ALL ABOUT COLORADO
THOMAS TONGE
The Author of This Book
TESTIMONIALS

Mr. Tonge received the following letters from eminent authorities after they had read the manuscript of the book:

FROM PRESIDENT VICTOR A. ALDERSON, Colorado School of Mines, Golden:

"Your book contains the maximum amount of authentic information on Colorado, concisely and interestingly presented and is, therefore, the very best advertising medium that Colorado people can send to their friends in other States. The enterprising people of Colorado should be congratulated upon having such a useful and timely book at their disposal when they are engaged in developing the resources of the State."

FROM PRESIDENT CHARLES A. LORY, State Agricultural College, Fort Collins:

"I have just read the MS of your book, giving special attention to your statements on Colorado Agriculture.

"I congratulate you on the clearness, accuracy and forcefulness of your statements. These can be accepted by your readers without hesitation as true to facts.

"Your book should be in every School Library in Colorado for use as a Text and Reference Book on Colorado resources. It will prove a safe and helpful guide for the home-seeker, the tourist, the investor and the health-seeker."

FROM MR. CHALMERS HADLEY, Librarian, Public Library of the City of Denver:

"Please enter the Denver Public Library for twelve copies of your new book on Colorado's resources. I know of no other publication that can approach it in scope and authority. It provides information and protection to prospective investors and should prove a revelation to all who are uninformed regarding the possibilities of this State."

FROM MR. GEORGE T. WELLS (Denver National Bank), representative of the State Bankers' Association in the "Greater Colorado" movement of the Denver Chamber of Commerce:

"Having read the MS of your new book, I have no hesitation in saying that every business and professional man in Colorado ought to have a copy on his desk as a Reference Book. Any one desiring information about Colorado, or contemplating coming here, should have a copy of it. It is absolutely fair, authoritative and concise, thoroughly covering the field."
All About Colorado

for

Home-Seekers,
Tourists,
Investors,
Health-Seekers

Written and Compiled by THOMAS TONGE
From Latest Official Reports

"A good land; a land of sunshine; a land of brooks of water, of fountains and depths that spring out of valleys and hills; a land of wheat, and barley, and alfalfa, and sugar beets, and fruit; a land of herds and flocks; a land wherein thou shalt eat bread without scarceness, thou shalt not lack anything in it; a land whose bowels are coal and oil; and out of whose hills thou mayest dig money."—Deuteronomy VIII, 7-9. (Adapted.)

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PREFACE

The object of this book is to furnish reliable and authentic information for:

(1) Home-seekers (farmers, etc.) now residing in other States and countries, that they may, with great future satisfaction to themselves, make their homes in Colorado.

(2) Tourists from other States and countries, that they may, to their own great enjoyment, spend their vacations among the exceptional scenic attractions of Colorado.

(3) Investors, resident in other States and countries, that they may realize and take advantage of the many opportunities in Colorado for the intelligent, conservative and profitable investment of capital.

(4) Health-seekers from other States and countries, that they may benefit by the famous health-giving climate of Colorado.

It has been the aim of the writer to avoid exaggeration. The plain, simple facts as to Colorado, as demonstrated by official statistics and the testimony of eminent and conservative authorities, are the greatest and most effective advertisement that Colorado can have, whereas statements which have to be mentally discounted by the intelligent and conservative reader have a tendency to cast doubt on the actual pre-eminence of Colorado in many lines.
Colorado State Capitol—Built of Colorado Granite
Colorado for Home-Seekers

Colorado Needs and Presents Ample Opportunities for More People—if of the Right Kind; that is, Assets—Not Liabilities

COLORADO AND SWITZERLAND COMPARED

Area—
Colorado has 103,658 square miles; Switzerland has 15,981 square miles; that is, less than one-seventh the area of Colorado.

Population—
Colorado (U. S. Census 1910) has a population of 799,024, or 7.7 persons per square mile.
Switzerland has a population of 3,741,971, or about 234 persons per square mile.

Colorado has more varied and greater natural resources than Switzerland, on which to amply maintain a population of 234 persons per square mile.

If Colorado had 234 persons per square mile, the population of Colorado would be over 24,000,000.

Location of Population—
In Colorado, nearly one-third of the population is in Denver, fully one-third live in smaller cities and towns, leaving only about one-third in the rural districts. The mountainous districts outside the mining towns are very sparsely populated.

In Switzerland, the population is mainly rural, only six cities having a population exceeding 50,000. The Alpine region is sparsely populated and the valley districts correspondingly densely populated.

Productiveness—
Colorado (103,658 square miles) is practically wholly "productive;" i. e., in the valleys and on the plains—agriculture, horticulture and pasture, coal, oil, clay, etc.; in the mountains—metalliferous mining, quarrying, forests and pasture.

In the mountain valleys of Colorado there is at least twice as much tillable land as the entire area of Switzerland.
Between the altitudes of 3,500 and 6,000 feet Colorado has valley and plain land equal to about three times the entire area of Switzerland, and with a better climate for farming, etc.

Of the area of Switzerland (15,981 square miles) 11,443 square miles (including 3,032 square miles of forests) are classed as "productive," and 4,538 square miles—i.e., nearly one-fourth of the whole country—as "unproductive," consisting of rocks, moraine, glaciers, etc.

WONDERFUL AGRICULTURAL PROGRESS 1900-1910

The 1910 U.S. Census Report states:

- Of the approximate land area of Colorado (66,341,120 acres) 13,532,113 acres were in farms, as compared with 9,474,588 acres in 1900—an increase of 42.8 per cent!!!

- The improved land in Colorado farms was 4,302,101 acres, as compared with 2,273,968 acres in 1900—an increase of 89.2 per cent!!!

- The number of Colorado farms was 46,170, as compared with 24,700 in 1900—an increase of 86.9 per cent!!!

- The average acreage per farm was 293.1 acres, as compared with 383.6 acres in 1900—a decrease of 23.6 per cent!!!

- Note.—Ranges or ranches using the public domain for grazing purposes, but not owning or leasing the land, were counted as farms in 1910 and 1900. The counting of these ranges as farms affects all totals, averages and percentages in which the number of farms is a factor. In 1910 there were 157 such ranges included as farms.

- The value of all Colorado farm property was $491,471,806, as compared with $161,045,101 in 1900—an increase of 205.2 per cent; the detailed increases being: land, 301.6 per cent; buildings, 185.6 per cent; implements and machinery, 169.5 per cent; domestic animals, poultry and bees, 40.5 per cent.

- The average value of all property per Colorado farm was $10,645, as compared with $6,520 in 1900—an increase of 63.3 per cent!!!

- The average value of Colorado land per acre was $26.81, as compared with $9.54 in 1900—an increase of 181 per cent!!!

- In 1910, 73.6 per cent of Colorado farms were free from mortgage!!!

The 46,170 Colorado farms in 1910 were classified as follows:

- Under 3 acres, 569; 3 to 9 acres, 2,222; 10 to 19 acres, 2,279; 20 to 49 acres, 3,882; 50 to 99 acres, 4,384; 100 to 174 acres, 16,355; 175 to 259 acres, 3,004; 260 to 499 acres, 9,472; 500 to 999 acres, 2,426; 1,000 acres and over, 1,577.

- Of the 46,170 Colorado farmers in 1910, 80.6 per cent were native white, 18.2 per cent were foreign-born white, and 1.2 per cent were negro and other non-white.

- In 1910, 81.8 per cent of Colorado farms were operated by owners and managers, as compared with 77.4 per cent in 1900.
In 1910, 18.2 per cent of Colorado farms were operated by tenants, as compared with 22.6 per cent in 1900.

AGRICULTURE WITH IRRIGATION

Colorado, with an average annual precipitation of rain and snow of only about 15 inches and considerably over 300 sunny days per annum, was long regarded as too dry for agriculture, except in the alluvial lands close to the streams, and irrigation was therefore introduced for the utilization of the naturally rich soil at higher levels than the "bottom" alluvial lands.

WONDERFUL DEVELOPMENT—

The 1910 U. S. Census Report gives the following particulars as to irrigation in Colorado:

The irrigated area of Colorado in 1909 was the largest reported for any of the States in the semi-arid region.

Of the 46,170 farms in Colorado on 15th April, 1910, 25,857 were irrigated in 1909, as compared with 17,613 in 1900—an increase of 46.8 per cent!!!

In 1909, 2,792,032 acres were irrigated, as compared with 1,611,271 in 1900—an increase of 73.3 per cent!!!

Of the 2,792,032 acres irrigated, 2,758,283 were irrigated from streams, 16,091 acres from reservoirs, 8,320 acres from springs, 8,282 acres from wells, and 1,056 acres from lakes.

| Number of independent irrigation enterprises | 9,065 |
| Ditches, total length—miles               | 22,570 |
| Main ditches—number                        | 8,405 |
| Length—miles                               | 17,564 |
| Capacity—cubic feet per second              | 148,483 |
| Lateral ditches—number                      | 5,612 |
| Length—miles                               | 5,006 |
Reservoirs—number ........................................... 1,084  
Capacity—acre-feet ........................................ 2,646,593  
Pumped wells—number ...................................... 121  
Capacity—gallons per minute ............................ 52,564  
Pumping plants—number .................................... 206  
Engine capacity—horse-power ............................ 7,969  
Pump capacity—gallons per minute .................... 296,937  

There have been marked increases in some of the above items since 1910.

The cost of the irrigation enterprises existing in 1910 was $56,636,443, as compared with $11,758,703, the cost of those existing in 1900—an **increase of 381.7 per cent!!!**

The estimated final cost of the irrigation enterprises existing in 1910 was $76,443,239, some of which has since been expended.

![Irrigating 329 Acres from One Well. Pump Driven by 40-H. P. Westinghouse Motor](image)

The average cost of operation and maintenance per acre in 1910 was 75 cents, as compared with 34 cents in 1900—an **increase of 120.6 per cent.**

**THE IRRIGATED PORTIONS OF COLORADO—**

The 1910 U. S. Census Report contains the following information as to various counties:

**Per Cent of Total Land Area Irrigated—**

15 per cent and over—Boulder, Conejos, Rio Grande, Weld.

10 to 15 per cent—Jackson, Jefferson, Larimer, Morgan.

5 to 10 per cent—Adams, Bent, Costilla, Custer, Delta, Logan, Otero, Prowers, Saguache, Sedgwick.

1 to 5 per cent—Arapahoe, Archuleta, Chaffee, Douglas, Eagle, El Paso, Fremont, Garfield, Grand, Gunnison, Huerfano,
Lake, La Plata, Mesa, Mineral, Montezuma, Montrose, Ouray, Park, Pitkin, Pueblo, Rio Blanco, Routt, San Miguel, Summit, Teller.

Less than 1 per cent—Baca, Cheyenne, Dolores, Elbert, Hinsdale, Kiowa, Kit Carson, Las Animas, Lincoln, Washington, Yuma.

No irrigation—Clear Creek, Phillips, San Juan.

**Per Cent of Number of Farms Irrigated**

90 per cent and over—Boulder, Chaffee, Conejos, Costilla, Delta, Dolores, Fremont, Grand, Gunnison, Hinsdale, Jackson, Jefferson, Mesa, Montrose, Ouray, Pitkin, Rio Grande, Saguache, Summit.

75 to 90 per cent—Bent, Eagle, Garfield, Huerfano, Lake, Larimer, La Plata, Mineral, Otero, Park.

50 to 75 per cent—Adams, Arapahoe, Archuleta, Custer, Montezuma, Morgan, Prowers, Pueblo, Routt, Weld.

25 to 50 per cent—Douglas, Las Animas, Sedgwick.

5 to 25 per cent—El Paso, Logan, Teller.

Less than 5 per cent—Baca, Cheyenne, Elbert, Kiowa, Kit Carson, Lincoln, Washington, Yuma.

No irrigation—Clear Creek, Phillips, San Juan.
ADVANTAGES OF IRRIGATION

Some of the advantages of irrigation are as follows:

(1) Security against drought.

(2) Ability to apply water when needed and in amount desired, said amount being important with certain crops and on particular soils.

(3) In many instances occasionally, and in some sections constantly, irrigating water is a great fertilizer.

(4) Insufficient rainfall remedied by irrigation is an immense advantage to farmers in harvesting grain and hay. For instance, the water needed on corn, roots, etc., can be applied by irrigation, whereas, if it was supplied by rain, much loss would result to the other crops then being harvested.

(5) The average increased returns resulting from applied irrigation, as compared with agriculture dependent on rainfall, far more than justify the initial and operating costs of irrigation.

ITEMS ON IRRIGATION

A "water right," so far as the owners of an irrigating canal are concerned, is the right to divert water for irrigating purposes from a public stream. Such right is regulated and defined by statute.

A "water right," such as is purchased by a farmer, is the right possessed, in connection with a specific tract of land, for the supply of water from a particular canal. Such right is regulated by the contract between the purchaser and the owners of the irrigation canal.

Irrigation water, when flowing, as in a canal, is measured by the "inch" and the "cubic foot per second." When standing, as in a storage reservoir, it is measured by the "acre-foot."

A Colorado statutory "inch" of irrigating water is the quantity of water which will flow through an inch square orifice, under a five-inch head; that is, when the water above the wooden gate containing the orifice stands five inches higher than the center of such orifice.

A Colorado statutory "cubic foot per second" of irrigating water is equal to 38.4 statutory "inches" of water and to 7.5 gallons passing per second.

An "acre-foot," applied to measurement of water in reservoirs, is the quantity of water which will cover one acre to a depth of one foot, or 43,560 feet. One "cubic foot per second," flowing constantly for 24 hours, equals approximately two "acre-feet."

In the early days of irrigation in Colorado an "inch" of water was considered sufficient for an acre; in some cases less. Now, under more careful use, half an inch is considered sufficient. At the present time a "cubic foot per second" is considered
sufficient for 80 acres, more or less, depending on the character of the soil, the kind of crop and the extent to which the land has previously been annually cultivated.

The market price of an 80-acre "water right" ranges from $25 to $50 per acre.

The State Engineer and his assistants and subordinates control the distribution of the waters of the streams among the irrigating canals and the individual irrigators, and the system is simple.

The Office of State Engineer was created in 1879, the same Act of the Legislature dividing the State into Water Districts, based on drainage lines. The water is distributed in accordance with Court Decrees as to appropriations and the statutes governing the practice, which absolutely safeguard the rights of the water consumer.

![Irrigating 160 Acres of Potatoes from 18-Foot Well. Pump Driven by 15-H. P. Motor](image)

Courtesy of Westinghouse Electric & Mfg. Co.

An "acre-foot," in addition to natural rainfall, ordinarily is sufficient to mature a crop on one acre.

A Colorado statute provides that all irrigating canals must be ready to deliver water to their consumers on 15th April of each year and up to 15th November of each year. This is really a longer period than the irrigation is usually practiced.

The irrigating season commences from the latter part of May to June 10th. Grain irrigation terminates about June 30th.

Three successive irrigations, to a combined or aggregate depth of 4 inches above the surface, are sufficient for grain crops and moisten the ground to a depth of 12 inches by actual test.
Potato irrigation commences about the last week in July and continues during August. Potatoes once irrigated are kept moist by subsequent irrigations at intervals until crop matures.

Irrigation is not required after the first or second week in September, the latest crop to be irrigated being alfalfa, in order to mature the last (third) cutting.

IRRIGATION DISTRICTS

Most of the large irrigating systems in Colorado were originally constructed by Irrigation Companies, organized for the purpose, looking for their income to the water rents and "royalties" to be paid by the farmers using the water.

In course of time more or less friction developed between the water users and the Companies, finally resulting in The Irrigation District Act, passed by the Colorado Legislature in 1901, amended in 1905.

Wherever the Act has been adopted, the water users, as a municipal corporation, own and operate the local irrigation system.

There are now quite a number of such Irrigation Districts in Colorado.

(See "Irrigation Bonds.")

IRRIGATION BY ELECTRICALLY OPERATED PUMPS

In Northern Colorado, within the range of electric power companies, pumping irrigation water by means of electrically operated pumps is on the steady increase and is especially important in the case of land higher than any local "gravity flow" irrigation system.
The following particulars of five cases, differing in circumstances (taken from among thirty), illustrate the system:

<table>
<thead>
<tr>
<th>Acres Irrigated</th>
<th>Source of Supply</th>
<th>Lift Feet</th>
<th>Galls per Minute</th>
<th>Cost of Installation</th>
<th>Cost of Operation Per Season</th>
<th>Cost of Operation Per Acre</th>
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</thead>
<tbody>
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<td>80</td>
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<td>42</td>
<td>265</td>
<td>$714</td>
<td>$300</td>
<td>$3.75</td>
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<td>Ditch</td>
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<td>$80</td>
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<tr>
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<td>$0.94</td>
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<tr>
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<td>14</td>
<td>1,200</td>
<td>$510</td>
<td>$75</td>
<td>$0.63</td>
</tr>
</tbody>
</table>

**AGRICULTURE WITHOUT IRRIGATION**

Agriculture without irrigation in Colorado is sometimes misleadingly termed "Dry Farming," which is a misnomer, as the annual precipitation of rain and snow in the non-irrigable districts is sufficient for successful farming when special methods are adopted.

In practically all those agricultural Counties of Colorado which have extensive irrigation systems, there are considerable areas of land, consisting of good soil, higher than the level of the local irrigating systems, and therefore non-irrigable so far as such systems are concerned.

