,000 acres of arable land in the county not under cultivation and the county could support perhaps 50 per cent more farmers than it has at present. There are also good opportunities for stockraising and dairy farming. The opportunities in the various towns depend to a considerable extent upon further agricultural growth. Mineral resources in the western part of the county are largely undeveloped, but further development will depend largely upon extension of transportation facilities.



in the east and north. The valleys of several small streams extend across the county from the foothills toward the Southwest. The soil is principally a sandy loam, of a Coarse gravelly mixture, easily worked and usually very fertile. In the southwest the soil is formed principally from detritus laid down on the bed of an ancient lake, which formerly occupied this area. Further north and east it is formed chiefly from the weathering of the rocks of the Culebra range. It is an excellent soil for general agriculture and under irrigation produces good crops. The only soil survey of the district ever made was that of the bureau of soils of the United States department of agriculture, published in 1904.

Population—Though Costilla county was one of the first sections of Colorado to be settled, its development for a great many years was very slow, chiefly because its area was made up largely of immense land grants, whose owners showed little inclination to

break them up into smaller agricultural units and develop them. Its first settlers were Spaniards and Mexicans, and the population today includes many Spanish-speaking people, especially in the older towns in the southern part, though most of them are natives. The population in 1920 was 5,032, compared with 5,498 in 1910. The apparent decrease is due to the fact that a part of Costilla county was taken in 1913 to form the new county of Alamosa. The population is all rural, there being no city in the county having more than 2,500 people. The percentage of foreign-born whites in 1920 was 2.2 of the total population. The principal foreign nationalities at that time were Danish, Canadian, English and German.

Drainage and Water Supply—The Rio Grande del Norte and its tributaries afford the principal drainage and the tributaries supply water for the irrigation of practically all irrigable land. The chief tributaries are the Trinchera, Culebra, and Costilla rivers, which have their sources in the snows of the Sangre de Cristo range and flow south and west across the county. Irrigation reservoirs in the county have an aggregate capacity of about 133,000 acre feet, and water from them supplements the direct flow from the streams during the drier periods of the summer, affording thus an ample supply for crops at all times during the growing season. Water for domestic purposes is obtained from these streams and from wells.

Industries—Farming and stock-raising are the principal industries. This is an excellent stockraising district, especially for cattle and sheep. The higher lands in the eastern and northern parts afford excellent summer pasture, and hay in abundance, with field peas, barley, oats and like grain crops supply plenty of winter feed. Dairying is being followed more extensively each year and conditions are favorable for the further development of the industry. There has been some mining in the county for many years, but the annual mineral output is comparatively small. The value of all farm property in the county in 1925, as reported by the census bureau, was \$3,986,135. Manufacturing in 1919 was limited to five establishments, with an aggregate output of products valued at \$180,890.

Crops—The principal crops in the order of their importance are hay, wheat, barley, sugar beets, potatoes and oats. The farm value of all crops in 1925 was \$772,283, of which \$261,489 was in hay, \$83,167 in wheat, \$38,806 in barley, \$24,390 in sugar beets, \$20,578 in potatoes and \$16,450 in oats. Of 29,891 acres cultivated in 1925, 24.9 per cent was in alfalfa, 8.2 per cent in barley, 10.1 per cent in spring wheat and 4.6 per cent in oats. Average yields per acre over a five-year period are, irrigated spring wheat, 20.1 bushels; non-irrigated spring wheat, 7.4 bushels; irrigated corn, 22.2 bushels; non-irrigated corn, 11 bushels; irrigated barley 28.5 bushels; non-irrigated barley, 12 bushels; irrigated potatoes, 86.9 bushels; non-irrigated potatoes, 37.3 bushels.

Land Classification—At the beginning of 1926 there was 757,469 acres of private-owned land in the county, or a fraction less than 100 per cent of the total area. This county has a larger percentage of its land on the tax rolls than any other county in the state except Denver. The records of the county assessor show that 80,825 acres of this is irrigated land, 5,560 acres is natural hay land, 10,000 acres is dry farming land, 290,000 acres is grazing land, 368,000 acres is timber and waste land and the remainder mineral land, railroad rights of way and town and city lots. This county contains no government land, no state land and no national forest, the reason being that practically the entire county was included in Spanish and Mexican land grants when this territory became a part of the United States.

Mineral Resources—The known minerals are gold, silver, magnetic iron ore, granite and other varieties of stone, potash, brick-clay and building sand. Total production of gold, silver, copper and lead up to the end of 1921 was \$72,669, none having been produced since then.

Timber—There is considerable timber in the mountains in the east and north, principally pine, spruce and some cedar. Lumbering and tie-making are important industries in these sections.

Transportation—The Denver & Rio Grande Western standard gauge railroad passes east and west across the northern end of the county. The San

Luis Southern railroad leaves this line at Blanca and extends south through the heart of the principal agricultural section to Jaroso, near the New Mexico line. Pueblo is the nearest large market reached over these lines. The county has a total of 63 miles of railroad.

Highways—The principal state highway is the Spanish Trail, which crosses the northern part of the county near the route of the Denver & Rio Grande Western railroad. A state highway leaves this at Fort Garland and runs south by way of San Luis, the county seat, into New Mexico. Another state highway runs west from San Luis to La Jara, in Conejos county. A new state highway has been constructed leading out from San Acacio south to Jaroso and south to Taos, New Mexico. There are numerous county roads, generally unimproved, but level and passable almost the entire year. The county has 307 miles of state and county highways, of which 58 miles is surfaced with gravel and sand clay and 107 miles is graded, the remainder being unimproved.