**VAST NON-IRRIGABLE AREA**

Eastern Colorado alone, however, is here taken as illustrating the point dealt with.

Eliminating the Counties of Boulder, Douglas, Jefferson and Larimer as containing more or less of the mountains and foothills, there are twenty Counties on the plains of Eastern Colorado, lying between the foothills of the Rocky Mountains and the Kansas State line. In some cases almost the whole, and in other cases very large portions, of such counties are non-irrigable from any stream.


Irrespective of the extensive irrigated areas in a number of such Counties (about to be materially increased in the vicinity of Denver), it is conservatively estimated that the twenty counties contain over 20,000 square miles, or over 12,000,000 acres, mostly fertile land, non-irrigable from any stream, therefore dependent on natural precipitation, supplemented in numerous cases by pumping from spring wells or underground waters.

Only a minimum of this vast area is at present cultivated. With effective, successful cultivation, it is capable, in the not distant future, of well maintaining a population (including small local towns) of at least 20 persons per square mile, or 400,000 people; with corresponding further increase as cultivation becomes more intensive.
Much of this land is covered by patents issued by the U. S. Government, originally either to railroads or "entrymen." Other land is still part of the public domain and subject to "entry," but most of the best land has already been taken up.

MISTAKES OF THE PAST—

Between 1886 and 1889 a large number of people flocked into Eastern Colorado, settling on the non-irrigable lands, on the theory that that section was in a supposed "rain belt," i. e., having sufficient annual precipitation to admit of the raising of ordinary farm crops by usual farm methods. Many of such people were utterly unsuited to farming, even under ordinary conditions, and apparently did not realize the abnormal conditions by which they were confronted. They were mainly people of small financial means, attracted by the cheapness with which land could be obtained by "homesteading," etc.

The result was inevitable. A few comparatively "wet" years were followed by a succession of "dry" seasons; the crops shriveled and died; farms and homes were abandoned by their owners after losing practically all they had in the world; and the country largely relapsed into grazing land.

The remembrance of the "rain belt" fiasco of the late "eighties" did much to prejudice many persons on the feasibility of successfully and profitably cultivating the non-irrigable lands of the plains of Eastern Colorado.

A number of the best settlers in the late "eighties" did not leave, but, adapting themselves to local conditions, have successfully farmed for periods of over 20 years, and successful farming, using live stock as a basis, is being done by an increasing number of people.

Renewed interest, a few years ago, brought into Eastern Colorado, among others, many improvident "settlers" (some of them "failures" in other States) without capital or equipment, some of them without energy, ignorant of soil or climatic conditions, with minimum knowledge of how to prepare the soil or what kind of crops to raise.

On the other hand, among the settlers of a few years ago there are many successful farmers, making money on the cheap lands, without irrigation, and obtaining profitable results, even in the seasons of light rainfall.

THE WATER AVAILABLE—

There being, in those portions of Eastern Colorado remote from the Arkansas and Platte Valleys, no permanent streams of any size from which to obtain irrigation water, the amount of precipitation and other water obtainable are all important.

PRECIPITATION—

The average annual precipitation, in inches, for periods of five years or more, seven-tenths of which occurs in six months,
April to September inclusive, as compiled from the local observations of the U. S. Weather Bureau, at various non-irrigable points in Eastern Colorado are as follows:

Baca County—Blaine, 15.88; Springfield, 15.75; Vilas, 14.09.
Cheyenne County—Cheyenne Wells, 15.96.
Elbert County—Hamps, 14.32.
El Paso County—Colorado Springs, 14.34; Husted, 15.98.
Kit Carson County—Burlington, 18.37; Seibert, 15.31; Wallett, 18.11.
Las Animas County—Clear View, 22.90; Hochne, 13.60; Trinidad, 17.17.
Lincoln County—Hugo, 15.14.
Logan County—Crock, 16.41; Le Roy, 15.72.
Phillips County—Holyoke, 16.81.
Washington County—Akon, 19.6; Cope, 18.74.
Yuma County—Fox, 16.65; Wray, 17.68; Yuma, 17.50.

Water from Wells—

The following items as to the depth, in feet, to ground water at various points (non-irrigable from streams) in Eastern Colorado are taken from the Biennial Report (1905-1906) of the Colorado State Engineer:

Baca County—Monon, 15-20; Vilas, 50-65.
Cheyenne County—Arroyo, 14; Wild Horse, 11.
Kiowa County—Arlington, 17; Chivington, 33; Sheridan Lake, 84.
Kit Carson County—Burlington, 185; Flager, 5-20; Seibert, 15-25.
Lincoln County—Arriba, 65; Bovina, 115; Hugo, 45.
Washington County—Akon, 20-120; Cope, 18; Otis, 220.
Weld County—Ault, 34; Dover, 40; Nunn, 28.
Yuma—Wray, 80.

Many wells have been sunk throughout Eastern Colorado since 1906, with gratifying results.

Irrigation from Wells—

Doctor Elwood Mead, in the Year Book (1905) of the U. S. Department of Agriculture, states that where an ample supply of underground water can be reached at the above depths, the farmer can afford to pump water for irrigation.

Records of Government Experiment Stations show that wells, equipped with wind-mills, irrigate from one acre to seven acres each, at a cost of from 75 cents to $6 per acre, admitting of orchards, gardens, shade trees and wind-brakes; also crops worth from $12 to $500 per acre, including alfalfa, garden vegetables, fruit, sugar beets, corn, etc. In ten years there was not a single crop failure where the wind-mill provided moisture.

In connection with some wind-mills, large storage tanks or comparatively small surface reservoirs are used.

Doctor Mead also states that it is believed there are few localities in arid Eastern Colorado where enough water cannot be had for the irrigation of from one to ten acres on each section, and that it is remarkable how much can be done with a little water, where rightly used.
Doctor Mead gives particulars of one pump in Eastern Colorado, operated by gasoline engine, which irrigates 50 acres—45 acres in farm crops and the remaining five acres in orchard.

IRRIGATION FROM WELLS BY GASOLINE ENGINES—

One Denver firm during 1912 installed eight pumping plants between Limon, Lincoln County, and Kit Carson, Cheyenne County, tapping the water-bearing gravel at depths of from four feet to 24 feet below the surface, the water-bearing gravel ranging from 12 to 20 feet thick.

The method is to sink a set or "battery" of wells into the water-bearing gravel, from three to ten in number, according to circumstances, in a direct lateral line about 50 feet apart, each about 14 inches in diameter, cased with special perforated metal casing; the wells connected with each other by one horizontal suction line.

![Pumping Irrigation Water from Wells by Gasoline Engine in Eastern Colorado](image)

The center well is equipped with a pump, operated by gasoline engine, pumping the water simultaneously from all the connected wells. Experience has shown that as much water is obtainable this way from a 14-inch perforated casing well as from a large open well of from 10 feet to 14 feet in diameter.

The pumping plants of this character already installed in Eastern Colorado are each furnishing continuously from 500 to 1,000 gallons of water per minute, and are operated by gasoline engines of from eight to 12 H.P., driving centrifugal pumps.

It is estimated that 500 gallons of water per minute is capable of irrigating eighty acres.

CONSERVATION OF WATER IN THE SOIL—

It has been demonstrated that by deep plowing and thorough preparation of the soil, successful agriculture can be continuously conducted, year in and year out, in Eastern Colorado.
Mr. E. R. Parsons, of Parker, Douglas County, Colo., who has been successfully farming at that place, without irrigation, for twenty-five years, and for fifteen years successfully growing orchard fruit, also without irrigation, states as his experience that every year of intensive cultivation increases the moisture in the ground to an ultimate depth of 14 feet below the surface, sufficient to carry orchard trees, etc., through succeeding dry years.

He further says that he has never lost a single tree, or any crop, by drought; that in the so-called dry years his locality usually gets a precipitation of about ten inches, or 1,130 tons of water per acre; that the aim and object of farming without irrigation is not so much to produce good crops in good years (anybody can do that) as to raise a profitable amount of products in dry years; that he knows of no year since the spring of 1880 that this was not done by men who had the requisite knowledge of how to do it.

The Spalding Deep Tilling Machine—

This machine (Spalding Deep Tilling Machine Company, Western office, Ideal Building, Denver) marks the beginning of a new era in Colorado farming, both in irrigated and non-irrigable districts, particularly the latter. Its merits are aptly summarized by Mr. Joseph H. Eaton, Weld County, a practical agriculturist of many years' Colorado experience, as follows:

In farming without irrigation, deep plowing is the only method by which the precipitation can be successfully caught, stored and conserved in the soil for the use of the growing crops. Until recently no implement could be obtained by which satisfactory work could be done, especially in new ground.
The Spalding Deep Tilling Machine has now been perfected, by which it is possible to plow and thoroughly mix the soil to the depth of even 16 or 18 inches.

Hundreds of them are now in successful operation. Mr. Eaton now has eleven of them; in 1912 plowed 700 acres with them, and says that the machine is an unqualified success, representing the greatest advance in tilling implements since the invention of the steel plow-share.

By the use of this machine the prairie sod can be at once plowed to a depth of from 12 to 14 inches and transformed into a thoroughly tilled seed bed from 14 to 18 inches deep, enabling the farmer in one day to convert a piece of raw prairie sod into a seed bed ready for any crop.

Mr. J. C. Pickett, a farmer at Seibert, Kit Carson County, with a Spalding machine plowed 25 acres in the fall of 1911, 12 to
16 inches deep, using four good horses. The land was very hard, the sod having previously only been broken about three inches deep, for two years. Result of such deep plowing: 50 bushels of corn per acre in 1912; adjoining land, shallow plowed, only yielding from 25 to 30 bushels.

Mr. J. N. Gibbs, Jr., a farmer near Trinidad, Las Animas County, obtained a Spalding Deep Tilling Machine in May, 1910; plowed non-irrigable prairie sod land of nominal market value, one tract about eight inches deep, the other, 12 inches deep, 35 acres in all, sowing same to Mexican beans. In 1911 the land plowed 12 inches deep yielded 1,500 pounds of beans per acre; that plowed eight inches deep yielded less than half as much. In May, 1912, he double-disked the 35 acres, sowing same to barley, threshing out 60 bushels per acre—the best yield for the County. Mr. Gibbs now has five Spalding Deep Tilling Machines and a traction engine, and is about to cultivate more than 1,000 acres of non-irrigable land now covered with thick prairie sod and, in the absence of such a machine, of little market value.

Other instances could be quoted illustrating the new era in Colorado farming made possible by this machine. Wherever it was used in 1912 the ground is now (March, 1913) moist to a depth of several feet below the surface.

"Scratchiculture"—

Heretofore the accepted method of reducing a tract of prairie sod to cultivation has been, first, to turn the tough sod over by shallow plowing to a depth of a few inches; then, either wait a
year for the sod to "rot," or, after industriously disk ing the over
turned sod, raise the first year a small crop of one of the so-called
"sod" crops; then the next year plow a little deeper, and so on,
until after a period of several years a seed bed six or eight inches
deep would be obtained.

This savors more of "scratchiculture" than "agriculture," but
many of the farmers had not the financial means to do better.

Under the above system, ordinary farm crops are a failure in
a majority of years in Eastern Colorado.

Drought-Resisting Cereals and Forage Plants—

The following drought-resisting cereal and forage plants
yield on Colorado non-irrigable land, as follows:

![Image of Barley Raised Without Irrigation. Altitude, 8,479 Feet
Courtesy of Colorado Midland Railway]

Durum Wheat (a spring wheat, originating from the semi-
arid steppe regions of Russia): Has been grown in Colorado ever
since 1902, yielding from 10 to 48 bushels per acre.

Turkey Red Wheat (a winter wheat, originating from the
semi-arid regions of Southeastern Russia): Average yield, 15
bushels.

Rye (Russian variety): Frequently used as forage; as grain,
yields from a few bushels up to 25 bushels per acre.

Barley: Special varieties successfully grown.

Corn: The 1910 U. S. Census Report states that more than
one-half of the total corn acreage of Colorado is in the non-
irrigable Counties of Yuma, Kit Carson, Phillips, Washington and Elbert, the average yield for that year being 15 bushels per acre. Green corn is also used for forage and ensilage.

Spring Emmer or Speltz (of Russian origin): From 10 to 30 bushels per acre; used as feed grain for live stock.

Oats: Special varieties grown for forage, as frequently as for grain.

Sorghum: Common forage crop, yielding from half a ton to several tons per acre.

Kaffir Corn (originating in semi-arid South Africa): Valuable for forage and grain.

Milo Maize (also originating in semi-arid South Africa): Valuable for forage and grain.

Proso (originating in semi-arid regions of Europe): Drought-resisting millet, grown for forage and grain.

Millet: German variety, grown for forage and grain.

Brome Grass (originating in Europe): Drought-resisting; yields up to one ton per acre.

Alfalfa: Drought-resisting varieties.

Colorado Native Grasses: Variety of them, including blue stem (Western wheat grass) and gramma grasses.

The New Buffum Cereals—

By special breeding for a number of years, Professor Buffum: (Wyoming Plant & Seed Breeding Company, with Denver office) has evolved new varieties of grain, specially adapted for non-irrigable land, provided such land is deeply plowed and thoroughly cultivated to conserve the natural precipitation. Two of such varieties have already been successfully introduced, viz.:

Buffum's Improved Winter Emmer. In 1912 Colorado farmers grew, on non-irrigated land, yields of from 40 bushels per acre by Nash Bros., Pueblo County, to 104 bushels per acre by Mr. James E. Kane near Trinidad, Las Animas County, and 107 bushels per acre by Mr. R. E. Showalter near Loveland, Larimer County.

Buffum's No. 17 Wheat, produced by breeding the beard off Turkey Red Wheat. It was only introduced in Colorado in 1912, to mature in 1913. Prior to its introduction into Colorado, it produced on the Buffum Seed Breeding Farm in arid Northern Wyoming, by the acre, 35 bushels without irrigation and 62 bushels with irrigation.

Live-Stock Farming—

The success of farming, without irrigation, in Eastern Colorado has been and will continue to be: diversified farming, with live stock as a basis; stock-raising, dairying (particularly the latter), hog-raising and poultry—a combination of "the plow.
the cow and the sow;” feeding the farm products and selling on
the hoof, or feeding to dairy stock and poultry, selling milk,
eggs, etc.

This is already illustrated by two Counties in Eastern Colo-
rado, each with less than one per cent of its total area and less
than five per cent of the number of its farms irrigated.

According to the statistics in the 1912 Annual Report of the
Colorado Auditor of State, (1) Kit Carson County ranks
fourth, among all the Counties of Colorado, in the number of
milch cows; (2) Yuma County ranks first, among all the
Counties of Colorado, in the number of swine.

Among the enterprising, industrious farmers in the non-
irrigable districts, silos are being increasingly used for the stor-

![A Dairy Herd in Northern Colorado](image)

ing of live-stock food for the winter, consisting of the cereals
(corn, etc., cut green) and forage plants, chopped up by machin-
ery.

**Summary—**

It is evident from the foregoing that a man will do well not
to undertake farming without irrigation, unless he has sufficient
capital to purchase his land, provide house, fences, barn, well,
wind-mill or other pumping plant, obtain necessary live stock
(if he does not bring it with him), and to carry him well over
until he has cultivated a sufficient area and begins to get definite
returns.

If he does not recognize the above requirements, he takes the
responsibility himself and is not able to find any justification in
this book, which does not aim to "boost," but to present facts.
Some good men have started farming in Eastern Colorado not fully equipped, and have had a "hard time" for a few years, coming out all right eventually.

COLORADO EXCELS OTHER STATES

Colorado (including both irrigated and non-irrigated land) excels other States in the average yields per acre and average prices of farm crops (except corn), but does not equal, in yields per acre, some European countries where intensive farming and continuous liberal fertilizing are practiced.

As stated elsewhere in this book, the other States which have contributed most to the population of Colorado are: Missouri, Illinois, Iowa, Kansas, Ohio, Nebraska and New York. These States fairly represent farming conditions in various parts of the country, and are therefore selected for comparison with Colorado.

The 1911 Year Book of the U. S. Department of Agriculture shows that the average yields per acre and average prices of the seven ordinary farm crops, over a ten-year period, in Colorado, several European countries (yields per acre only), and such seven other States were as follows:

BARLEY

1902-1911: Germany, 35.8 bushels; United Kingdom, 35.1, Austria, 25.5; France, 23.8; Hungary, 23.6.

<table>
<thead>
<tr>
<th>State</th>
<th>Bushels per Acre</th>
<th>Price per Bushel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>33.8</td>
<td>59 cents</td>
</tr>
<tr>
<td>Missouri</td>
<td>21.8</td>
<td>55 &quot;</td>
</tr>
<tr>
<td>Illinois</td>
<td>27.8</td>
<td>50 &quot;</td>
</tr>
<tr>
<td>Iowa</td>
<td>25.6</td>
<td>41 &quot;</td>
</tr>
<tr>
<td>Kansas</td>
<td>19.8</td>
<td>41 &quot;</td>
</tr>
<tr>
<td>Ohio</td>
<td>27.3</td>
<td>53 &quot;</td>
</tr>
<tr>
<td>Nebraska</td>
<td>24.0</td>
<td>37 &quot;</td>
</tr>
<tr>
<td>New York</td>
<td>24.6</td>
<td>60 &quot;</td>
</tr>
<tr>
<td>United States</td>
<td>25.7</td>
<td>47 &quot;</td>
</tr>
</tbody>
</table>

According to the Crop Report of the U. S. Department of Agriculture for 1912, the average Colorado yield of barley was 39 bushels per acre.

Professor Alvin Keyser, Chief Agronomist, Colorado State Agricultural College, says that on the College Farm 85 bushels of barley per acre, for the entire field, have been harvested.

CORN

The Year Book does not give the average yields per acre of corn in European countries, but the average yields and prices for various American States, for the decade 1900-1909, as follows:
<table>
<thead>
<tr>
<th>State</th>
<th>Bushels per Acre</th>
<th>Price per Bushel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>21.2</td>
<td>59 cents</td>
</tr>
<tr>
<td>Missouri</td>
<td>28.6</td>
<td>45</td>
</tr>
<tr>
<td>Illinois</td>
<td>34.5</td>
<td>43</td>
</tr>
<tr>
<td>Iowa</td>
<td>32.3</td>
<td>39</td>
</tr>
<tr>
<td>Kansas</td>
<td>22.4</td>
<td>42</td>
</tr>
<tr>
<td>Ohio</td>
<td>35.6</td>
<td>48</td>
</tr>
<tr>
<td>Nebraska</td>
<td>27.4</td>
<td>38</td>
</tr>
<tr>
<td>New York</td>
<td>31.0</td>
<td>66</td>
</tr>
<tr>
<td>United States</td>
<td>28.8</td>
<td>47</td>
</tr>
</tbody>
</table>

HAY

The Year Book does not give the average yields per acre of hay in European countries, but the average yields and prices for various American States, for the decade 1900-1909, as follows:

<table>
<thead>
<tr>
<th>State</th>
<th>Tons per Acre</th>
<th>Price per Ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>2.35</td>
<td>$8.67</td>
</tr>
<tr>
<td>Missouri</td>
<td>1.28</td>
<td>8.15</td>
</tr>
<tr>
<td>Illinois</td>
<td>1.35</td>
<td>9.53</td>
</tr>
<tr>
<td>Iowa</td>
<td>1.55</td>
<td>6.47</td>
</tr>
<tr>
<td>Kansas</td>
<td>1.41</td>
<td>5.63</td>
</tr>
<tr>
<td>Ohio</td>
<td>1.38</td>
<td>10.06</td>
</tr>
<tr>
<td>Nebraska</td>
<td>1.55</td>
<td>5.09</td>
</tr>
<tr>
<td>New York</td>
<td>1.22</td>
<td>12.10</td>
</tr>
<tr>
<td>United States</td>
<td>1.44</td>
<td>9.59</td>
</tr>
</tbody>
</table>

According to the 1910 U.S. Census Report, alfalfa (lucerne) contributes nearly two-fifths of the acreage and over one-half of the quantity and value of the Colorado hay crop.
Sixty-Five Acre Potato Field. Altitude, 6,200 Feet
Courtesy of Colorado Midland Railway

OATS

1902-1911: Germany, 51.5 bushels; United Kingdom, 44.7; Austria, 31.2; Hungary, 31; France, 30.

1900-1909:

<table>
<thead>
<tr>
<th>State</th>
<th>Bushels per Acre</th>
<th>Price per Bushel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>35.3</td>
<td>46 cents</td>
</tr>
<tr>
<td>Missouri</td>
<td>23.4</td>
<td>35 &quot;</td>
</tr>
<tr>
<td>Illinois</td>
<td>31.2</td>
<td>34 &quot;</td>
</tr>
<tr>
<td>Iowa</td>
<td>29.5</td>
<td>30 &quot;</td>
</tr>
<tr>
<td>Kansas</td>
<td>24.4</td>
<td>35 &quot;</td>
</tr>
<tr>
<td>Ohio</td>
<td>33.2</td>
<td>36 &quot;</td>
</tr>
<tr>
<td>Nebraska</td>
<td>26.4</td>
<td>30 &quot;</td>
</tr>
<tr>
<td>New York</td>
<td>31.3</td>
<td>43 &quot;</td>
</tr>
<tr>
<td>United States</td>
<td>29.5</td>
<td>35 &quot;</td>
</tr>
</tbody>
</table>

According to the Crop Report of the U. S. Department of Agriculture for 1912, the average Colorado yield of oats was 42.8 bushels per acre.

Professor Alvin Keyser says that, on good soils, with adequate preparation, proper rotation of crops and efficient irrigation, oats in the Fort Collins district yield 107 bushels per acre, whole fields running 85 bushels per acre. Oats in Middle Park, at 8,000 feet altitude, range from 65 to 75 bushels per acre. Whole fields in the San Luis Valley yield 60 bushels per acre.
POTATOES

1900-1910: Germany, 200.8 bushels; United Kingdom, 200.7; Austria, 154.6; France, 123.3; Hungary, 117.3.

1900-1909:

<table>
<thead>
<tr>
<th>State</th>
<th>Bushels per Acre</th>
<th>Price per Bushel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>139</td>
<td>60 cents</td>
</tr>
<tr>
<td>Missouri</td>
<td>81</td>
<td>62 &quot;</td>
</tr>
<tr>
<td>Illinois</td>
<td>85</td>
<td>64 &quot;</td>
</tr>
<tr>
<td>Iowa</td>
<td>82</td>
<td>63 &quot;</td>
</tr>
<tr>
<td>Kansas</td>
<td>76</td>
<td>73 &quot;</td>
</tr>
<tr>
<td>Ohio</td>
<td>84</td>
<td>59 &quot;</td>
</tr>
<tr>
<td>Nebraska</td>
<td>83</td>
<td>55 &quot;</td>
</tr>
<tr>
<td>New York</td>
<td>88</td>
<td>59 &quot;</td>
</tr>
<tr>
<td>United States</td>
<td>91.4</td>
<td>57 &quot;</td>
</tr>
</tbody>
</table>

A Colorado Potato Cellar

Courtesy of Colorado Midland Railway

Professor Keyser, before quoted, says that on the best lands of the Greeley district, potatoes have yielded as high as from 300 to 400 sacks per acre, weighing from 100 to 115 pounds per sack; that he has seen 125 sacks per acre produced at 8,000 feet altitude in Middle Park, and that yields of 200 sacks per acre are not unusual in the Montrose and Carbondale districts.

RYE

1902-1911: United Kingdom, 28.2 bushels; Germany, 26.5; Austria, 20.1; Hungary, 18.3; France, 16.8.
1900-1909:

<table>
<thead>
<tr>
<th>State</th>
<th>Bushels per Acre</th>
<th>Price per Bushel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>18.3</td>
<td>62 cents</td>
</tr>
<tr>
<td>Missouri</td>
<td>14.8</td>
<td>64 &quot;</td>
</tr>
<tr>
<td>Illinois</td>
<td>15.1</td>
<td>61 &quot;</td>
</tr>
<tr>
<td>Iowa</td>
<td>18.0</td>
<td>53 &quot;</td>
</tr>
<tr>
<td>Kansas</td>
<td>14.2</td>
<td>57 &quot;</td>
</tr>
<tr>
<td>Ohio</td>
<td>17.1</td>
<td>64 &quot;</td>
</tr>
<tr>
<td>Nebraska</td>
<td>16.8</td>
<td>49 &quot;</td>
</tr>
<tr>
<td>New York</td>
<td>16.1</td>
<td>68 &quot;</td>
</tr>
<tr>
<td>United States</td>
<td>16.0</td>
<td>62 &quot;</td>
</tr>
</tbody>
</table>

According to the Crop Report of the U. S. Department of Agriculture for 1912, the average Colorado yield of rye was 20 bushels per acre.

Professor Keyser says that 60 bushels of rye per acre have been obtained on Colorado irrigated lands.

WHEAT

1902-1911: United Kingdom, 33 bushels; Germany, 29.8; France, 20.3; Austria, 19.4; Hungary, 18.4.

1900-1909:

<table>
<thead>
<tr>
<th>State</th>
<th>Bushels per Acre</th>
<th>Price per Bushel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>25.1</td>
<td>75 cents</td>
</tr>
<tr>
<td>Missouri</td>
<td>13.4</td>
<td>78 &quot;</td>
</tr>
<tr>
<td>Illinois</td>
<td>15.5</td>
<td>81 &quot;</td>
</tr>
<tr>
<td>Iowa</td>
<td>14.6</td>
<td>72 &quot;</td>
</tr>
<tr>
<td>Kansas</td>
<td>14.0</td>
<td>71 &quot;</td>
</tr>
<tr>
<td>Ohio</td>
<td>14.9</td>
<td>86 &quot;</td>
</tr>
<tr>
<td>Nebraska</td>
<td>17.5</td>
<td>67 &quot;</td>
</tr>
<tr>
<td>New York</td>
<td>17.4</td>
<td>90 &quot;</td>
</tr>
<tr>
<td>United States</td>
<td>14.1</td>
<td>77 &quot;</td>
</tr>
</tbody>
</table>

According to the Crop Report of the U. S. Department of Agriculture for 1912, the average Colorado yield of spring wheat was 24 bushels per acre, and of winter wheat 24.5 bushels per acre.

Professor Keyser, before quoted, says that on good soils, with adequate preparation, proper rotation of crops and efficient irrigation, it is not an unusual occurrence in the Fort Collins district to have spring wheat yield 50 bushels per acre.

SUGAR BEETS

Wonderful Development Since 1899—

In Colorado, sugar beets are regarded as the most safe and profitable crop of any, one year with another.

A farmer can raise beets, sell the sugar in them to the factory, get back and feed the factory pulp and syrup to his livestock, also the nutritive beet tops, and return to his land, in the manure, the fertility taken from the soil by the crop.

The cultivation of sugar beets was introduced into Colorado in 1899, when the first factory was built. There are now 17 beet-
sugar factories in the State, representing an investment of about $22,000,000.

In 1912 there were over 140,000 acres of beets harvested in Colorado and 1,700,000 tons paid for by the factories; average yield per acre, 12 tons; average factory price, nearly $6 (depending on sugar contents); the growers receiving about $9,500,000.

**Great Benefit to Agriculture**

The evolution of the beet-sugar industry in Colorado has been of great benefit to the State generally and to agriculture in particular, resulting in:

(1) Much greater attention being paid to scientific rotation of crops, the growth of sugar beets resulting in marked percent-
age of increase of yield per acre of alternating cereal and other crops.

(2) More intensive cultivation and tendency to smaller farms.

(3) Impetus to stock-feeding (cattle, sheep and hogs), utilizing, along with other foods, beet tops and residuum factory beet pulp and syrup.

(4) Increase of diversified farming.

(5) Increased demand for labor in the beet fields and factories, attracting people from the cities “back to the land.”

Leases for Beet-Growing Common—

Leases are common from Colorado farmers, for one season, of portions of their farms for the growth of sugar beets; the farmers furnishing the land and irrigation water; the lessees furnishing the seed, horses, implements and labor, paying as rent from 20 to 25 per cent of the gross value of the crop, as evidenced by the checks paid by the factory for the beets.

The growers, in the winter or early spring, individually contract, in writing, with the factories to grow a certain acreage of beets for the factories during the following season, at specified prices per ton, depending on sugar contents.

The tracts devoted to sugar beets range in size from a few acres to hundreds of acres each, the average being about 20 acres.

Profitable for Labor—

In 1912 there was paid to laborers in the Colorado beet fields about $4,000,000.

The busy times are the thinning, hoeing, pulling and topping seasons, the labor being generally done by contract.

The wages paid in the beet fields for ordinary common labor, doing hand work, range from $1.50 to $2.50 per day, if reckoned

31
that way; but the field workers generally contract to do the necessary hand work—i.e., the thinning and hoeing, second and third hoeings, pulling and topping—for $20 per acre, father, mother and children working on the family contract. The workers provide their own food.

Men, women and children (over 12 years of age) average six acres per worker, which at $20 per acre means an average of $120 per worker per season.

During the rush (lasting intermittently not over five weeks altogether) of the season the industrious work from 12 to 14 hours per day. In the intervals they get other work from the
farmer, thereby earning sufficient to cover their expenses for the entire season, the contract work representing clear money.

In the early years of the industry the laborers were housed in tents furnished rent-free by the farmers growing beets. As time went on, many of the farmers built wooden houses for them, also rent-free, while the more thrifty and industrious of the early comers of the field workers acquired small tracts of land and erected their own houses. **To-day, in some districts the majority of the most successful beet-growers are those who started years ago as field hands.**

**Most Profitable Field Crop in Colorado—**

The average cost of production of an acre of beets is about $45.

![First Prize Fat Ewes, Fattened on Factory Beet Pulp](image)

The average yield in 1912—12 tons—at an average price of $5.60 per ton, is $67.20, showing $23.20 net per acre.

Yields of 20 tons per acre and upwards are common.

**Residuum for Stock-Feeding—**

The residuum beet pulp and residuum syrup from the factories are mostly fed to live stock within a short distance from each factory, large numbers of cattle and sheep being assembled in fattening yards for the purpose of utilizing the material, in addition to alfalfa, etc.

The pulp and syrup are also shipped by railroad to stock-feeders and dairymen up to 30 miles distant, and fetched from the factory in wagons, by local farmers.
The factory price of the pulp is 50 cents per ton during operating period, and 75 cents per ton during inter-campaign; average, 65 cents for the year at the factory.

The residuum syrup sells for $7 per ton f. o. b. factory, and is shipped in tank cars. The farmers within easy driving distance from the factory buy it in barrels. It is used in different ways as stock feed, either sprinkled over the beet pulp, or mixed with chopped straw and hay, one part of syrup to three parts of chop.

Colorado has demonstrated that a farming community, which intelligently grows beets and utilizes the pulp resulting from them in the feeding of cattle, is able to grow as large crops, in addition to the beets, as were produced before adding the sugar-beet industry, and to maintain many more cattle than was possible before beet farming was inaugurated.

OTHER FIELD CROPS

CANADIAN PEAS—

Canadian field peas have been increasingly grown in Colorado for some years past, especially in the San Luis Valley. In rotation of crops, they are a great fertilizer. They do best at high, cool elevations, with minimum evaporation; say, from 7,000 feet upwards (as in the San Luis Valley), where alfalfa begins to be somewhat unreliable. They are a growing factor in the fattening of sheep and swine.

NOTE.—See "Sheep" and "Swine."

CANTALOUPES—

Rocky Ford (Otero County) has for years been famous for the extent and high quality of its cantaloupe field crop, which is shipped by the train load to the great cities of the Middle and
Eastern States, as far East as New York. Other Colorado points, such as Palisade (Mesa County) on the Western Slope, now also grow cantaloupes as a field crop.

**Flax—**

Flax is increasingly grown (for seed, not yet for fibre) as a profitable crop, more particularly on the non-irrigable lands of Eastern Colorado.

**Roots—**

Mangold-wurzels, rutabagas (Swede turnips), etc., do equally as well as sugar beets, and are increasingly grown as feed for live stock.

**Vegetables, Etc.—**

The entire range of vegetables, etc.—such as asparagus, beans, cabbage, carrots, celery, onions, peas, tomatoes, etc.—are increasingly grown as field crops. Colorado cabbage, celery, onions, etc., on account of their high quality, are increasingly shipped to other States; while asparagus, beans, peas, tomatoes, etc., constitute the raw material for numerous Colorado canning establishments, which, besides largely supplying the Colorado market, ship extensively to other States.
Live Stock

HORSES

There was an increase in the number and value per head of horses in Colorado in 1912, as shown by the following figures issued by the U. S. Department of Agriculture:

<table>
<thead>
<tr>
<th>Date</th>
<th>Number</th>
<th>Value per Head</th>
<th>Gross Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1, 1913</td>
<td>324,000</td>
<td>$87</td>
<td>$28,188,000</td>
</tr>
<tr>
<td>Jan. 1, 1912</td>
<td>321,000</td>
<td>80</td>
<td>25,680,000</td>
</tr>
</tbody>
</table>

According to the statistics of the State Auditor’s Report for 1912, the five leading horse Counties are: Weld, Yuma, Larimer, Kit Carson, Washington.

Horse-raising in Colorado admits of great and profitable development. Originally the local stock was of the Indian pony type, indigenous to the plains. For years past thoroughbred Belgian Draft, Norman-Percheron, Oldenburg Coach and French Coach breeding stock have been extensively introduced into Colorado, with corresponding results.

There is now a bigger demand for good draft horses than local supply. Locally raised horses have better bone and wind than those raised at lower altitudes. Colorado can well follow the practice in States to the East, where individual farmers sell two or three teams a year of their own raising and breaking. At present, a team weighing 1,200 pounds each fetches in the Colorado market from $300 to $500.

Colorado farmers are now going more into horse-raising than previously, and the number of horses handled at the Denver Union Stock Yards has doubled in the last few years.

MULES

There was an increase in the value per head of mules in Colorado in 1912, as shown by the following figures issued by the U. S. Department of Agriculture:

<table>
<thead>
<tr>
<th>Date</th>
<th>Number</th>
<th>Value per Head</th>
<th>Gross Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1, 1913</td>
<td>17,000</td>
<td>$104</td>
<td>$1,768,000</td>
</tr>
<tr>
<td>Jan. 1, 1912</td>
<td>17,000</td>
<td>100</td>
<td>1,700,000</td>
</tr>
</tbody>
</table>

According to the statistics of the State Auditor’s Report for 1912, the five leading mule Counties are Weld, Yuma, Las Animas, Prowers, Otero.