Educational—There are 25 public district schools in the county, employing 38 teachers. The schools at Fort Garland, Mesita and Blanca each give a full high school course, and two years of high school work is given at the school at San Acacio. There is a consolidated school at Blanca. There is a parochial school at San Luis. There are no other private schools or colleges in the county. The average daily attendance in the public schools in 1925 was 1,903 and the cost per capita, based on average attendance, was \$57.94, compared with an average for the state of \$143.53. Of 14 school districts in the county, 13 had bonds aggregating \$220,240 outstanding on January 1, 1926.

Climatological Data—In the principal farming district, in the southwest part of the county, the average annual rainfall varies from 7 to 10 inches, being too low for profitable farming without irrigation. It increases rapidly toward the mountains, being about 20 inches at the summits and along the slopes of the Sangre de Cristo range. This area furnishes the water supply for irrigation, which is ample for all purposes. Because of the high altitude the growing season in the county is shorter than in the agricultural districts of the eastern part of

the state, but with an abundance of sunshine and plenty of water for irrigation, crops mature very rapidly. The winters are open and not excessively cold, and in the agricultural districts are very favorable for feeding stock in the open. The normal annual mean temperature at San Luis is 42.4 degrees Fahrenheit and the average number of days between killing frosts is 108, the last killing frost in the spring usually occurring between May 16 and July 6 and the first in the fall between September 5 and October 11.

Tourist Attractions—Some of the finest mountain scenery in Colorado is to be found in and about the Sierra Blanca, on the northern boundary, and in the Culebra range, along the eastern boundary. The streams all afford good trout fishing. Recently several of the private lakes and reservoirs have been stocked with trout and now are fine fishing waters, though special permits must be obtained to use them.

Cities and Towns—Blanca, the only incorporated place in the county, has a population of 400 and an altitude of 7,870 feet above sea level. San Luis, the county seat, is a prosperous agricultural town in the southern part of the county. Other post offices in the county are Chama, Jaroso, Mesita, Russell, San Pablo and Veta Pass.

Special Opportunities—The principal opportunities here are for agricultural development. The county can support fully twice as large an agricultural population as it has today. There is little state land and no government land open to homestead entry in the county. Stockraising is usually carried on in this county in connection with cultivation of the soil, and there is considerable room for the development of this industry as well as dairy farming. There are two successful dairies in this county. Considerable mineralized territory, almost wholly undeveloped and but little prospected is to be found in the north and east. In this county, as in others in the San Luis Valley, experiments are being conducted for the purpose of determining whether or not the beet sugar industry can be developed profitably, and indications at this time are that the growing of sugar beets will become within the next few years one of the important industries of the district, both yield and sugar content being encouraging.

GENERAL Description —

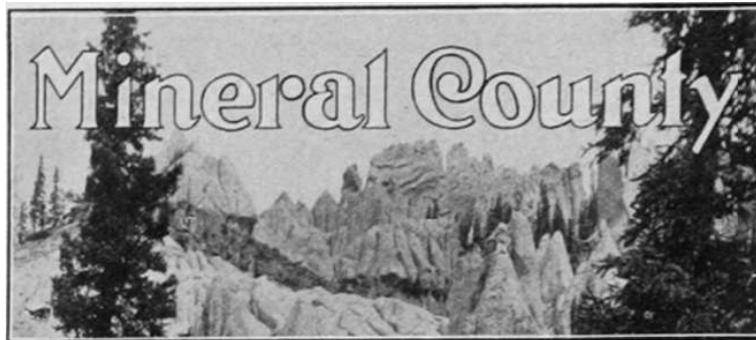
Mineral county lies in the south-central part of the state, just west of the San Luis valley and near the crest of the continent. It is of a rectangular outline with an extreme length, north and south, of 40 miles and an extreme width of 24 miles. The area is 554,240 acres, about 130,000 acres less than the area of the state of

Rhode Island. The surface is generally rugged and mountainous and the altitude varies from 8,250 feet, where the Rio Grande del Norte crosses the eastern boundary, to more than 13,000 feet at the summits of peaks in the San Juan range. The county was created in 1893 from parts of Hinsdale, Saguache and Rio Grande counties. Creede, 321 miles from Denver by rail, on a branch of the Denver & Rio Grande Western railroad, is the county seat.

Surface and Soil—The surface is extremely rugged, except for a few narrow valleys, which contain some land suitable for irrigation. The soil is very fertile in these valleys and raises good crops of wild hay, potatoes and vegetables. There is a limited amount of agricultural land in the county.

Population—The population in 1920 was 779, compared with 1,239 in 1910, the decrease being 37.1 per cent. This decrease is due to a falling off in mining activity in the Creede district. The foreign-born white population in 1920 was 9.8 per cent, compared with 13.9 per cent in 1910. The principal foreign nationalities are German, Swedish and English.

Drainage and Water Supply—The Rio Grande del Norte, which has its source in the San Juan mountains further west, flows through the county and, with its tributaries, affords the only drainage. There are numerous smaller streams here, tributaries of the Rio Grande, all those flowing from the south having their sources in the San Juan mountains, and those flowing from the north rising near the Continental divide. They carry plenty of water throughout the year. The water supply is fully



adequate for all purposes, its principal use being for the ranches and mines.