So far, mule-breeding has not been extensively practiced in Colorado, though there is a good opening for same.
Most of the mules now in Colorado are work animals shipped in from other States. Draft mules, standing 15 hands and over, weighing from 1,200 pounds to 1,300 pounds each, fetch from $400 to $600 per team in Colorado. For freight-hauling in the mountains, mules, especially Colorado-bred mules, are better than horses, being surer-footed, tougher and hardier.

ASSES

The Year Book of the U. S. Department of Agriculture does not take cognizance of the number of asses in the various States.

The State Auditor's Report for 1912 credits Colorado as having 572 asses, the five leading ass Counties being: La Plata, San Miguel, Park, San Juan, Clear Creek.

The use of asses (locally termed "burros") as pack animals in the mining Counties has declined with the advent of aerial wire trams and the substitution of wagon roads for former trails.

RANGE CATTLE

There was no increase in the number, but an increase in the value per head of range cattle (i.e., other than dairy cattle) in 1912, as shown by the following figures issued by the U. S. Department of Agriculture:

<table>
<thead>
<tr>
<th>Date</th>
<th>Number</th>
<th>Value per Head</th>
<th>Gross Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1, 1913</td>
<td>921,000</td>
<td>$34.10</td>
<td>$31,406,000</td>
</tr>
<tr>
<td>Jan. 1, 1912</td>
<td>921,000</td>
<td>27.60</td>
<td>25,420,000</td>
</tr>
</tbody>
</table>

According to the statistics of the State Auditor's Report for 1912, the five leading range cattle Counties are: Moffat, Rio Blanco, Routt, Jackson, Yuma.

The open-range cattle industry, as it existed in the eighties in Colorado, is practically a thing of the past, except as it lingers in the less populated Counties, and, even there, winter feeding
with hay, etc., is now practiced, in order to be able to market the animals in good condition in the early spring months. In the more populous grazing Counties the cattle industry is now conducted in smaller herds and of much higher grade stock than formerly, and on fenced lands.

The favorite breeds are Shorthorns, Herefords, Polled Angus, Galloways, etc.

Colorado is increasingly self-supplied with beef of high quality, resulting from the feeding of cereals (barley, speltz, etc.), roots (mangold-wurzel, sugar beets, beet-sugar pulp) and forage, such as alfalfa.

At the Denver Stock Show (practically a “feeder” show) in January, 1913, the champion carload of Shorthorn calves, less than one year old, fetched $12.25 per 100 pounds, and ordinary two-year-old Colorado cattle sold from $7.10 up to $10 per 100 pounds.

Colorado, by means of increased live-stock farming, as contrasted with grazing on the remaining open ranges decreasing in area, can produce double and treble the present number of beef cattle.

In view of the increasing shortage of beef cattle throughout the United States, the favorable conditions in Colorado will probably result in a marked expansion of live-stock farming.

There is good profit in individual farmers purchasing comparatively small lots of weaned calves or yearling steers, feeding them for a time on alfalfa and straw, grazing during the summer, and subsequently feeding them on grains, roots, etc., raised on their own farms, and marketing as beef.
Some small farmers on non-irrigated land are raising forage—such as Kaffir corn, milo maize, etc.—as food for their livestock.

MILCH COWS

There was an increase in the number and value per head of milch cows in Colorado in 1912, as shown by the following figures issued by the U. S. Department of Agriculture:

<table>
<thead>
<tr>
<th>Date</th>
<th>Number</th>
<th>Value per Head</th>
<th>Gross Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1, 1913</td>
<td>172,000</td>
<td>$53.80</td>
<td>$9,254,000</td>
</tr>
<tr>
<td>Jan. 1, 1912</td>
<td>167,000</td>
<td>47.00</td>
<td>7,849,000</td>
</tr>
</tbody>
</table>

NOTE.—Switzerland has 1,500,000 cattle, practically all dairy cattle, and 350,000 goats, also used for dairy purposes.

According to the statistics of the State Auditor’s Report for 1912, the five leading dairy cattle Counties are: Weld, El Paso, Douglas, Kit Carson, Arapahoe.

REDUCE IMPORTATIONS OF DAIRY PRODUCTS—

The Colorado State Dairy Commissioner, in his Annual Report for 1912, says that Colorado offers greater advantages than any other Western State for profitable dairying. The vast idle, grazing areas present exceptional opportunities for dairy herds, and several thousand more cows could be introduced with profit to the owners. In this way the importation of dairy products into the State would be lessened.

At the present time from $6,500,000 to $7,000,000 worth of dairy products annually are shipped into Colorado.

Here is an opening for less fortunate dairymen in the crowded States East of Colorado.

NOTE.—Irrespective of supplying its own population of nearly 4,000,000 people, Switzerland annually exports dairy products (cheese, condensed milk and milk chocolate) to the amount of nearly $25,000,000.

COLORADO IDEAL FOR DAIRY FARMING—

The Colorado State Dairy Commissioner further says that almost every County in Colorado is well adapted for dairy farming. There should be better cows and more of them. They should be tested and the poorer ones weeded out, thereby raising the standard, not only of the herds, but of the products. One serious drawback to successful dairying in Colorado is the lack of efficient help, notwithstanding the fact that farm hands are paid higher wages than in almost any other State in the Union.

Producers are getting higher prices for their milk now than ever before, mainly because the grade is better. In 1912 they were paid 48 cents for their butter fat, as against 44 cents in 1911.
INCREASING USE OF SILOS—

Silos are coming into more general use with dairymen. Where it is not possible to have a concrete silo, the ground or trench silo is a valuable aid to the dairy farmer in the preparation of winter food. In non-irrigable sections, corn and other forage plants are used for ensilage. In the irrigated districts, the larger growth of corn makes it an especially valuable crop for ensilage.

DAIRIES AND CREAMERIES—

Of the more than 7,000 dairies (large and small) in Colorado, the majority are confined to the more populous Counties. The one- and two-cow dairies are mostly in the sparsely peopled Counties, where many goats are being utilized for family use.

In 1912 there were 125 creameries at various points, as against 85 in 1911.

There are two condensed-milk factories operating continuously, with increasing production.

Six small cheese factories are in operation, the quality of their output being above the average; but the great bulk of the cheese consumed in Colorado is as yet imported from other States.
SHEEP

There was an increase in the number and value per head of sheep in Colorado in 1912, as shown by the following figures issued by the U. S. Department of Agriculture:

<table>
<thead>
<tr>
<th>Date</th>
<th>Number</th>
<th>Value per Head</th>
<th>Gross Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1, 1913</td>
<td>1,737,000</td>
<td>$3.10</td>
<td>$6,253,000</td>
</tr>
<tr>
<td>Jan. 1, 1912</td>
<td>1,579,000</td>
<td>3.00</td>
<td>4,737,000</td>
</tr>
</tbody>
</table>

As to wool, the Year Book for 1911 quotes from the estimates of the National Association of Wool Manufacturers for 1911, as follows: "Colorado, 1,300,000 sheep sheared; average weight of fleece, seven pounds; shrinkage, 68 per cent; wool washed and unwashed, including pulled wool, 9,100,000 pounds; wool scoured, including pulled wool, 2,912,000 pounds."

According to the statistics of the State Auditor's Report for 1912, the five leading sheep Counties are: Las Animas, Prowers, Bent, Conejos, Saguache.

Alfalfa-Field Pea Fed Sheep

Originally the sheep in Colorado were Mexican in breed; hardy, adapted to local conditions, but inferior for mutton and wool purposes.

In the "eighties" there was a movement resulting in the extensive introduction of breeding stock for wool, mostly Merinos. This was followed by the extensive introduction of the mutton breeds—Shropshires and Rambouillets.

To-day there is practically an unlimited local demand for mutton as compared with formerly. Sheep-feeding in Colorado for the butcher has witnessed corresponding development. Northern Colorado alone annually feeds over 300,000 sheep and lambs. Lambs born in May and June are put into the feeding pens in September, October and November, fed on the small cereals, roots
(including factory sugar-beet pulp and syrup), alfalfa, etc., and marketed in January, February and March, fetching the highest price in the markets of Chicago and other Eastern centers; viz., up to nine cents per pound, live weight.

In the Arkansas Valley several hundred thousand sheep and lambs are annually fattened on hay, alfalfa and small grain.

In the San Luis Valley several hundred thousand lambs and sheep are fattened annually for market, mainly on Canadian peas, on which they are turned out to graze.

There is good profit in individual farmers purchasing comparatively small lots of sheep or lambs, and fattening same for market on the produce of their own farms.

GOATS

The Year Book aforesaid does not give statistics as to the number of goats in the various States.

According to the statistics of the State Auditor's Report for 1912, there are 24,353 goats in Colorado, the five leading goat Counties being: Las Animas, Archuleta, Mesa, La Plata, Costilla.

They are mostly common goats, usually owned by Mexicans and kept for their milk, though at some points Angora goats are being introduced.

NOTE.—As before mentioned, Switzerland has 350,000 goats, used for dairy purposes.

SWINE

There was a decrease in the number and an increase in the value per head of swine in Colorado in 1912, as shown by the following figures issued by the U. S. Department of Agriculture:

<table>
<thead>
<tr>
<th>Date</th>
<th>Number</th>
<th>Value per Head</th>
<th>Gross Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1, 1913</td>
<td>205,000</td>
<td>$11</td>
<td>$2,255,000</td>
</tr>
<tr>
<td>Jan. 1, 1912</td>
<td>211,000</td>
<td>8</td>
<td>1,688,000</td>
</tr>
</tbody>
</table>

According to the statistics of the State Auditor's Report for 1912, the five leading hog Counties are: Yuma, Adams, Otero, Prowers, Rio Grande.

During 1912 there were 221,718 hogs handled at the Denver Union Stock Yards, over 50 per cent of which came from Kansas and Nebraska.

The hog industry in Colorado is in its infancy and presents practically an unlimited field for development. The packing-houses of Denver and Pueblo do not begin to supply the Colorado demand for packing-house products, and can ship extensively to other States, particularly to the North, South and West of Colorado.
COLORADO'S ADVANTAGE FOR THE HOG INDUSTRY—

Professor H. M. Cottrell (until recently Professor of Animal Industry at the Colorado State Agricultural College and now Agricultural Commissioner of the Chicago, Rock Island and Pacific Railway) says that hogs can be raised more economically and profitably in Colorado than in the corn belts of Iowa, Illinois and other States, and that Colorado has four special supplies of hog feed, viz.:

(1) Alfalfa in the irrigated districts. Hogs can be pastured on it, supplemented by one pound of grain per head per day. Deducting the gain resulting from the grain, alfalfa produces, on the average, about 700 pounds of pork per acre.

(2) Barley in the irrigated and non-irrigated districts, and also in the mountains. This is the main basis of the enormous and growing hog product of Denmark, with its vast annual hog-product exports to Great Britain. On Colorado irrigated barley lands, from 600 pounds to 800 pounds of pork to the acre can be raised; on non-irrigated barley lands, from 200 pounds to 400 pounds of pork per acre; on barley lands at higher elevations, say along the line of the Moffat Road, from 500 to 700 pounds per acre. The corn belts of Iowa, Illinois, etc., do not average over 400 pounds of pork per the acre.

(3) Canadian Field Peas. At high elevations in Colorado—say, of 7,000 to 9,000 feet—where alfalfa is not generally successful, Canadian field peas, as in the San Luis Valley, are the surest crop. With present method of growing Canadian peas, about 400 pounds of pork to the acre is raised. With better methods and selected seed, 600 pounds of pork per acre can be raised. In the

![Alfalfa-Fea-Fed Hogs. Average Weight, 500 Pounds](image)

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San Luis Valley the cost of labor, seed and water, up to the time the hogs are turned out to graze, is said not exceed $1.50 per acre. The average yield is 25 bushels of peas to the acre, irrespective of the vines. Those who take special pains and use selected seed get 50 bushels to the acre, with corresponding increase of pork yield. With 400 pounds of pork per acre, the cost of production is about 38 cents per 100 pounds of pork, live weight. The price of the pea land has been from $30 to $50 per acre. Corn land in Iowa and Illinois, used for hog-raising, sells at $150 per acre.

(4) Fallen and undersized fruit in the orchard districts, particularly on the Western Slope. The hog business, auxiliary to orchards, is valuable, maintaining fertility of soil and utilizing otherwise waste products, supplemented, of course, with grain. The orchard districts can profitably produce large quantities of hogs.

In addition to the above, in the dairy districts there are vast quantities of buttermilk and skim milk obtainable at minimum prices.

The favorite breeds are Berksires, Jersey Reds, Poland Chinas, Tamworths, etc.

A serum, manufactured in Colorado, now in local general use as an antidote to or preventive of hog cholera, reduces the mortality to a minimum, removing the one serious objection to the hog industry.
DENVER UNION STOCK YARDS

Each succeeding year demonstrates that Denver is the great Western live-stock market.

The Denver Union Stock Yards, established in 1886, have ever since had an annually increasing business, in 1912 handling 378,408 cattle, 37,409 calves, 221,718 hogs, 776,760 sheep, 14,918 horses and mules; aggregating 18,400 cars.

The raisers of live stock in Colorado and the adjoining States market their young and lean stock in Denver, while the live-stock men of Colorado who make a specialty of feeding for the market, market their fat stock in Denver.

The Denver Union Stock Yards have about 100 acres in open pens or under cover.

Adjoining the Yards are a number of slaughtering and packing establishments.

POULTRY

The last U. S. Census Report contains the following items on Colorado poultry (April 15th, 1910), 34,491 farms reporting:

Total number of fowls: 1910, 1,721,445; 1900, 1,017,120.
Number of chickens: 1910, 1,644,471; 1900, 968,761.
Number of turkeys: 1910, 26,430; 1900, 30,781.
Number of ducks: 1910, 12,250; 1900, 15,002.
Number of geese: 1910, 4,455; 1900, 2,576.

Similar information is given as to guinea fowls, pigeons, pea fowls and pheasants.

As a result of enterprising, public-spirited Poultry Associations and their Annual Shows, increasing attention is being given to the poultry industry, and the numbers kept have increased since the last Census Report.
The fact remains that the State is annually importing from other State $4,000,000 worth of poultry products, leaving a large and profitable field for the development, by the right kind of parties, of the industry in Colorado.

**BEES**

The last U. S. Census Report contains the following items on the Colorado bee industry, the number of farms reporting being 3,563, or about seven farms in every 100:

Colonies of bees: 1910, 71,434; 1900, 59,756; increase, 19.5 per cent.

![A Colorado Apiary](image)

Value of bees: 1910, $308,608; 1900, $195,096; increase, 58.2 per cent.

Average value of bees per farm reporting: 1910, $86.61; 1900, $43.18; increase, 100 per cent.

Colorado is a large producer of honey, much of which is shipped to other States.

There is an active and efficient Colorado State Bee-Keepers' Association, and the State provides efficient Bee Inspection.

**FARM LABOR COST**

The Crop Report, March, 1913, of the U. S. Department of Agriculture states that in Colorado the average cost of farm labor, per month, with board, is $28.90, as compared with an average of $20.81 for the United States and an average for the Western States of $32.96.

The Report shows that the crops of the West can afford and do pay higher farm wages than any other section of the United States, and so offer a better opportunity for sturdy young immigrants to get a start in the world.
A COLORADO EXAMPLE OF SCIENTIFIC FARMING

It is gratifying to show what is being done by brains and money—particularly brains—in Colorado farming; viz.: A farm that nets considerably over $50 per acre per annum (after charging interest on capital); the average crop yields, by entire fields, being: wheat, 56 bushels per acre, weighing 62 pounds per bushel (standard, 60 pounds); oats, 107 bushels per acre, weighing 46 pounds per bushel (standard, 32 pounds); barley, 85 bushels per acre, weighing 60 pounds per bushel; potatoes, 500 bushels per acre; as against the following averages: Germany, 200; United Kingdom, 200; Colorado, 130; United States, 91.

In 1906 the Sweet Brothers acquired, at low cost, 2,500 acres of land, mostly sagebrush, near Carbondale, Garfield County, Colorado. Of this, over 1,000 acres have been for several years under irrigation and cultivation. They built an irrigation system and numerous up-to-date buildings.

It is now the model farm of Colorado for productiveness and profit per acre, five contributing causes being: (1) deep, thorough tillage; (2) proper rotation of crops; (3) humus or organic matter added to the soil; (4) carefully selected good seed; (5) business management.

The six-year rotation of crops (after thorough preparation of soil) is as follows:
First Year: Drilling grain (say, heavy Scotch oats weighing from 44 to 50 pounds per bushel) N. and S., 3 inches deep, 80 pounds per acre; immediately afterwards drilling, E. and W., one inch deep, 12 pounds of alfalfa seed and 5 pounds of timothy seed per acre. The mixed crop is cut about August 1st; then irrigating the alfalfa, the subsequent growth being left to protect the crowns through the winter.

Second Year: Three cuttings of alfalfa, aggregating 4 tons per acre.

Third Year: Three cuttings of alfalfa, aggregating 4 tons per acre.

Fourth Year: Two cuttings of alfalfa; plowing the third growth under, 4½ inches deep, containing more organic matter for the soil than 20 tons of farm manure.

Fifth Year: Plowed 10 inches deep, thoroughly prepared and planted with potatoes.

Sixth Year: Potatoes.

Seventh Year: The same as the first year.

In this way, each year one-half of the farm is in alfalfa, one-third in potatoes and one-sixth in mixed grain, alfalfa and timothy.

Live stock is kept, averaging in number 60 horses, 750 fattening cattle and nearly 300 hogs. All "roughage" produced on the farm is fed to the live stock, and every pound of farm manure put into the land.

The potatoes from this farm, on account of high quality, are sold to leading hotels and the railroad dining-car services in a number of States, and also at high prices for seed. The wheat, oats, etc., also on account of high quality, from this farm, find ready sale at high prices, especially for seed.

What is being done on this farm can be done on other and smaller Colorado farms by using the same methods.

More Farmers and Better Farming Methods Needed—

While Colorado, as before shown, excels other American States in the yield per acre of the seven ordinary farm crops (except corn), better forming methods (such as those on the Sweet farm hereinbefore stated) should enable the deep, practically virgin soils of Colorado to yield as well as the soils of Europe, farmed for centuries and kept fertile by thorough cultivation, rotation of crops and frequent fertilizing.

Action by the Denver Chamber of Commerce—

The Denver Chamber of Commerce, recognizing that the best way to build up Denver is to "Build Colorado First," has inaugurated and is conducting a "Greater Colorado" movement (of which Mr. E. J. Yetter, President of the Chamber, is President), among the objects of which are: (1) to attract more farmers to Colorado, and (2) to promote better farming methods by
those already here, including (a) greater productiveness; (b) maximum utilization of all products and corresponding avoidance of waste; (c) increased storage, canning, etc., facilities; (d) better marketing methods in the interest of both producer and consumer.

County Agricultural Experts—

Some of the Counties are already employing Agricultural Experts (in co-operation with the Office of Farm Management, U. S. Department of Agriculture and the State Agricultural College) to instruct the farmers of such Counties in the latest, practical farming methods. Other Counties are about to do so.

Action by the State Bankers' Association—

The Colorado State Bankers' Association has appointed Mr. George T. Wells, of the Denver National Bank, representative of the Association in the "Greater Colorado" movement of the Denver Chamber of Commerce, on account of his personal familiarity with Colorado agricultural conditions.

The Bankers throughout the State will use their local influence in the employment by Counties of Agricultural Experts, encouraging farmers to the extent of extending credit commensurate with the degree of efficiency manifested by the farmer.

Fertilizers

The 1910 U. S. Census Report shows that only one out of every 100 Colorado farmers reported that he purchased fertilizers. The total amount reported as paid for fertilizers showed an increase of 163.1 per cent since 1899, the average per farm reporting being $109.13.

The Report does not specifically define the "fertilizer" referred to, whether manufactured commercial fertilizer or otherwise.

The use of ordinary farm-yard manure, where obtainable, is general; also the plowing under of clover, field peas, etc.; but the use of "fertilizer" is open to material increase.
Horticulture

According to the 1910 U. S. Census, there were 2,947,920 trees and vines of bearing age in the orchards of Colorado, and 3,151,784 trees and vines not then of bearing age, meaning the doubling of the fruit crop so soon as they reach full bearing.

The annual value of the Colorado fruit crop varies with the seasons (depending on yields and prices), usually aggregating from $5,000,000 to $7,000,000.

Conditions in 1912 demonstrated the need for better marketing methods and local facilities for preserving or otherwise utilizing fruit.

All the farming Counties grow more or less fruit, but the leading fruit-growing counties are: Boulder, Delta, Denver, Fremont, Garfield, Larimer, Mesa, Montezuma, Montrose, Morgan, Otero, Prowers, Pueblo, Weld.

The following particulars from four of the Counties—Boulder and Fremont in Eastern Colorado, and Delta and Montrose in Western Colorado—are instructive.

The Annual Report of the Colorado State Board of Horticulture for 1911 (that for 1912 not yet being published) contains the following information as to acreage, yields, prices, etc., in 1911, in such four Counties:
BOULDER COUNTY—

Fruit-bearing orchards, 1,500 acres; not yet bearing, 700 acres; 250 cars of fruit produced, of which 220 were apples. Average price of apples per box, fancies, f.o.b. cars, $1; choice, 85 cents. Average yield of apples, 350 boxes per acre. Cherries, five cars, $2.10 per crate. Plums, $1 per crate. Small fruits, 10,000 crates; strawberries, $2.50 per crate; raspberries, $2.10; blackberries, $2.40.

DELTA COUNTY—

Fruit-bearing orchards, 14,000 acres; not yet bearing, 20,000 acres; 2,800 cars of fruit produced; viz., apples, 1,320; peaches, 1,450; cherries, 10; other fruits (not small fruits), 15; small fruits, five.
FREMONT COUNTY—

Fruit-bearing orchards, 3,500 acres; not yet bearing, 5,000 acres; 1,300 cars of fruit produced, of which 1,100 were apples. Average price of apples per box (50 pounds), fancy, Ben Davis, 85 cents; other better varieties, $1.20; choice, 60 to 85 cents. Average yield of apples, 450 boxes per acre. Average price of peaches per box, $1. Cherries, 50 cars produced; average price per crate, $1.90. Average price of pears per box, $1.50. Plums per crate, 60 cents. Small fruits, 50,000 crates produced; average prices per crate, strawberries, $2.65; raspberries, $1.50; blackberries, $1.75.

MONTROSE COUNTY—

Fruit-bearing orchards, 3,665 acres; not yet bearing, 2,690 acres; 600 cars of fruit produced, of which 555 were apples. Average price of apples, from $1.25 to $1.60 per box fancy and 90 cents for choice. Average yield of apples, 480 boxes per acre. Peaches, 32 cars, fetching from 70 cents to 80 cents per crate. Cherries, six cents per pound; pears, $1.60 per box. Per crate, plums, 75 cents; strawberries, $2.40; raspberries, $4; blackberries, $4.

Typical Orchard in Western Colorado

Courtesy of Colorado Midland Railway
Manufactures

The natural and inevitable tendency is for factories to follow population Westward, especially in the cases where the raw materials exist in the West and, by means of cheap fuel, can be economically manufactured for the supply of the ever-growing Western market.

The extent of the manufacturing industries in Colorado is not usually realized, and general statements on the subject are often received with doubt. Particulars for 1912 are not obtainable by

anything less than an Official Census, and the last U. S. Census on the subject was in 1909. Since 1909 there has been an increase proportionate to that from 1904 to 1909.

Wonderful Growth in Five Years—

The 1910 U. S. Census Bulletin gives the following particulars as to the progress of Colorado manufacturing industries in the period 1904-1909:

Number of establishments: 1904, 1,606; 1909, 2,034.
Proprietors and firm members: 1904, 1,398; 1909, 1,722.
Salaried employees: 1904, 2,677; 1909, 4,326.
Wage-earners (average number): 1904, 21,813; 1909, 28,067.
Primary horse-power: 1904, 124,907; 1909, 154,615.
Capital: 1904, $107,664,000; 1909, $162,668,000.
Salaries: 1904, $3,549,000; 1909, $5,648,000.
Wages: 1904, $15,100,000; 1909, $19,912,000.
Cost of materials: 1904, $63,114,000; 1909, $80,491,000.
Value of products: 1904, $100,144,000; 1909, $130,044,000.
Value added by manufacturing: 1904, $37,030,000; 1909, $49,553,000.

Of the 2,034 manufacturing establishments in Colorado in 1909, 766 were in Denver, 94 in Pueblo, 59 in Colorado Springs and 30 in Trinidad.

E and W Ends—Plant of Western Chemical Mfg. Co., Denver

Three Leading Industries—

Three of the leading Colorado manufacturing industries are:

(1) The steel plant at Pueblo of the Colorado Fuel & Iron Company, which (irrespective of its coal and iron mines, coke ovens, lime quarries, etc.) employs an average of 4,000 men in its steel plant alone. During 1912 the plant turned out over 485,000 tons of finished steel products, of the value of over $15,000,000, 90 per cent of which products were sold outside Colorado in the States between the Missouri River and the Pacific. Including its coal
mines, etc., the Company pays $10,000,000 in wages annually, and 40 per cent of the coal mined by the Company is used (mostly in the form of coke) in its steel plant.

(2) The American Smelting & Refining Company (besides large plants in other States) owns and operates large smelting plants in Denver, Durango, Leadville and Pueblo, treating gold, silver, lead and copper-bearing ores; also coal mines and coke ovens, producing the coke used in the smelters. In such concerns the Company has about 4,000 employes (including office force), representing with their families about 20,000 persons. An auxiliary Company—the United States Zinc Company—with plant at Pueblo, furnishes a Colorado market for all zinciferous ores carrying a minimum of about 30 per cent zinc, extracting such zinc and turning the gold, silver, lead and copper-bearing portions of such zinciferous ores over for treatment at the other smelters.

Coors' Brewery, Golden

(3) The beet-sugar factories, 17 in number, at different Colorado points, during the factory season (of about 130 days) treating the 1912 crop, paid $2,325,000 to factory labor alone.

Among the other prominent industries are: breweries, canning factories, cement factories, creameries and cheese factories, flouring and grist mills, foundries and machine shops, railroad shops, slaughtering and packing plants, etc., etc.

SHIPEMENTS TO FOREIGN COUNTRIES—

Colorado specialties, in mining, etc., machinery, have for years past been exported to practically every mining district in the world.
For instance, within the past few years the Colorado Iron Works Company, Denver, has supplied special smelting furnaces to Belgium, Chili, the Dutch East Indies, England, Germany, Greece, Holland, Japan, Mexico, Tasmania, etc.

The Denver Rock Drill & Machinery Company, with factory in Denver, has branch selling establishments in Johannesburg, South Africa; Melbourne, Australia; and St. Petersburg, Russia. During 1912, either from Denver or from one of the above branches, drills, etc., were sold to many foreign countries.

During the past few years, also, Proske Drill Sharpeners, manufactured in Denver, have been shipped to more than 20 foreign countries.

Openings for New Factories—

The railroads are increasingly recognizing Denver and other Colorado points as manufacturing and distributing centers.

Ordinary Colorado-manufactured goods are now increasingly marketed in fifteen other States and in the Republic of Mexico.

Every year sees marked increase in the importance of Colorado factories.

Colorado presents good openings, amongst other things, for canning and cheese factories, glass factories, shoe factories, ware pottery, woolen mill, knitting factory, stocking factory, tannery, etc. Parties of practical experience in the above lines and with sufficient capital, wishing further information, would do well to communicate with the Colorado Manufacturers' Association, Chamber of Commerce Building, Denver.

NOTE.—Switzerland, like Colorado, has no canals or navigable rivers and is remote from the sea coast, yet has built up important manufacturing industries—textile, watch-making, etc.—employing hundreds of thousands of persons.
Mineral Industries

The aggregate value of the annual output of the mineral industries of Colorado—cement, clay, coal, lime, gypsum, metalliferous minerals, petroleum, stone, etc.—approximates $100,000,000.

CEMENT

The manufacture of high-grade Portland cement in Colorado, following the ever-increasing demand, is proportionately on the increase, and there are two large factories in Fremont County; viz., those of the Colorado Portland Cement Company and the United States Portland Cement Company.

Plant of U. S. Portland Cement Co. at Concrete, Colo.

Plant of Denver Sewer Pipe & Clay Co., Denver
CLAY

At various points in Colorado, more particularly along the Eastern base of the Rocky Mountains (at Golden, for instance), are found deposits of clay which, for extent, diversity and quality, are unsurpassed in America.

They are used for the manufacture of ordinary building brick, pressed and ornamental brick in many shades and colors, paving brick, fire brick, assayers' supplies, Roman building tile, roofing tile, flooring tile, pottery, sewer pipe, stone ware, etc.

Some of these products are shipped extensively by the carload to other and even distant States, and fire-clay goods (assayers' supplies, etc.) to foreign countries.

COAL

NOTE.—In Switzerland "little or no coal is mined."

Colorado possesses inexhaustible coal reserves. A conservative estimate shows the actual coal fields to cover more than 18,000 square miles. They lie on both sides of the Rocky Mountains. As a result, fuel in Colorado is comparatively cheap.

The Northeastern field, in Boulder and adjoining Counties, carries an excellent, ordinary and cheap fuel in its non-cooking lignitic coal. The chief towns of this field are Lafayette, Louisville, etc. The El Paso field is also of this character.

The Southeastern field, extending from Canon City to Trinidad, carries a bituminous coal, one-half the area being coking, the remainder domestic. The chief towns of this field are Chandler, Coal Creek, Rockvale, etc., in Fremont County; Pictou, Rouse, Walsenburg, etc., in Huerfano County; Berwind, Coke-dale, Hastings, Primero, etc., in Las Animas County.

The Southwestern field, around Durango, is of much the same character, producing both domestic, bituminous and coking coal.

The Northwestern or Grand River field bears a variety of coal—bituminous, coking, some anthracite—the bulk of it being domestic, non-cooking coal. The chief towns of this field are: Crested Butte, in Gunnison County; Cardiff, Newcastle, etc., in Garfield County.

The Yampa field, in Moffat and Routt Counties in Northwestern Colorado, is 1,200 square miles in area, carrying bituminous and semi-anthracite coal. This field is as yet only opened on its Eastern edge, at the towns of Oak Creek, etc., but will be traversed through its center by the proposed extension Westward from Steamboat Springs of the Denver, Northwestern and Pacific Railway—commonly known as the "Moffat" Road.

Colorado Coal Production in 1912—

The annual coal output of Colorado in 1873 was only 69,977 tons. In 1912 it was over 11,000,000 tons, worth at the mines about $16,500,000.
The Annual Report for 1912 of the State Inspector of Coal Mines shows the ten leading coal-producing Counties and their respective tonnages (in round figures) were: (1) Las Animas, 4,770,000; (2) Huerfano, 1,889,000; (3) Boulder, 1,053,000; (4) Fremont, 733,000; (5) Gunnison, 559,000; (6) Weld, 489,000; (7) Routt, 441,000; (8) El Paso, 341,000; (9) Garfield, 178,000; (10) La Plata, 121,000.

A large percentage of the coal produced is shipped to other States.

Coal Miners' Earnings—

Taking seven mines in the Southeastern field, the average earnings of the men working 20 days or more during January, 1913, were $3.93 per day.

A large majority of the men, who worked 25 days or more, earned considerably more than $100 for the month.

Of six men, for the year 1912, four, working the entire year, each earned over $1,800, or an average of about $152 per month; the fifth man worked nine months, earning $1,359.13, an average of $151.01 per month; and the sixth man worked three months, earning $474.42, an average of $158.14 per month.

Metalliferous Mining

NOTE.—In Switzerland "few metallic deposits are found; those which exist cannot be worked."

Metalliferous mining has ever been, and will continue to be, one of the leading industries of Colorado. The gold in Cherry Creek and other streams brought the first appreciable immigration of white men to Colorado in 1859.
Past Production—

Official statistics of the Colorado State Bureau of Mines show that Colorado produced from 1859 to December 31st, 1912, at the current market prices for the metals over one billion one hundred and eighty-seven million five hundred and forty-three thousand ($1,187,543,000) dollars, of which the following are the leading items:

- Gold ........................................... $525,226,307
- Silver ........................................... 433,486,844
- Lead ............................................ 151,373,353
- Zinc (since 1901) ................................ 47,308,420
- Copper ........................................... 29,755,733

Other items being tungsten, uranium, vanadium, etc.

Future Production—

The past production was mostly from high-grade and medium-grade ores, as there were formerly no known methods of profitably extracting the values from low-grade ores. All that is now changed. Modern metallurgy is now profitably treating ores ranging less than $10 per ton, at many points in the State. For every ton of ore averaging $100 that was ever mined in Colorado, there are probably 500 tons of ore averaging $10 per ton that can now be profitably mined, treated and marketed.

Irrespective of new discoveries of high- and medium-grade ores constantly being made at different places, the low-grade ores of Colorado, now amenable to profitable treatment, indicate that the future metalliferous mineral production of the State will equal its wonderful past production.
Modern Concentrating Mill (Exterior and Interior), in Gilpin County, of Frontenac Cons. Mines Co., Ltd.
Production in 1912—

The 1912 Annual Report of the Colorado State Bureau of Mines states the production for 1912 to have been:

<table>
<thead>
<tr>
<th>Mineral</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold</td>
<td>$18,691,577.26</td>
</tr>
<tr>
<td>Silver</td>
<td>$5,023,960.75</td>
</tr>
<tr>
<td>Lead</td>
<td>$3,280,702.62</td>
</tr>
<tr>
<td>Copper</td>
<td>$1,445,416.44</td>
</tr>
<tr>
<td>Zinc</td>
<td>$8,591,023.73</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$37,033,280.80</strong></td>
</tr>
<tr>
<td>Tungsten (Boulder County)</td>
<td>$525,000.00</td>
</tr>
<tr>
<td>Vanadium (San Miguel County)</td>
<td>$666,500.00</td>
</tr>
<tr>
<td>Uranium and vanadium (Montrose County)</td>
<td>$245,812.50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$38,470,593.30</strong></td>
</tr>
</tbody>
</table>

Colorado School of Mines Experimental Ore-Dressing and Metallurgical Plant, Golden

The following statistics are taken from the Report for 1912 of the Colorado State Bureau of Mines:

**Counties Producing Over $1,000,000 Each**—

1. Lake (Leadville), $11,269,691;
2. Teller (Cripple Creek), $11,055,174;
3. San Miguel (Telluride), $3,852,062;
4. San Juan (Silverton), $1,733,721;
5. Ouray, $1,666,263;
6. Summit, $1,433,150;
7. Gilpin, $1,379,404;
8. Clear Creek, $1,-202,472.