Industries—Mining is the principal industry. There is little land suitable for cultivation, the report of the county assessor showing only about 2,937 acres being farmed in 1925. There is considerable grazing land in the mountain valleys, lying chiefly within the national forest, and stock raising is followed to a considerable extent. There is good timber on the mountain slopes and lumbering and tie-making are followed in a small way. The value of all farm property in 1925, as reported by the census bureau, was \$289,215. Up to the end of 1924 the county had produced gold, silver, copper, lead and zinc to the value of \$42,408,773.

Crops—The principal crops in the order of their importance are hay, barley and oats. The farm value of all crops in 1925 was \$117,177.

Mineral Resources—The known minerals are gold, silver, copper, sulphur, barium, lead, zinc, fluorspar, alunite, sand, sandstone and other building stone. Gold, silver, lead, copper and zinc have been produced in considerable quantities and are still being produced, the most important mines being in the neighborhood of Creede. Fluorspar has been produced at Wagon Wheel Gap and is now one of the main products. Sulphur is now being produced in considerable quantities at Trout creek, southwest of Creede.

Timber—There is considerable timber in the county, principally pine and spruce.

Land Classification—At the beginning of 1926 there was 31,193 acres of patented land in the county, or 5.63 per

cent of the total area. This county has a smaller percentage of its land on the tax rolls than any other county in the state, except Hinsdale. The records of the county assessor show that 993 acres of the patented land is irrigated, 2,633 acres is natural hay land, 23,801 acres is grazing land and the remainder principally mineral land, railroad rights of way and town and city lots. On January 1, 1926, there was 679 acres of unappropriated state land in the county, chiefly grazing land. There is no open government homestead land in the county. The national forest area is 516,596 acres, or 93.22 per cent of the total area. This county has a larger percentage of its area included within the national forests than any other county in the state.

Transportation—The San Luis valley branch of the Denver & Rio Grande Western railroad has its terminus at Creede, the county seat, and is the only railroad in the county. The county has 17 miles of railroad.

Highways—The Spanish Trail, a primary state highway, crosses the Continental divide in the southwestern part of the county. A primary state highway leaves this road at South Pork, in Rio Grande county, and follows the Rio Grande del Norte to Creede, and on to the Hinsdale county line. Here it strikes westward through the mountains, one branch going to Lake City, in Hinsdale county, and another to Silverton, in San Juan county. There are numerous wagon roads and trails chiefly for the movement of ore, but most sections of the county are wholly inaccessible to automobiles. The county has 111 miles of state and county highways of which 15 miles is surfaced with gravel and sand clay and 96 miles is graded.

Educational—There are four public district schools in the county, employing 10 teachers. The Mineral county high school at Creede offers a full high school course, which is available for all pupils in the county. There are no private schools or colleges in the county. Average daily attendance at the schools in 1925 was 108 and cost per capita, was \$106.74, based on attendance.

Climatological Data—The rainfall in the extreme eastern part of the county, along the Rio Grande del Norte, averages about 15 inches annually. It increases rapidly as the altitude

increases, being above 25 inches along the crest of the San Juan mountains, which crosses the southwestern part. This is one of the heaviest rainfall sections in the state, much of the water for irrigation of lands in the San Juan valley having its origin in Mineral county. The climate is rather severe. The summers are short, and usually very warm in the lower altitudes. There is frost every month in the year in the higher altitudes and the snowfall during the winter is exceptionally heavy. The normal annual mean temperature at Wagon Wheel Gap is 35.2 degrees Fahrenheit and the average number of days between killing frosts is 59.

Tourist Attractions—Situated as it is, near the crest of the continent, and containing the headwaters of many tributaries of the Rio Grande del Norte, this county contains some of the most magnificent mountain scenery on the American continent. One of its distinctive scenic attractions is Wheeler national monument, in the northeast corner of the county, about 10 miles from Wagon Wheel Gap, and 13 miles from Creede. This park contains about 300 acres and has several shelter places for visitors. It was created by presidential proclamation in 1908 and was named in honor of Captain George M. Wheeler, U. S. A., who carried on explorations under the direction of the war department in this section of Colorado in 1874. It contains some of the most unique and fantastic rock formations to be found any place in America, in some respects surpassing any other mountain scenery in Colorado. This park may be reached over a horseback trail from Creede. There is also much beautiful mountain scenery in the southern part of the county that needs further transportation to make it accessible. The Spanish Trail, recently completed, has greatly increased tourist travel to this section. Most of the mountain streams within the county afford good trout fishing. The Wagon Wheel Gap Hot Springs hotel has a two plunge bath house and the water is supplied from natural hot springs on the ground, said to have exceptional medicinal qualities.

Cities and Towns—Creede, the county seat and the only incorporated town

in the county, is the western terminus of the San Luis Valley branch of the Denver & Rio Grande Western railroad. It is located at the mouth of one of the gulches from which most of Mineral county's wealth has been taken, and has an altitude of 8,854 feet above sea level. Its population in 1920 was 500, compared with 741 in 1310 and 938 in 1900. Wagon Wheel Gap, on the Denver & Rio Grande Western railroad southeast of Creede, is the center of a prosperous grazing district and is noted for its picturesque scenery. The hot springs located here are becoming more popular with tourists and health seekers every year.

Taxation—The assessed value of all property in 192-4 was \$1,472,735, and total revenue \$38,473. The county levy in that year was 11.37 mills; average town levy, 20.80 mills, and average school levy, 7.78 mills. Average total levy was 26.12 mills, compared with an average for the state of 28.01 mills. Taxes, licenses and permits and special assessments in 1922 were \$37.97 per capita, compared with \$17.23 per capita for the state.

Special Opportunities—Most of the opportunities offered here are in the direction of mining development. Though gold, silver, copper, lead and zinc have been produced in considerable quantities from the county continually since 1891, they have come almost wholly from the Creede district. This has been one of the largest silver-producing districts of Colorado. In the mountains further west and south there is an immense area of presumably mineralized land which has never been adequately prospected. This is not an exceptionally rugged district nor difficult of access, but is wholly without transportation facilities. It is not inconceivable that rich mineral deposits may soon be discovered and opened up in this area. There are 516,956 acres of national forests in the county, or more than 93 per cent of the entire area. This territory is all open to prospecting and entry under the public land law, and claims, after the existence of mineral bodies has been proved, may be filed upon and patented the same as on public lands not within the forest areas.

GENERAL Description—Rio Grande county lies in the south-central part of the state and includes most of the western extension of the San Luis valley. It is of an irregular rectangular outline, with an extreme length, east and west, of 30 miles and an extreme width of 25 miles. The surface is generally level except in the southwest, where it rises abruptly into the San Juan mountains. Its area is 574,720 acres, or a little less than one-half that of the state of Delaware. The altitude ranges from about 7,600 feet where the Rio Grande river crosses the eastern boundary to about 13,000 feet at the summits of peaks of the San Juan mountains in the southwest. The county was organized in 1874 from parts of Conejos and Costilla counties. Del Norte, 283 miles from Denver by rail, is the county seat.

Surface and Soil—That portion of the county lying in the San Luis valley is level, with a very rich soil of great depth, well



adapted for general farming. In the southeast the surface is more broken, rising to the summit of the Continental divide. The valley soil is a sandy loam, easily worked and extensively cultivated. In some sections it contains too much alkali, due to excessive sub-irrigation and imperfect drainage, but enterprises are now under way for draining a large acreage and much of it already has been reclaimed in this way. Recent investigations indicate that gypsum counteracts the bad effects of alkali in this soil and recommendations have been made that steps be taken for using

some of the huge stores of gypsum in the state for this purpose. The only soil survey available is that made by the bureau of soils of the United States department of agriculture, published in 1904.

Population—The population in 1920 was 7,855, compared with 6,563 in 1910, the increase being 19.7 per cent. In 1920 the foreign-born white population was 3.3 per cent of the total, compared with 5.6 per cent in 1910. The principal foreign nationalities are German, Swedish and English.

Drainage and Water Supply—The Rio Grande del Norte and its tributaries drain the county and afford water for irrigation. These streams carry plenty of water the year round, having their sources in high altitudes where the precipitation is very heavy. There is water available for the irrigation of practically all the arable land in the county. Domestic water in the agricultural sections is obtained principally from artesian wells, which are drilled to depths varying from 100 to 400 feet, and from reservoirs.

Industries—The principal industries are agriculture, stockraising, dairying and mining. A very large percentage of the people are engaged in agriculture and stockraising, and agricultural property makes up nearly 60 per cent of the total county wealth. Farming without irrigation is impracticable in most parts of the county, because of light rainfall, but there is plenty of water for irrigation and there are few places where farming under irrigation is more successful. Grazing land is available here in abundance within the national forests areas, and plenty of feed crops are raised for finishing livestock for market. Cattle and sheep are raised on a large scale and no county in the state in proportion to its size equals this in the production of hogs. There is some mining in the southwestern part, but lack of transportation facilities has retarded mineral development. Lumbering is carried on to a limited extent in the southwest. The value of all farm property in 1925, as reported by the census bureau, was \$10,176,085. The value of livestock on farms was \$772,691. Total production of gold, silver, copper and lead up to the end of 1924 was \$2,560,668. In 1919, the county had 24 manufacturing estab-

lishments, with an output of products valued at \$673,531.

Land Classification—At the beginning of 1926 there was 209,619 acres of privately-owned land in the county, or 36.47 per cent of the total area. The records of the county assessor show that 72,403 acres of this is irrigated land, 7,550 acres is natural hay land, 124,089 acres is grazing land and the remainder principally railroad rights of way and town and city lots. On January 1, 1926, there was 15,697 acres of unappropriated state land in the county, including some good agricultural land. On July 1, 1926, there was 54,446 acres of government land open to homestead entry, most of which is hilly and semi-mountainous and suitable only for grazing purposes. The national forest area is 234,931 acres, or 40.88 per cent of the total area.

Crops—The principal crops in the order of their importance are potatoes, hay, wheat, oats, barley and sugar beets. The farm value of all crops in 1925 was \$6,922,278, of which \$5,182,883 was in potatoes, \$679,584 in hay, \$173,569 in wheat, \$95,659 in oats, \$35,600 in barley and \$24,390 in sugar beets. Of 87,178 acres in cultivation, 16.1 per cent was in alfalfa, 3.2 per cent in barley, 8.1 per cent in oats and 6.4 per cent in spring wheat. The average yields per acre over a five-year period are, irrigated winter wheat, 25 bushels; irrigated spring "wheat, 24.9 bushels; irrigated barley, 28.5 bushels; irrigated potatoes, 168.5 bushels.

Mineral Resources—The known mineral resources are gold, silver, copper, asbestos, alunite, sand, clays, granite and other varieties of stone. Gold, silver and copper have been produced in considerable quantities and the clays in some sections have been utilized for brick making. Some granite and other stones have been quarried.

Timber—There is considerable timber in the western and southwestern part, chiefly pine, spruce and cedar.