63
FIVE LEADING GOLD-PRODUCING COUNTIES—
(1) Teller (Cripple Creek), $11,012,084; (2) San Miguel (Telluride), $2,400,050; (3) Lake (Leadville), $1,132,507; (4) Ouray, $1,096,697; (5) Gilpin, $874,395.

FIVE LEADING SILVER-PRODUCING COUNTIES—
(1) Lake (Leadville), $1,812,572; (2) San Miguel (Telluride), $717,038; (3) Mineral (Creede), $435,655; (4) Ouray, $344,429; (5) Pitkin (Aspen), $321,838.

FIVE LEADING LEAD-PRODUCING COUNTIES—
(1) Lake (Leadville), $1,105,979; (2) San Juan (Silverton), $398,124; (3) Pitkin (Aspen), $375,154; (4) San Miguel (Telluride), $339,270; (5) Clear Creek, $216,701.

FIVE LEADING COPPER-PRODUCING COUNTIES—
(1) Lake (Leadville), $461,271; (2) Gilpin, $232,276; (3) San Juan (Silverton), $215,211; (4) San Miguel (Telluride), $143,841; (5) Dolores (Rico), $110,769.

Five Leading Gold Dredge, Summit County

FIVE LEADING ZINC-PRODUCING COUNTIES—
(1) Lake (Leadville), $6,757,360; (2) Summit, $749,869; (3) Eagle, $362,905; (4) San Miguel (Telluride), $251,860; (5) Clear Creek, $106,333.

EVOLUTION OF MINING AND ORE TREATMENT—
The history of mining and ore treatment in Colorado, more particularly in recent years, is a remarkable instance of evolution in all lines.

Colorado, as compared with formerly, now possesses great advantages in all the important factors of successful and profitable mining, briefly stated as follows:
(1) Railroads running to practically every mining district, with general reduction of railroad freight rates of from 25 to 50 per cent, as compared with formerly.

(2) Improved wagon roads connecting mines with railroads.

(3) Improvements in smelting methods, resulting in reduced charges, higher saving of values, and rendering profitable ore too low grade to be formerly available.

(4) Improvements in stamp-amalgamation and concentration, attended by the same results as the improved smelting methods.

(5) The introduction and remarkable evolution of the cyanide process of ore treatment.

(6) The evolution since 1901 in the separation of the zinc contents in mixed ores.

(7) The utilization of the mountain streams in some cases, and of cheap fuel in others, for the generation and transmission of electricity, and its utilization for power and lighting purposes at mines and mills, at great saving in cost as compared with steam power.

(8) The utilization of compressed air and electric power for the operation of machine drills, and the great improvement in the drills themselves.

(9) The utilization of the diamond drill for prospecting purposes.

(10) The improvements in hoisting plants, mine pumps, etc.

(11) Proximity to Denver, the great mining machinery center.

(12) Local high-class talent, covering the entire field of geology, mineralogy, metallurgy, mining, mechanical, hydraulic and electrical engineering, etc.

All the above progress and improvements have reduced cost of production and rendered profitable ore too low-grade to be formerly available.
PETROLEUM

The 1912 Report of the Colorado Bureau of Mines states that on December 31st, 1912, there were 56 producing wells around Florence, Fremont County, and 20 producing wells near Boulder, Boulder County; the output for 1912 aggregating over 200,000 barrels, and the value of the refined products for 1912 being over $375,000.

STONE

For extent, diversity and quality of stone, the quarries of Colorado are unsurpassed.

The white, pink and gray lava stones of Douglas County have been extensively used for building purposes.

The white, gray, brown and red sandstones of many shades, found in Boulder, Eagle, El Paso, Gunnison, Larimer, Las Animas, Pueblo and other Counties, some of them especially suitable for paving and others for building, have an extensive local consumption and have been shipped by the train load to other States.

In Clear Creek, Chaffee, Fremont, Gunnison, Jefferson, Larimer and other Counties, Colorado has granite (blue, gray, pink, purple, mottled, etc.) sufficient to build a dozen cities, and they are in increasing request for public buildings and monumental work, both in Colorado and in the States in the valleys of the Mississippi and Missouri.

New U. S. Federal and Post Office Building, Denver
Built of Colorado-Yule White Marble

MARBLE

In Gunnison County the Colorado-Yule Marble Company has vast deposits of very superior white marble, from which the fol-
lowing have been built (the figures given being the amounts of the marble contracts, not the whole cost of the buildings): New U. S. Post Office, Denver, $533,000; Court House, Cleveland, O., $500,000; Municipal Building, New York City, $300,000; Court House, Youngstown, O., $300,000; Colorado State Museum, Denver, $118,000; County Court House, Omaha, Neb., $111,000. Other smaller contracts have been executed for buildings in Arkansas, Arizona, California, Illinois, Kansas, Louisiana, Missouri, Minnesota, Oklahoma, Texas, etc.

Education

Colorado has a very efficient system of public schools, the 1912 Annual Report of the State Superintendent of Public Instruction showing:

High Schools, 64; School Buildings, 2,678; School Rooms, 5,622; valuation of school buildings, $14,281,916; School Libraries, 1,059; books, 306,228.

Teachers: Graded schools (male, 604; female, 3,079), 3,683; average monthly salary: males, $102.45; female, $69.01; Rural Schools (male, 298; female, 1,744), 2,042; average monthly salary: males, $61.53; females, $56.19.

Pupils—enrollment: High Schools, 16,377; Graded Schools, 112,582; Rural Schools, 48,469; (male, 89,932; female, 87,496;) total, 177,428; average daily attendance, 120,326.

State Educational Institutions—

The State University, Boulder; the Colorado School of Mines, Golden; the State Agricultural College, Fort Collins; the State Normal School, Greeley; the State School for the Deaf and the Blind, Colorado Springs.

Electricity

Quite a number of the cities and towns of Colorado have electric lighting and electric street-car systems, and an era of electric interurban street-car lines has been entered upon.

A Report by the U. S. Geological Survey states that the streams of Colorado represent a minimum capacity of 828,400 H.P., and that there is no reason why at least 1,000,000 continuous H.P. should not be developed.
As compared with this, the present actual water power developed in Colorado amounts to not over 70,000 H.P., represented by 53 hydro-electric plants.

In addition, there are nine plants using fuel to generate electricity, with an aggregate of 64,000 H.P.

In Colorado there are 4,000 industrial concerns (including coal and metal mines) using electric power.

Coal mines use 13,500 H.P., and metal mines 28,000 H.P.

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Colorado Railroads

There are already over 5,000 miles of railroads within the boundaries of Colorado.

The 1912 Report of the Colorado Tax Commission states that the mileage of the principal railroads (including main lines, branches and side tracks, but irrespective of the mileage operated over other lines) in Colorado, on December 31st, 1911, was as follows:

Denver & Rio Grande Ry. (Standard, 1,391.19; Narrow, 659.60) ... 2,050.79
Colorado & Southern Ry. (Standard, 826.73; Narrow, 445.15) ... 1,271.88
Union Pacific Ry. (Standard) ........................................ 805.69
Atchison, Topeka & Santa Fe Ry. (Standard) ................... 785.68
Chicago, Burlington & Quincy Ry. (Standard) ................. 664.10
Colorado Midland Ry. (Standard) ................................. 337.53
Denver, Northwestern & Pacific Ry. (Standard) ............. 255.00
Rio Grande Southern Ry. (Narrow) .............................. 205.99
Chicago, Rock Island & Pacific Ry. (Standard) .............. 187.45
Missouri Pacific Ry. (Standard) .................................. 184.90

Among the shorter Colorado railroads are: Colorado Springs & Cripple Creek District Ry.; Denver, Boulder & Western Ry.; Denver, Laramie & Northwestern Ry.; Florence & Cripple Creek Ry.; Great Western Ry.; Midland Terminal Ry.; Silverton Ry.; Uintah Ry.; etc.

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Population

The growth of population in Colorado, as shown by U. S. Census Reports, has been as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1860</td>
<td>34,277</td>
</tr>
<tr>
<td>1870</td>
<td>39,864</td>
</tr>
<tr>
<td>1880</td>
<td>194,327</td>
</tr>
<tr>
<td>1890</td>
<td>412,198</td>
</tr>
<tr>
<td>1900</td>
<td>539,700</td>
</tr>
<tr>
<td>1910</td>
<td>799,024</td>
</tr>
</tbody>
</table>
CHARACTER OF POPULATION—

According to the U. S. Census Report for 1910, the total Colorado population was divided as follows:

- Native-born .................................. 656,564
- Foreign-born .................................. 126,851
- Whites ........................................... 773,415
- Negroes ......................................... 11,453
- Japanese ........................................ 2,300
- Indians ......................................... 1,482
- Chinese ......................................... 373
- Hindoo ......................................... 1

A greater percentage of the population of Colorado (viz., 82.2 per cent) was American-born and a less percentage (viz., 15.9 per cent) foreign-born than was the case in many of the Eastern States.

So, also, Colorado had a less percentage of negroes (viz., 1.4 per cent) than other States, irrespective of the Southern States, and a less percentage of Orientals than any of the Pacific States.

As to Indians, Colorado has fewer than the State of New York.

NATIONALITY OF POPULATION—

Of the 1910 population, 475,136, or 59.5 per cent, were native whites of native parentage, and 181,428, or 22.7 per cent, were native whites of foreign or mixed parentage.

Of the American-born population, 233,516, or 34.9 per cent, were born in Colorado and 65.1 per cent outside the State, the following ten States taking the lead:

- Missouri .................................... 50,729
- Illinois ...................................... 49,964
- Iowa .......................................... 44,276
- Kansas ........................................ 37,356
- Ohio .......................................... 30,573
- Nebraska ..................................... 24,643
- New York ..................................... 22,802
- Pennsylvania ................................ 23,596
- Indiana ....................................... 21,219
- Wisconsin .................................... 12,085

FOREIGN-BORN POPULATION—

Of the 1910 foreign-born population the following countries were the leading contributors:

- Great Britain—
  - England .................................... 12,926
  - Scotland .................................... 4,269
  - Wales ........................................ 1,989
  - Total ........................................ 19,184

- Germany ..................................... 17,071
- Italy .......................................... 14,375
- Russia ........................................ 13,816
- Austria ....................................... 13,042
- Sweden ........................................ 12,446
- Canada (other than French) .................. 8,744
- Ireland ....................................... 8,710
- Denmark ....................................... 2,755
- Mexico ......................................... 2,543
- Greece ......................................... 2,270
- Norway ........................................ 1,787
- Switzerland ................................... 1,767
- Hungary ....................................... 1,632
- France ................................-------- 1,373
- Finland ....................................... 1,239

And the rest from other countries.
Denver—"The Portal of the West"

Denver stands unrivalled in either hemisphere for its combination of advantages, as: (1) a place of residence; (2) a favorable point for investment; (3) a place of unusually rapid but solid growth; (4) an increasing manufacturing center; (5) a cosmopolitan, energetic and enterprising community; (6) its past history, present position and future prospects undoubtedly destine it to be one of the leading great cities of the United States.

Welcome Arch—Opposite Union Depot

A City of Rapid Growth—

Population: 1870, 4,731; 1880, 35,628; 1890, 106,713; 1900, 133,859; 1910, 213,381. With the development and settling up of its tributary country, now progressing rapidly, Denver will soon have a population of 500,000.

Hon. William Orton, long President of the Western Union Telegraph Company and a member of the Governing Committee of the New York Stock Exchange, visited Denver years ago on official business and inspected every point in Colorado then
Central Telephone Operating Room, Denver. Colorado Has Over 85,000 Telephones, of Which Over 35,700 Are in Denver

Courtesy of Mountain States Telephone & Telegraph Co.
accessible by railroad car, travelling only by day. On his return to New York he delivered an address, in which he gave it as his opinion that “The four great cities of this continent are to be New York, Chicago, Denver and San Francisco.”

**Benefits as Geographical Center**

The country tributary to Denver (and within which Denver has no possible rival for 600 miles in any direction) extends far beyond the State of Colorado and practically embraces the whole of the territory West of the Missouri River, with an area considerably greater than the whole of the German Empire. In this vast region every new mine worked, every fresh acre cultivated, every new orchard planted, every new quarry opened, all increases in live stock and every manufacturing enterprise started, react beneficially on and send new life-blood to the heart—Denver.

**A Railroad Center**

In ancient times all roads led to Rome. In Western America all railroads lead to Denver. Colorado has over 5,000 miles of railroad, all radiating from Denver. A number of interstate trunk lines run regular daily trains into Denver. Such trunk lines and their connections aggregate over 30,000 miles of railroad radiating from Denver to the Atlantic and Pacific ports, the Great Lakes and the Gulf.

**A Manufacturing Center**

The 1910 U. S. Census Report states that in 1909 there were 766 manufacturing establishments in Denver, with 15,037 persons engaged therein, since which time there has been proportionate increase. Denver-manufactured goods are increasingly shipped
Gas & Electric Building, Denver, at Night

Courtesy of Denver Gas & Electric Co.
throughout the United States and to foreign countries, and Den-
ver is bound, with the increase of population in its tributary
country, to increase in importance as a manufacturing center.

A FINANCIAL AND COMMERCIAL CENTER—
Denver is by far the leading banking center between the
Missouri River and the Pacific Ocean (Denver Bank Clearings
in 1912, $491,088,954) and the Western headquarters of all the
great insurance, mortgage, investment, irrigation companies, etc.,
doing business in Colorado and surrounding States, and of the
great majority of the mining companies operating in Colorado.

Denver also does a large wholesale or "jobbing" business
($42,000,000 in 1912) with the tributary country, and has a com-
paratively large number of exceptionally fine retail stores.

AN EDUCATIONAL CENTER—

Denver is noted for the excellence of its public school system,
public school buildings, and library system and buildings. The
local private educational establishments comprise: Denver Uni-
versity (Methodist); Loretto Heights Academy and St. Mary's
Academy (both Catholic) for girls; Sacred Heart College (Jesuit)
for boys; Westminster University (Presbyterian); Wolfe Hall
(Episcopalian) for young ladies; Woman's College (Baptist);
etc., etc.

A SOCIAL CENTER—

Denver is deservedly celebrated for its social life, clubs and
places of amusement. Clubs: Country Club, Denver Club, Denver
Athletic Club, Progress Club, Woman's Club, University Club,
etc., etc. Theaters: Broadway, Tabor, Orpheum, etc., etc.

A TOURIST CENTER—

Denver as a geographical and railroad center is also a Tourist
center, and has many local scenic attractions. (See "List of
Railroad Trips" elsewhere in this book.)

UP-TO-DATE PUBLIC UTILITIES—

Denver has up-to-date public utility enterprises, viz., (1)
abundant supply of pure water from the mountains; (2) very
ample electric street car system; (3) equally ample electric
lighting and fuel gas systems; (4) up-to-date telephone system
connected with all parts of Colorado and adjoining States.

A Denver Mercantile House

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Cities and Towns of Colorado
(Statistics of Population from U. S. Census Reports.)

IN THE SOUTH PLATTE VALLEY

This valley comprises the Counties of Adams, Arapahoe, Boulder, Denver, Douglas, Jefferson, Logan, Morgan, Sedgwick and Weld. It has a larger relative area of irrigated and cultivated land than any other section of the State. It is capable of

![Pearl Street, Boulder, Colo.](image)

Courtesy of Colorado & Southern Railway

well maintaining many times its present population and presents exceptional opportunities for home-seekers. The following are the places having over 5,000 population:

**Boulder** (County seat of Boulder County): Population 1890, 3,330; 1900, 6,150; 1910, 9,539; altitude 5,335 feet; 30 miles N.W. of Denver on U. P. and C. & S. railways; connected with Denver by electric trolley line. Beautiful residential city, surrounded by farming, fruit-growing and mining (coal, metalliferous and oil) country. The Colorado State University is located here.

**Denver.** (See notice elsewhere in this book.)

**Fort Collins** (County seat of Larimer County): Pop. 1890, 2,011; 1900, 3,053; 1910, 8,210; alt. 4,984 feet; 74 miles N. of
Denver on C. & S. Ry. The State Agricultural College is located here, also beet-sugar factory, etc. Growing agricultural center.

**Greeley** (County seat of Weld County): Pop. 1890, 2,395; 1900, 3,023; 1910, 8,179; alt. 4,652 feet; 52 miles N. of Denver on U. P. and C. & S. railways. The State Normal School is located here. Has beet-sugar factory, etc. Growing agricultural center.