Transportation—The San Luis Valley branch of the Denver & Rio Grande Western railroad follows the course of the Rio Grande del Norte through the county and the San Luis Central road leaves this line near Monte Vista and runs north to Center, in Saguache county. Regular stage service is maintained from Monte Vista to the towns of Jasper, Stunner and Platoro,

mining camps, and from Del Norte to these towns and to Summitville, in the same mining district, and Carnero and La Garita, agricultural towns in Saguache county. The county has a total of 52 miles of railroad.

Highways—The principal state highway is the Spanish Trail, which follows in general the Rio Grande del Norte west to South Fork, whence it turns south to Wolf Creek pass, where it crosses the Continental divide. Another important state highway, known as the Gunbarrel road, connects with the Spanish Trail at Monte Vista, runs north to Saguache and joins the Rainbow route. A secondary state highway runs northeast from Del Norte and joins the Gunbarrel road just south of Saguache. Numerous county roads afford ample routes for the marketing of crops from the agricultural districts. The county has a total of 422 miles of state and county highways, of which 42 miles is surfaced with gravel and sand clay and 332 miles is graded, the remainder being unimproved.

Educational—There are 19 public district schools in the county, employing 90 teachers. The schools at Del Norte, Monte Vista and Sargent all give a full high school course. There are consolidated schools at Del Norte, Monte Vista and Sargent. The consolidated school at Center, in southern Saguache county, is jointly supported by Saguache and Rio Grande counties. The school at Hooper is maintained by Rio Grande, Saguache and Alamosa counties. There are no private schools or colleges in the county.

The average daily attendance in the public schools in 1925 was 1,662, and average per capita cost, based on attendance, was \$142.94, compared with \$143.53 per capita for the state. The nine school districts in the county had an aggregate bonded indebtedness of \$531,900 outstanding on January 1, 1926.

Climatological Data — The average annual rainfall in that part of the county lying in the San Luis valley varies from 7 to 10 inches. It increases rapidly in the higher altitudes, being above 25 inches in the extreme southwest corner. The climate in the valley is equable, with open winters and short, warm summers.

Tourist Attractions—The opening of the Spanish Trail has greatly increased tourist

travel to this section of the state. Some of the finest mountain scenery in the west is to be found in the mining districts in the southwestern part of the county. There is good trout fishing in the Rio Grande del Norte and its various tributaries in the county.

Cities and Towns—There are two incorporated towns in the county. Monte Vista, the principal city and one of the most prosperous places in the San Luis valley, had a population of 2,484 in 1920, compared with 2,544 in 1910. The estimated population in 1926 was 2,600. The town has an altitude of 7,500 feet above sea level. It is the center of a wonderfully rich and prosperous agricultural district and is the site of the State Home for Disabled Volunteer Soldiers. Del Norte, the county seat, had a population of 1,007 in 1920, and 840 in 1910. The estimated population in 1926 was 1,100. It is also the center of a prosperous farming and stock-raising community. Other postoffices in the county are Homelake, Jasper and South Fork.

Taxation—The assessed value of all property in 1924 was \$10,716,610 and total revenue \$382,560. The county levy was 9.95 mills; average town levy, 16.00 mills, and average school levy, 18.52 mills. Average of all levies was 35.70 mills, compared with an average for the state of 28.01 mills. Taxes, licenses and permits and special assessments in 1922 were \$13.88 per capita, compared with \$17.23 per capita for the state.

Special Opportunities—The principal opportunities offered here are in the line of agricultural development. There is a considerable acreage of arable land still unbroken, and water available for the irrigation of more land than is now being watered. This is also one of the best stockraising sections of the state, with range available for more cattle and sheep than are now being pastured and plenty of room for increasing the output of feed crops. Hog raising has developed rapidly in the past 10 years and there is still room for expansion. Dairy farming also is profitable and will increase in importance as the county is more thickly settled. There is much promising mineral territory in the southwest, which will be developed rapidly when better transportation facilities are provided.

GENERAL Description

G—Saguache county is in the south-central part of the state and includes the northern end of the San Luis valley. It is of an irregular shape, with an extreme length, east and west, of about 85 miles, and an extreme width, north and south, of about 48 miles. Its area is 2,005,120 acres, or about 100,000 acres greater than the combined areas of the states of Rhode Island and Delaware. The eastern boundary is formed by the Sangre de Cristo mountain range and the Continental divide passes across the northwestern corner. The San Luis valley extends about 30 miles north into the central part of the county. The surface here is an extremely level plain, which rises gradually to the Sangre de Cristo range on the east. The altitude ranges from 7,500 feet in the south to more than 14,000 feet at the summit of peaks of the Sangre de Cristo range. For a distance of more than 50 miles every peak in this range rises to a height of 13,500 feet or more. The county was organized in 1867 from a part of Costilla county. The town of Saguache, 265 miles from Denver by rail, is the county seat. It is not, however, located directly on a railroad.

Surface and Soil—In the south-central part the surface is a level plain, which rises abruptly in the east to the Sangre de Cristo Range and more gradually in the north to the Cochetopa hills and the high peaks of the Continental divide. The soil of the valley portion is a sandy loam, made up principally of detritus laid down by the vast lake which at one time covered this area. Further north the soil is coarser, made up chiefly from the weathering of the rocks in the nearby mountains. The soil in the valley is of great depth and exceptional fertility. In some districts the percentage of alkali is so high as to interfere with successful crop raising, but plans are now being worked out for neutralizing this harmful substance and reclaiming considerable areas which are not now being cultivated. There is no detailed soil survey available except a general survey of the San Luis valley, made by



the bureau of soils of the United States department of agriculture.

Population—The population in 1920 was 4,638, compared with 4,160 in 1910, the increase being 11.5 per cent. The foreign-born white population in 1920 was 4.1 per cent of the total, compared with 6 per cent in 1910. The principal foreign nationalities are Swedish, English and German.

Drainage and Water Supply—Most of the streams in the southern part of the county carry considerable water the year round in their upper courses, but lose themselves in the sands near the southern boundary. They include the Saguache river and its tributaries, the San Luis, La Garita and Carnero creeks. In the northwest are several streams belonging to the Pacific watershed. The principal one is Cochetopa creek, which finds an outlet into the Gunnison river through Tomichi creek. There are a few unimportant lakes, and several reservoirs supplement the flow of the streams of the valley for irrigation purposes. In the lower valley water for domestic purposes is obtained chiefly from artesian wells, the depth to water ranging from 100 to 300 feet. There is water available for the irrigation of considerably more land than is now being cultivated under irrigation.

Industries — Farming and stock-raising are the principal industries. The higher lands in the north are valuable chiefly for grazing purposes. Mining has been followed to a considerable extent in the mountainous areas of the north and east. There are several producing mines, of which the principal output is gold, silver, copper, lead and iron. Dairy farming

is being followed successfully and is increasing in importance. The value of all farm property in 1925, as reported by the census bureau, was \$10,176,085. In 1924 there were seven producing mines in the county which had a total output of \$21,602 in gold, silver, copper, lead and zinc. Total output of these minerals up to the end of 1924 was \$2,798,156. In 1919 the county had 10 manufacturing establishments, with a total output valued at \$209,173.

Crops—The principal crops in the order of their importance are potatoes, hay, wheat, oats and barley. The farm value of all crops in 1925 was \$3,860,519, of which \$1,761,840 was in potatoes, \$1,740,209 in hay, and \$82,721 in wheat. Of 102,162 acres under cultivation in 1925, 10.8 per cent was in alfalfa, 5.8 per cent in oats, and 2.1 per cent in spring wheat. Average yields per acre over a five-year period were, irrigated spring wheat, 23 bushels; irrigated corn, 24.7 bushels; irrigated barley, 29 bushels; irrigated potatoes, 158.6 bushels.

Mineral Resources—The principal minerals found in the county are alunite, clays, copper, gold, iron, lead, manganese, sand, silver, building stone and zinc. There is much promising mineral territory in the county that has not been adequately prospected. The iron mines at Orient, in the eastern part of the county, have been the principal producers of iron ore in the state.

Timber—There is considerable timber in the north and northwestern parts of the county and some along the abrupt slopes of the Sangre de Cristo range in the east. It is chiefly pine and spruce.

Land Classification—At the beginning of 1926 there was 516,355 acres of privately-owned land in the county, or 25.7 per cent of the total area. The records of the county assessor show that 37,640 acres of this is irrigated land, 49,000 acres is natural hay land, 421,679 acres is grazing land and the remainder railroad rights of way and town and city lots. On January 1, 1926, there was 100,757 acres of unappropriated state land, including some good agricultural land and a large amount of grazing land. On July 1, 1926, there was 343,499 acres of government land open to homestead entry, most of which is

hilly or semi- mountainous and of little value except for grazing purposes. The national forest area in this county is 882,673 acres, or 44 per cent of the total area.

Transportation—A narrow gauge line of the Denver & Rio Grande Western railroad, extending from Salida to Alamosa, passes through the eastern end of the county. A branch leaves this line at Villa Grove and runs to the iron mines at Orient, at the base of the Sangre de Cristo range, another leaves it at Moffat and extends eastward to the mining camp of Crestone and south to Cottonwood, in the Baca land grant. The San Luis Central road extends north from the San Luis valley branch of the Denver & Rio Grande Western near Monte Vista, to Center, in the extreme southern part of Saguache county. The main narrow gauge branch of the Rio Grande Western crosses the Continental divide at Marshall pass, in the northern part of the county. The county has a total of 107 miles of railroad.

Highways—One of the alternate roads of the Rainbow route runs south from Poncha pass to Saguache and north to Parvin in Gunnison county, where it joins the main route. The other branch of this route enters Saguache county for a short distance near the town of Sargent. A road known as the Gunbarrel road, because it is entirely straight for its whole length, extends south from the Rainbow route at Saguache to the Spanish Trail at Monte vista in Rio Grande county. A secondary state highway leaves the Gunbarrel road south of Saguache and runs southwest to Del Norte in Rio Grande county. Other secondary state highways and county roads are in a general way sufficient for the transportation of farm products to market. The county has a total of 1,272 miles of state and county highways, of which 126 miles is surfaced with gravel and sand clay and 745 miles is graded, the remainder being unimproved.

Educational—There are 24 public district schools in the county, employing 70 teachers. The Saguache county high school at Saguache and the joint schools at Hooper and Center each give a complete high school course. There are consolidated schools at Saguache, Center, Hooper and Moffat. The school at Center is maintained

jointly by Saguache and Rio Grande counties and that at Hooper by Saguache, Alamosa and Rio Grande counties. There are no private schools or colleges in the county. The average daily attendance in the public schools in 1925 was 1,003 and the cost per capita was \$170.27, based on average attendance, compared with \$143.53 per capita for the state. Of IS school districts in the county, five had bonds aggregating \$111,000 outstanding on January 1, 1926.