Other places are:

<table>
<thead>
<tr>
<th>Place</th>
<th>County</th>
<th>1910</th>
<th>1900</th>
<th>1890</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arvada</td>
<td>Jefferson</td>
<td>840</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ault</td>
<td>Weld</td>
<td>569</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aurora</td>
<td>Adams-Arapahoe</td>
<td>679</td>
<td>202</td>
<td></td>
</tr>
<tr>
<td>Berthoud</td>
<td>Larimer</td>
<td>758</td>
<td>305</td>
<td>228</td>
</tr>
<tr>
<td>Brighton</td>
<td>Adams</td>
<td>850</td>
<td>366</td>
<td>306</td>
</tr>
<tr>
<td>Place</td>
<td>County</td>
<td>Population</td>
<td>Wheat</td>
<td>Hay</td>
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<td>------------</td>
<td>-------</td>
<td>-----</td>
</tr>
<tr>
<td>Brush</td>
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<td>Fort Lupton</td>
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<td>Littleton</td>
<td>Arapahoe</td>
<td>1,373</td>
<td>738</td>
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<tr>
<td>Longmont</td>
<td>Boulder</td>
<td>4,526</td>
<td>2,201</td>
<td>1,543</td>
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<tr>
<td>Louisville</td>
<td>Boulder</td>
<td>1,706</td>
<td>966</td>
<td>596</td>
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<tr>
<td>Loveland</td>
<td>Larimer</td>
<td>3,651</td>
<td>1,091</td>
<td>698</td>
</tr>
<tr>
<td>Lyons</td>
<td>Boulder</td>
<td>632</td>
<td>547</td>
<td>574</td>
</tr>
<tr>
<td>Platteville</td>
<td>Weld</td>
<td>430</td>
<td>263</td>
<td>213</td>
</tr>
<tr>
<td>Sterling</td>
<td>Logan</td>
<td>3,044</td>
<td>998</td>
<td></td>
</tr>
<tr>
<td>Wellington</td>
<td>Larimer</td>
<td>459</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windsor</td>
<td>Weld</td>
<td>935</td>
<td>305</td>
<td>173</td>
</tr>
</tbody>
</table>

The Famous Skyline Drive, Canon City, Colo.

Courtesy of Denver & Rio Grande Railway

IN THE ARKANSAS VALLEY

This valley comprises the Counties of Baca, Bent, Chaffee, Crowley, Custer, El Paso, Fremont, Otero, Prowers and Pueblo. It is second only in importance to the South Platte Valley in
the area of irrigated and cultivated land. It, also, is capable of well maintaining many times its present population and presents exceptional opportunities for home-seekers. The following are the places having over 5,000 population:

**Canon City** (County seat of Fremont County) : Pop. 1890, 2,825; 1900, 3,775; 1910, 5,162; alt. 5,332 feet; 160 miles from Denver on the A. T. & S. F. and D. & R. G. railways; mineral springs, fruit-growing, manufacturing, scenic attractions, etc.

**Colorado Springs** (County seat of El Paso County) : Pop. 1880, 4,226; 1890, 11,140; 1900, 21,085; 1910, 29,078; alt. 5,878 feet; 74 miles from Denver on A. T. & S. F., C. R. I. & P., C. & S., C. S. & C. C., Colo. Mid. and D. & R. G. railways. Noted for its climatic and scenic attractions. Charming residential city and leading tourist resort in the State. The Colorado College, one of the leading educational institutions of the West, is located here.

**Pueblo** (County seat of Pueblo County) : Pop. 1880, 3,217; 1890, 24,558; 1900, 28,157; 1910, 44,395; alt. 4,668 feet; 119 miles from Denver on A. T. & S. F., C. & S., D. & R. G. and Mo. Pac. railways. Second city in the State. Manufacturing and smelting center; surrounding country—farming, fruit-growing, etc.
Street Scene in Pueblo, Colo.
Courtesy of Denver & Rio Grande Railway

Other places are:

<table>
<thead>
<tr>
<th>Place</th>
<th>County</th>
<th>1910</th>
<th>1900</th>
<th>1890</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buena Vista</td>
<td>Chaffee</td>
<td>1,041</td>
<td>1,006</td>
<td>.....</td>
</tr>
<tr>
<td>Coal Creek</td>
<td>Fremont</td>
<td>676</td>
<td>698</td>
<td>.....</td>
</tr>
<tr>
<td>Colorado City</td>
<td>El Paso</td>
<td>4,333</td>
<td>2,914</td>
<td>1,788</td>
</tr>
<tr>
<td>Florence</td>
<td>Fremont</td>
<td>2,712</td>
<td>3,728</td>
<td>.....</td>
</tr>
<tr>
<td>Fountain</td>
<td>El Paso</td>
<td>431</td>
<td>.....</td>
<td>.....</td>
</tr>
<tr>
<td>Fowler</td>
<td>Otero</td>
<td>925</td>
<td>.....</td>
<td>.....</td>
</tr>
<tr>
<td>Granada</td>
<td>Prowers</td>
<td>359</td>
<td>204</td>
<td>163</td>
</tr>
<tr>
<td>Holly</td>
<td>Prowers</td>
<td>724</td>
<td>364</td>
<td>.....</td>
</tr>
<tr>
<td>La Junta</td>
<td>Otero</td>
<td>4,154</td>
<td>2,513</td>
<td>1,439</td>
</tr>
<tr>
<td>Lamar</td>
<td>Prowers</td>
<td>2,977</td>
<td>987</td>
<td>566</td>
</tr>
<tr>
<td>Las Animas</td>
<td>Bent</td>
<td>2,088</td>
<td>1,192</td>
<td>611</td>
</tr>
<tr>
<td>Manitou</td>
<td>El Paso</td>
<td>1,357</td>
<td>1,303</td>
<td>1,439</td>
</tr>
<tr>
<td>Manzanola</td>
<td>Otero</td>
<td>428</td>
<td>.....</td>
<td>.....</td>
</tr>
<tr>
<td>Ordway</td>
<td>Crowley</td>
<td>705</td>
<td>138</td>
<td>.....</td>
</tr>
<tr>
<td>Rockvale</td>
<td>Fremont</td>
<td>1,413</td>
<td>870</td>
<td>.....</td>
</tr>
<tr>
<td>Salida</td>
<td>Chaffee</td>
<td>4,425</td>
<td>3,722</td>
<td>2,586</td>
</tr>
<tr>
<td>South Canon</td>
<td>Fremont</td>
<td>1,321</td>
<td>958</td>
<td>.....</td>
</tr>
<tr>
<td>Sugar City</td>
<td>Otero</td>
<td>808</td>
<td>689</td>
<td>.....</td>
</tr>
<tr>
<td>Swink</td>
<td>Otero</td>
<td>310</td>
<td>.....</td>
<td>.....</td>
</tr>
<tr>
<td>Williamsburg</td>
<td>Fremont</td>
<td>556</td>
<td>337</td>
<td>.....</td>
</tr>
</tbody>
</table>

(6) 81
IN THE GRAND VALLEY

The valleys of the Grand River and its tributaries comprise the Counties of Delta, Eagle, Garfield, Gunnison, Mesa, Montrose, Ouray and Pitkin. There is a large irrigated area, and fruit growing is a leading industry, with considerable farming, live stock, etc. These valleys present exceptional opportunities for home-seekers. The only town having a population of 5,000 is—

Street Scene in Grand Junction, Colo.

Courtesy of Denver & Rio Grande Railway

Grand Junction (County seat of Mesa County): Pop. 1890, 2,030; 1900, 3,503; 1910, 7,754; alt. 4,573 feet; 424 miles W. of Denver on Col. Mid. and D. & R. G. railways; leading fruit-growing center; has beet-sugar factory, etc.

Other places are:

<table>
<thead>
<tr>
<th>Place</th>
<th>County</th>
<th>1910</th>
<th>1900</th>
<th>1890</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta</td>
<td>Delta</td>
<td>2,388</td>
<td>819</td>
<td>470</td>
</tr>
<tr>
<td>Fruita</td>
<td>Mesa</td>
<td>881</td>
<td>126</td>
<td></td>
</tr>
<tr>
<td>Glenwood Springs</td>
<td>Garfield</td>
<td>2,019</td>
<td>1,350</td>
<td>920</td>
</tr>
<tr>
<td>Gunnison</td>
<td>Gunnison</td>
<td>1,026</td>
<td>1,200</td>
<td>1,105</td>
</tr>
<tr>
<td>Hotchkiss</td>
<td>Delta</td>
<td>600</td>
<td>261</td>
<td></td>
</tr>
<tr>
<td>Marble</td>
<td>Gunnison</td>
<td>782</td>
<td>101</td>
<td></td>
</tr>
<tr>
<td>Montrose</td>
<td>Montrose</td>
<td>3,254</td>
<td>1,217</td>
<td>1,330</td>
</tr>
<tr>
<td>Newcastle</td>
<td>Garfield</td>
<td>493</td>
<td>431</td>
<td>311</td>
</tr>
<tr>
<td>Olathe</td>
<td>Montrose</td>
<td>458</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palisade</td>
<td>Mesa</td>
<td>900</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paonia</td>
<td>Delta</td>
<td>1,007</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ridgway</td>
<td>Ouray</td>
<td>376</td>
<td>245</td>
<td></td>
</tr>
<tr>
<td>Rifle</td>
<td>Garfield</td>
<td>698</td>
<td>273</td>
<td></td>
</tr>
</tbody>
</table>
IN THE SAN LUIS VALLEY

The San Luis Valley comprises the Counties of Alamosa (just created), Conejos, Costilla, Rio Grande and Saguache, and has an average altitude of 7,500 feet. The valley, equal in size to the State of Connecticut, contains over 3,000,000 acres of practically level land, with extensive irrigation systems. It is capable of well maintaining a very much greater population than it now has. The following are the leading places:

<table>
<thead>
<tr>
<th>Place</th>
<th>County</th>
<th>1910</th>
<th>1900</th>
<th>1890</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alamosa</td>
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<td>3,013</td>
<td>1,141</td>
<td>973</td>
</tr>
<tr>
<td>Antonito</td>
<td>Conejos</td>
<td>681</td>
<td>347</td>
<td>315</td>
</tr>
<tr>
<td>Del Norte</td>
<td>Rio Grande</td>
<td>840</td>
<td>705</td>
<td>736</td>
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<tr>
<td>La Jara</td>
<td>Conejos</td>
<td>448</td>
<td>208</td>
<td>.....</td>
</tr>
<tr>
<td>Manassa</td>
<td>Conejos</td>
<td>788</td>
<td>729</td>
<td>642</td>
</tr>
<tr>
<td>Monte Vista</td>
<td>Rio Grande</td>
<td>2,544</td>
<td>556</td>
<td>780</td>
</tr>
<tr>
<td>Saguache</td>
<td>Saguache</td>
<td>620</td>
<td>389</td>
<td>660</td>
</tr>
<tr>
<td>Sanford</td>
<td>Conejos</td>
<td>564</td>
<td>.....</td>
<td>.....</td>
</tr>
</tbody>
</table>

IN SOUTHERN COLORADO

This is an extensive territory, including the valleys of the Las Animas and San Juan in the S. W. and the strip along the Southern side of the State, not containing any important stream. These Counties—Archuleta, Huerfano, Montezuma, La Plata and Las Animas—present good opportunities for home-seekers. The only town having a population of 5,000 is—

**Trinidad** (County seat of Las Animas County): Pop. 1890, 5,523; 1900, 5,345; 1910, 10,204; alt. 5,983 feet; 210 miles S. of Denver on A. T. & S. F., C. & S. and D. & R. G. railways; important railroad point and business center of coal and coke districts of the Southern central portion of the State.
Other places are:

<table>
<thead>
<tr>
<th>Place</th>
<th>County</th>
<th>1910</th>
<th>1900</th>
<th>1890</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aguilar</td>
<td>Las Animas</td>
<td>858</td>
<td>698</td>
<td></td>
</tr>
<tr>
<td>Cortez</td>
<td>Montezuma</td>
<td>565</td>
<td>125</td>
<td>332</td>
</tr>
<tr>
<td>Delagua</td>
<td>Las Animas</td>
<td>968</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dolores</td>
<td>Montezuma</td>
<td>320</td>
<td>108</td>
<td></td>
</tr>
<tr>
<td>Durango</td>
<td>La Plata</td>
<td>4,686</td>
<td>3,317</td>
<td>2,726</td>
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<tr>
<td>Edith</td>
<td>Archuleta</td>
<td>293</td>
<td>282</td>
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</tr>
<tr>
<td>Gray Creek</td>
<td>Las Animas</td>
<td>576</td>
<td></td>
<td></td>
</tr>
<tr>
<td>La Veta</td>
<td>Huertano</td>
<td>651</td>
<td>254</td>
<td>361</td>
</tr>
<tr>
<td>Mancos</td>
<td>Montezuma</td>
<td>567</td>
<td>383</td>
<td></td>
</tr>
<tr>
<td>Pagosa Springs</td>
<td>Archuleta</td>
<td>669</td>
<td>367</td>
<td></td>
</tr>
<tr>
<td>Walsenburg</td>
<td>Huertano</td>
<td>2,423</td>
<td>1,033</td>
<td>928</td>
</tr>
</tbody>
</table>

ON THE PLAINS OF EASTERN COLORADO

This vast area presents opportunities for a large number of settlers, if of the right kind. The principal places are:

<table>
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<th>Place</th>
<th>County</th>
<th>1910</th>
<th>1900</th>
<th>1890</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akron</td>
<td>Washington</td>
<td>647</td>
<td>351</td>
<td>563</td>
</tr>
<tr>
<td>Burlington</td>
<td>Kit Carson</td>
<td>368</td>
<td>183</td>
<td>146</td>
</tr>
<tr>
<td>Cheyenne Wells</td>
<td>Cheyenne</td>
<td>270</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haxtun</td>
<td>Phillips</td>
<td>341</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holyoke</td>
<td>Phillips</td>
<td>659</td>
<td>461</td>
<td>649</td>
</tr>
<tr>
<td>Hugo</td>
<td>Lincoln</td>
<td>343</td>
<td>243</td>
<td></td>
</tr>
<tr>
<td>Limon</td>
<td>Lincoln</td>
<td>534</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wray</td>
<td>Yuma</td>
<td>1,000</td>
<td>271</td>
<td>125</td>
</tr>
<tr>
<td>Yuma</td>
<td>Yuma</td>
<td>333</td>
<td>139</td>
<td>241</td>
</tr>
</tbody>
</table>

IN NORTHWESTERN COLORADO

This district includes Grand, Moffat, Rio Blanco and Routt Counties, and presents exceptional opportunities for many thousands of home-seekers, if of the right kind. The proposed extension of the Denver, Northwestern & Pacific Railway from its present Western terminus at Steamboat Springs, through to Salt Lake City, and the boring of a railroad tunnel through the main range, 50 miles West of Denver, to avoid the present railroad climb over the summit at Corona (alt. 11,660 feet), will give a very great impetus to the peopling of N. W. Colorado. The principal places are:

<table>
<thead>
<tr>
<th>Place</th>
<th>County</th>
<th>1910</th>
<th>1900</th>
<th>1890</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craig</td>
<td>Moffat</td>
<td>392</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hayden</td>
<td>Moffat</td>
<td>314</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kremmling</td>
<td>Grand</td>
<td>141</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meeker</td>
<td>Rio Blanco</td>
<td>807</td>
<td>507</td>
<td>260</td>
</tr>
<tr>
<td>Oak Creek</td>
<td>Routt</td>
<td>220</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steamboat Springs</td>
<td>Routt</td>
<td>1,227</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulphur Springs</td>
<td>Grand</td>
<td>182</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yampa</td>
<td>Routt</td>
<td>332</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

THE NORTH PLATTE VALLEY

This contains a single County—Jackson—the County seat of which is Walden; pop. 1890, 64; 1900, 141; 1910, 162.

MOUNTAIN TOWNS

The only two mountain towns having a population of 5,000 are:
**Cripple Creek** (County seat of Teller County): Pop. 1910, 6,206; alt. 9,591 feet; 125 miles from Denver via shortest railway route. The Cripple Creek district, only a few square miles in extent, has produced over $250,000,000 since 1891, almost entirely gold.

![Harrison Avenue, Leadville, Colo.](image)

Courtesy of Colorado Midland Railway

**Leadville** (County seat of Lake County): Pop. 1910, 7,508; alt. 10,190 feet; 275 miles from Denver on Colo. Mid., C. & S. and D. & R. G. railways. The Leadville district, not many square miles in extent, has produced over $300,000,000 since 1860, in gold, silver, lead, copper and zinc.

Other places are:

<table>
<thead>
<tr>
<th>Town</th>
<th>County</th>
<th>Alt. (Feet)</th>
<th>Pop. 1910</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alma</td>
<td>Park</td>
<td>10,238</td>
<td>301</td>
</tr>
<tr>
<td>Aspen</td>
<td>Pitkin</td>
<td>7,943</td>
<td>1,834</td>
</tr>
<tr>
<td>Breckenridge</td>
<td>Summit</td>
<td>9,534</td>
<td>834</td>
</tr>
<tr>
<td>Central City</td>
<td>Gilpin</td>
<td>8,516</td>
<td>1,782</td>
</tr>
<tr>
<td>Creede</td>
<td>Mineral</td>
<td>8,840</td>
<td>741</td>
</tr>
<tr>
<td>Georgetown</td>
<td>Clear Creek</td>
<td>8,507</td>
<td>950</td>
</tr>
<tr>
<td>Idaho Springs</td>
<td>Clear Creek</td>
<td>7,556</td>
<td>2,154</td>
</tr>
<tr>
<td>Lake City</td>
<td>Hinsdale</td>
<td>8,675</td>
<td>405</td>
</tr>
<tr>
<td>Ouray</td>
<td>Ouray</td>
<td>7,710</td>
<td>1,644</td>
</tr>
<tr>
<td>Red Cliff</td>
<td>Eagle</td>
<td>8,598</td>
<td>383</td>
</tr>
<tr>
<td>Rico</td>
<td>Dolores</td>
<td>8,725</td>
<td>368</td>
</tr>
<tr>
<td>Silver Cliff</td>
<td>Custer</td>
<td>8,000</td>
<td>250</td>
</tr>
<tr>
<td>Silver Plume</td>
<td>Clear Creek</td>
<td>9,189</td>
<td>460</td>
</tr>
<tr>
<td>Silverton</td>
<td>San Juan</td>
<td>9,288</td>
<td>2,153</td>
</tr>
<tr>
<td>Telluride</td>
<td>San Miguel</td>
<td>6,744</td>
<td>1,756</td>
</tr>
<tr>
<td>Victor</td>
<td>Teller</td>
<td>9,728</td>
<td>3,162</td>
</tr>
</tbody>
</table>
Commercial Organizations of Colorado

Akron, Chamber of Commerce; Alamosa, Business Men’s Association, San Luis Valley Commercial Association; Antonito, Chamber of Commerce; Aspen, Commercial Club; Ault, Commercial Club.