Climatological Data—In the southern valley sections of the county the average annual rainfall varies from seven to ten inches, being too light for successful farming, without irrigation. It increases gradually toward the north, reaching a maximum of about 20 inches in the Cochetopa hills and very rapidly to the east, being close to 25 inches in the Sangre de Cristo mountains. The snowfall in these ranges is almost always ample to furnish plenty of water for irrigation. In the southern part of the county the summers are somewhat shorter than in the eastern agricultural sections of the state, on account of the higher altitude. The winters are open and not excessively cold. Much lower temperatures prevail in the "mountainous parts of the county. The normal annual mean temperature at Saguache is 44.2 degrees Fahrenheit and the average number of days between killing frosts is 120, the last killing frost in the spring usually occurring between April 21 and June 26 and the first in the fall between August 28 and October 16.

Scenic Attractions—The construction of a branch of the Rainbow route through this county has greatly popularized the picturesque scenery of the northern sections, and the number of

tourist visitors is increasing rapidly. Much beautiful mountain scenery in the eastern and western parts is yet inaccessible because of lack of highway facilities. There is good trout fishing in Saguache and Cochetopa creeks.

Cities and Towns—The county has five incorporated towns. Saguache, the county seat, situated near the center of the county on the Saguache river, had a population of 948 in 1920 and 620 in 1910. The estimated population in 1926 was 850. It has an altitude of 7,800 feet above sea level. Center, in the southern part, has a population of 750; Moffat, on the Denver & Rio Grande Western, a population of 200; Bonanza, 200; and Crestone, 200. Other post offices in the county are Alder, La Garita, Marshall Pass, Mineral Hot Springs, Sargents and Villagrove.

Taxation—The assessed value of all property in 1924 was \$11,291,514 and total revenue \$270,380. The county levy was 6.75 mills; average town levy, 13.33 mills, and average school levy, 12.02 mills. Average of all levies was 23.95 mills, compared with an average for the state of 28.01 mills. Taxes, licenses and permits and special assessments in 1922 were \$22.83 per capita, compared with \$17.23 per capita for the state.

Special Opportunities—The principal opportunities here are for the further development of agricultural and stockraising possibilities. The county would support an agricultural population perhaps twice as large as it now has. An immense area of mineralized land in the mountainous section has been but little prospected.

ACRES IN VARIOUS CROPS IN SAN LUIS VALLEY COUNTIES, 1925

	Wheat	Barley	Oats	Potatoes	Hay	Field Peas	Total Acreage Cultivated
Alamosa	35,991	1,705	4,431	1,991	34,474	6,150	51,244
Conejos	7,488	8,198	2,851	2,625	39,084	11,080	74,458
Costilla	3,179	2,478	453	95	11,658	9,450	29,891
Mineral		188	236	7	2,505	28	2,937
Rio Grande	5,792	2,790	1,509	15,952	30,298	24,600	87,178
Saguache	3,073	977	1,525	5,035	77,584	10,930	102,162

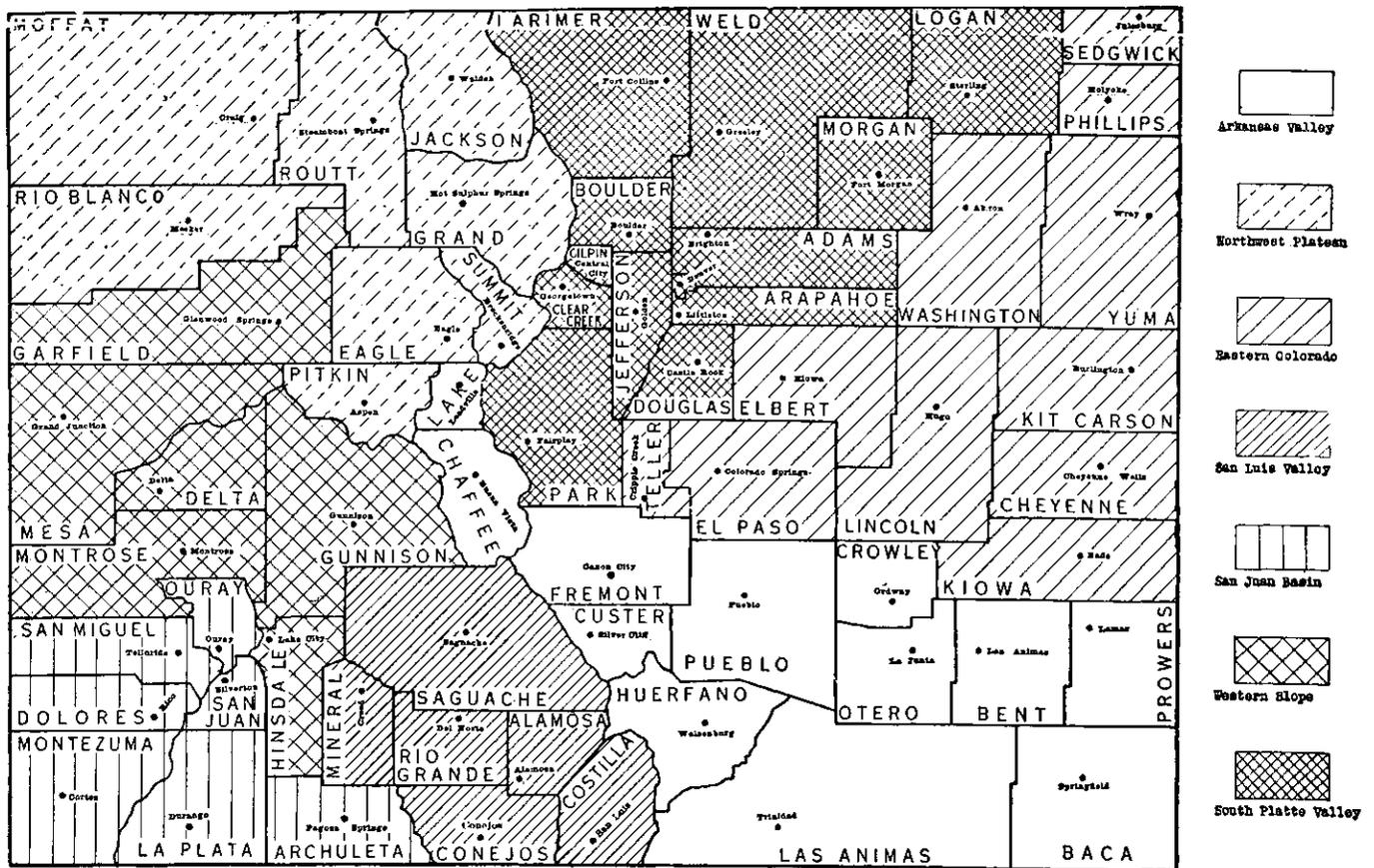
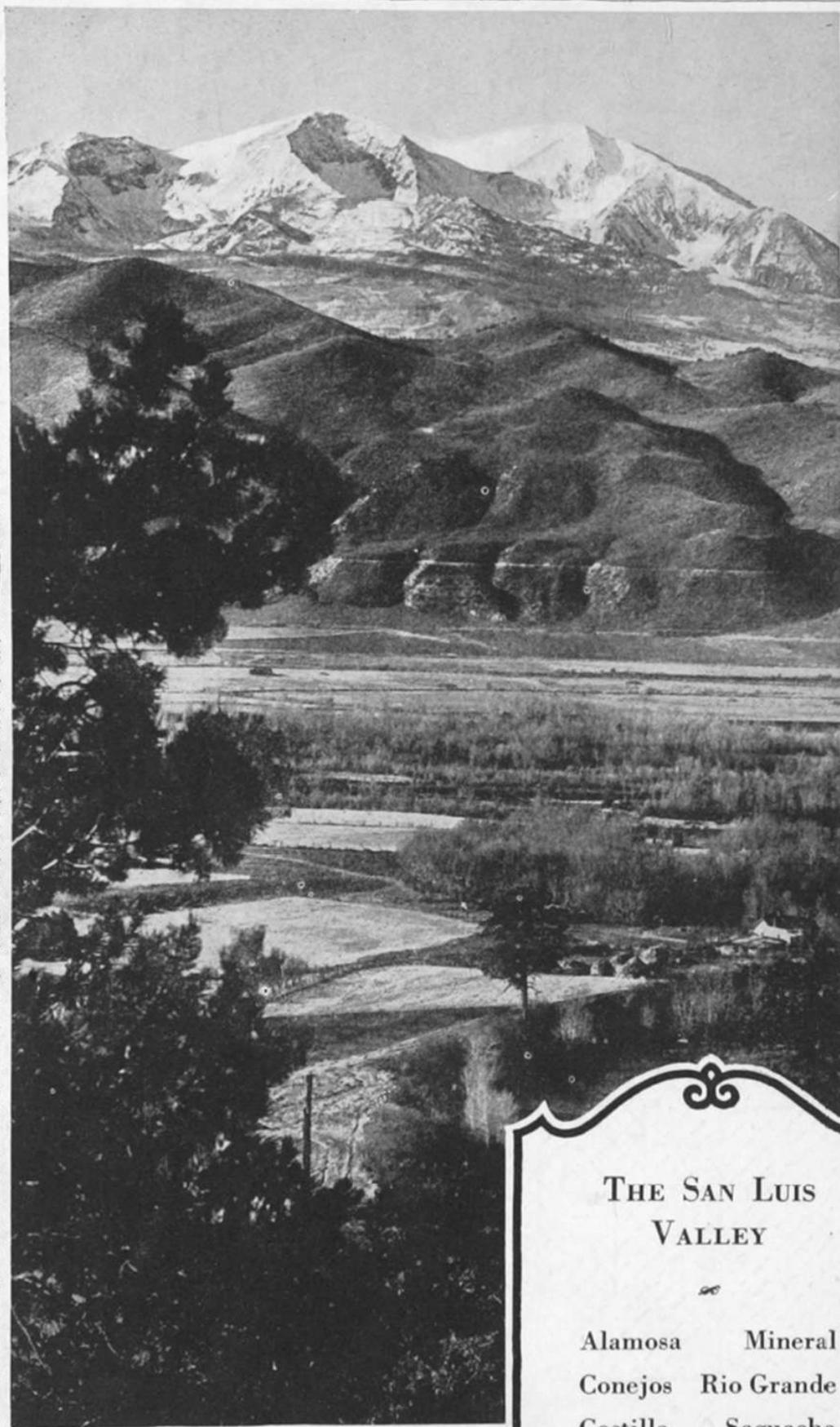


Chart showing grouping of Counties in Colorado, treated in each of the seven booklets published by the State Board of Immigration



THE SAN LUIS
VALLEY

Alamosa Mineral
Conejos Rio Grande
Costilla Saguache