Berthoud, Chamber of Commerce; Boulder, Commercial Association; Breckenridge, Chamber of Commerce; Brighton, Commercial Club; Brush, Commercial Club, Chamber of Commerce; Buena Vista, Board of Trade; Burlington, Chamber of Commerce.

Canon City, Business Men’s Association; Central City, Gilpin County Chamber of Commerce; Colorado City, Business Men’s Association, Chamber of Commerce; Colorado Springs, Chamber of Commerce; Cortez, Business Men’s Association; Craig, Commercial Association; Cripple Creek, Chamber of Commerce.

Denver, Chamber of Commerce, Colorado Manufacturers’ Association, Real Estate Exchange, etc.

Del Norte, Commercial Club; Delta, Delta County Business Men’s Association; Durango, Board of Trade.

Eaton, Commercial Club; Elizabeth, Elbert County Chamber of Commerce.

Florence, Chamber of Commerce; Fort Collins, Chamber of Commerce; Fort Lupton, Commercial Club; Fort Morgan, Chamber of Commerce; Fruita, Chamber of Commerce.

Georgetown, Commercial Club; Glenwood Springs, Board of Trade; Grand Junction, Chamber of Commerce, Mesa County Commercial Association; Greeley, Commercial Club; Gunnison, Chamber of Commerce.

Haxtun, Commercial Club; Holyoke, Commercial Club.

Idaho Springs, Commercial Club.

Julesburg, Commercial Club.

Lafayette, Commercial Club; La Junta, Industrial Association; Lamar, Commercial Association; Limon, Chamber of Com-
Leadville, Commercial Club; Longmont, Commercial Association; Louisville, Commercial Association; Loveland, Chamber of Commerce.

Monte Vista, Commercial Association; Montrose, Chamber of Commerce.

Ordway, Chamber of Commerce; Ouray, Commercial Club.
Palisade, Commercial Association; Paonia, Commercial Association; Pueblo, Arkansas Valley Commercial Association, Commerce Club.

Rifle, Chamber of Commerce; Rocky Ford, Chamber of Commerce.

Salida, Commercial Club; Silverton, Chamber of Commerce; Steamboat Springs, Commercial Club; Sterling, Commercial Association; Sugar City, Chamber of Commerce.

Trinidad, Chamber of Commerce.

Victor, Chamber of Commerce.

Walsenburg, Commercial Club; Wellington, Commercial Club; Windsor, Chamber of Commerce; Wray, Chamber of Commerce.

Yampa, Chamber of Commerce.
Colorado for Tourists

AMERICANS SHOULD SEE AMERICA FIRST

Switzerland, "The Playground of Europe," is visited annually by fully 100,000 tourists, many of them Americans who have never been to Colorado. "Americans should See America First."

As the special attractions of Colorado become better known and realized, Colorado will increasingly become "The Playground of America."

Colorado equals Switzerland in scenic attractions, and surpasses it in the number and height of mountain peaks, climatic advantages, and the number, wide range and curative properties of mineral springs.

Mountains Scenery—Number of Peaks

Colorado possesses more than 120 peaks of over 13,500 feet altitude, of which no fewer than 35 peaks range from 14,000 feet upwards. This is about ten times as many as there are in the whole of Europe.

While the Alps in Switzerland have several isolated peaks over 15,000 feet altitude, the mean elevation of the highest Alpine chain is only from 8,000 to 9,000 feet.

Mountains Peaks Visible from Denver—

On account of the clearness of the atmosphere, the following 19 mountain peaks, over 10,000 feet altitude, are plainly visible,
with the naked eye, from the Cheesman Memorial Pavilion (as shown by Chart prepared by Professor Bethel and James Grafton Rogers for the Colorado Mountain Club) commencing in the N.W. and continuing for 130 miles along the W. to the S.:

<table>
<thead>
<tr>
<th>Mountain Peak</th>
<th>Distance (Miles)</th>
<th>Altitude (Feet)</th>
</tr>
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<tbody>
<tr>
<td>Lookout Mountain</td>
<td>62</td>
<td>10,633</td>
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<tr>
<td>Signal Mountain</td>
<td>64</td>
<td>10,700</td>
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<tr>
<td>Hague Peak</td>
<td>67</td>
<td>13,832</td>
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<tr>
<td>Mount Fairchild</td>
<td>66</td>
<td>13,800</td>
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<tr>
<td>Twin Sisters</td>
<td>51</td>
<td>11,423</td>
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<td>Estes Cone</td>
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<td>10,705</td>
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<tr>
<td>Long’s Peak</td>
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<td>14,255</td>
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<tr>
<td>Mt. Audubon</td>
<td>46</td>
<td>13,173</td>
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<tr>
<td>Arapahoe Peak</td>
<td>44</td>
<td>13,520</td>
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<tr>
<td>James Peak</td>
<td>41</td>
<td>13,283</td>
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<tr>
<td>Engelmann Peak</td>
<td>43</td>
<td>13,500</td>
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<tr>
<td>Silver Plume Peak</td>
<td>43</td>
<td>13,500</td>
</tr>
<tr>
<td>Squaw Mountain</td>
<td>39</td>
<td>11,733</td>
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<tr>
<td>Mt. Evans</td>
<td>39</td>
<td>14,260</td>
</tr>
<tr>
<td>Rosalie Peak</td>
<td>37</td>
<td>13,575</td>
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<tr>
<td>Meridian Hill</td>
<td>34</td>
<td>11,000</td>
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<tr>
<td>Bison Peak</td>
<td>43</td>
<td>12,246</td>
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<tr>
<td>Buffalo Peak</td>
<td>38</td>
<td>11,627</td>
</tr>
<tr>
<td>Pike’s Peak</td>
<td>63</td>
<td>14,107</td>
</tr>
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</table>

“Among the Summits”
At Over 13,000 Feet Altitude

**Heights of Inhabited Points**—

In Colorado several populous mining towns are higher than the highest inhabited point in Europe, such as Leadville (10,190 feet), Cripple Creek (9,591 feet), Silverton (9,288 feet), Telluride (8,756 feet), Central City (8,516 feet), Georgetown (8,507 feet); while some gold and silver mines are worked at 13,000 feet altitude.

The highest village in Europe is Avors Platz in Switzerland, only 7,500 feet; the highest inhabited point in Europe is the Hospice of St. Bernard in Switzerland, only 8,200 feet.
Heights of Railroads and Wagon Roads—

In Colorado, the Denver, Northwestern & Pacific Railway ("Moffat Road") crosses the Continental Divide at Corona (11,660 feet); and the Denver & Rio Grande Railway, at Fremont Pass (11,330 feet).
There are wagon roads over numerous passes in Colorado ranging from 12,000 feet upwards, the highest being Mosquito Pass (13,700 feet).

The highest wagon road in Europe is the Stelvio Road, Switzerland, which is only 9,170 feet, while the highest points of the Swiss railroads are only about 4,000 feet altitude.

![The Royal Gorge](image)

**ROYAL GORGE, COLORADO**
Most wonderful chasm in the world through which a railroad passes
On main line
Denver & Rio Grande Railroad
five hours ride from Denver

The Royal Gorge

Courtesy of Denver & Rio Grande Railway

In Switzerland, the cog-railroad from Vitznau to the summit of the Rigi Kulm (altitude 5,900 feet) has a length of four and a half miles, in which the ascent is 4,072 feet. In Colorado, the cog-railroad from Manitou to the summit of Pike's Peak (altitude 14,109 feet) has a length of eight and three-quarters miles, in

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which the ascent is 8,100 feet, or an average of 846 feet per mile, the maximum grade being 1,320 feet.

COLORADO CANONS UNSURPASSED—

One class of Switzerland's finest scenery is along the Via Mala, the Schyn Pass and Urnerloch. In Colorado, the Canon of the Arkansas with the Royal Gorge, the Black Canon of the Gunnison, the Canon of the Rio de las Animas, all reached by the Denver & Rio Grande Railway; the Gore Canon, on the Denver, Northwestern & Pacific Railway ("Moffat Road"), and other Colorado Canons, are all much longer, quite as grand and more varied in character than any in Switzerland. The walls of the above-mentioned Colorado Canons are over 2,000 feet in perpendicular height.

Timberline (Altitude, 11,000 Feet)
On Cog Railroad to Summit of Pike's Peak
Altitude, 14,106 Feet

CLIMATE—

In Colorado the altitudes above sea level range from 3,500 feet to over 14,000 feet, and perpetual snow can hardly be said to exist even above 14,000 feet.

Switzerland has many varieties of climate, the height above sea level ranging from 646 feet to over 15,000 feet, the limit of perpetual snow ranging from 9,020 feet to 9,250 feet.

SHOWN BY FOREST TREES—

In Colorado, timber grows up to 11,000 feet. In Switzerland, at Davos Platz (only 5,200 feet—the same altitude as Denver), there is a growth of pine trees and dwarf willows; trees and plants of less hardy character, requiring careful winter protection.
Shown by Cereals—

Professor Olin, late Agronomist, Colorado State Agricultural College, gives the following instances of cereals maturing at high altitudes in Colorado: barley, 10,200 feet; corn, 6,500 feet, 20 bushels per acre; oats, 7,800 feet, over 90 bushels per acre; wheat, 8,000 feet, 20 bushels per acre.

Shown by Root Crops—

Professor Bennett, late Potato Specialist, Colorado State Agricultural College, states that the record potato yield—viz., 847 1/2 bushels per measured acre—was grown at Del Norte (7,868 feet). The great sugar-beet growing districts of Colorado range nearly 5,000 feet altitude.

Shown by Fruit—

Professor Paddock, Pomologist, Colorado State Agricultural College, says that apples, pears, plums, and cherries mature, in commercial quantity, in favorable situations, up to 7,950 feet altitude, and bush fruits up to 8,050 feet. The leading Colorado fruit-growing districts range from 4,500 feet to 6,000 feet altitude.

At Davos Glaris (only 4,900 feet), Switzerland, cherry trees blossom, but cannot ripen fruit, while potatoes and rye mature with difficulty.

MINERAL SPRINGS

The mineral springs of Colorado, as shown by a scientific comparison of the analyses, are wider in range and superior in curative properties than those of Switzerland, while many of them equal and others surpass some of the most famous of the mineral springs found in France, Germany and Austria, such as are used, under the highest medical advice, by the autocrats and pluto-crats of Europe.

For combination of scenic attractions, climatic advantages and curative mineral waters, Boulder, Buena Vista, Canon City, Glenwood Springs, Hot Sulphur Springs, Idaho Springs, Manitou, Ouray, Pagosa Springs, Poncha Springs, Salida, Steamboat Springs, etc., in Colorado, are superior to Alveneu, Davos, Leuk, Pfaffers, Ragatz, St. Moritz, or any other Swiss health resort.

HOTELS

All the cities, towns, health and pleasure resorts of Colorado are supplied with good hotels, giving full value in services rendered for rates charged.

NOTE.—The hotel proprietors of Colorado have not yet followed the enterprising example of the hotel proprietors of Switzerland, who publish, for the information of tourists, a handy little book, in English, containing the name and picture of each Swiss hotel, number of rooms, rates, etc., specially advertising, soliciting and catering for American tourist business.
GOOD ROADS

NOTE.—Switzerland is famous for its well-made and well-kept carriage roads, some of them (traversing the mountain passes) having been built at great expense.

According to the March, 1913, Bulletin of the Denver Chamber of Commerce, Colorado has, approximately, 30,000 miles of highway, of which 15,000 miles are passable for automobiles, of which 4,000 miles are in good condition. Before 1915, 10,000 miles of road are to be improved by means of $850,000 now in the State Treasury for the purpose, supplemented by appropriations from Counties.

AUTO TOURISTS

Each year sees an increase in the number of auto tourists who come to Colorado, in their own autos, from the Eastern, Middle and Southern States, drawn by the climatic and scenic attractions of Colorado. All auto tourists contemplating such a trip should write for any special information, as to roads, routes and other auto matters, to The Denver Motor Club, 819 Majestic Building.

Fishing in Platte Canon

SUGGESTED RAILROAD TRIPS FOR TOURISTS

The following are some of the tours which can be made, with absolute comfort and at moderate cost, by railroad, from Denver (alt. 5,196 feet):

OVER THE COLORADO & SOUTHERN RAILWAY—

To Golden; thence up the Canon of Clear Creek, through Idaho Springs (alt. 7,542 feet), with its mines, mills, mineral springs and bath-houses; thence to Georgetown (alt. 8,476 feet); over the famous "Loop" to Silver Plume (alt. 9,176 feet), 54 miles from Denver, near the foot of Gray's Peak (alt. 14,341 feet); returning over the same route.
“Round the Horn;” i.e., to Greeley, Fort Collins, Loveland, Longmont, Boulder, and thence to Denver. This is the oldest and most productive farming section of Colorado, with numerous orchards between Fort Collins and Boulder.

Arapahoe Peaks—Altitude, 13,500 Feet
Courtesy of Colorado & Southern Railway

Up the romantic Platte Canon to Kenosha Summit (alt. 10,030 feet), returning by the same route. Platte Canon is famous for its summer resorts and homes.

To Boulder (alt. 5,335 feet); thence by the Denver, Boulder & Western Railway to Eldora (alt. 8,730 feet), 63 miles from Denver, or to Ward (alt. 9,450 feet), 56 miles from Denver; returning by the same route, and getting back to Denver the same day.

St. Peter’s Dome (Altitude, Over 9,000 Feet)
On Colorado Springs & Cripple Creek Railway
To Colorado Springs (alt. 5,878 feet); thence by the scenic Colorado Springs & Cripple Creek Short Line, via Bull Hill (alt. 10,202 feet) to Cripple Creek (alt. 9,505 feet), 125 miles from Denver.

OVER THE COLORADO MIDLAND RAILWAY—

To Colorado Springs (alt. 5,878 feet); up Ute Pass, via Divide (alt. 9,198 feet); thence by the Midland Terminal Railway to Cripple Creek (alt. 9,505 feet); from Divide through South Park to Leadville (alt. 10,190 feet), crossing the Continental Divide at Ivanhoe (alt. 10,927 feet), and so on to Aspen (alt. 7,943 feet) or Grand Junction (alt. 4,573 feet), 377 miles from Denver.

Twin Lakes. Altitude, 9,015 Feet

Courtesy of Colorado Midland Railway

OVER THE DENVER, NORTHWESTERN & PACIFIC RAILWAY—

Through the foot-hills and up South Boulder Creek to Boulder Park (alt. 8,889 feet), and on to Corona (alt. 11,660 feet), on the summit of the Continental Divide, only 66 miles from Denver; returning over the same route, and getting back to Denver the same evening.

The journey may be continued from Corona to Hot Sulphur Springs (alt. 7,665 feet) in Middle Park, 109 miles from Denver; on through the famous Gore Canon, 130 miles from Denver; thence past the wonderful volcanic formations at Crater and Volcano (162 and 166 miles from Denver); thence through the beautiful Egeria Park, and on to Steamboat Springs (alt. 6,680 feet), 214 miles from Denver.
The trip from Denver to Steamboat Springs is the most scenic one-day daylight railroad ride in Colorado.

OVER THE DENVER & RIO GRANDE RAILWAY—

To Colorado Springs and Manitou, the "Chamounix of Colorado," at the base of Pike's Peak (14,107 feet); to Pueblo, the "Pittsburg of the West;" to Florence, the petroleum center (from
which point the tourist can take the Florence & Cripple Creek Railway for Cripple Creek; from Florence to Canon City, embowered in orchards; through the famous "Royal Gorge," to Salida and Buena Vista; thence to Leadville; to Glenwood Springs, "The Kissengen of America," with palatial hotel and bath-houses; thence to Grand Junction, celebrated for orchards and vineyards.

Ute Pass, Near Colorado Springs
Courtesy of Denver & Rio Grande Railway

Or, branching off at Glenwood Springs, up the beautiful valley of the Roaring Fork, to the interesting mining town of Aspen.

Or, branching off at Salida, taking the narrow-gauge over Marshall Pass (alt. 10,852 feet); through the "Black Canon of the Gunnison," to fruit-growing Montrose, Delta and Grand Junction.

Or, branching off at Montrose and at Ridgway, through the "Golden San Juan," a combination of magnificent mountain
Buena Vista and Mt. Princeton. Altitude, 14,196 Feet
Courtesy of Colorado Midland Railway

The Famous Mears Toll Road Between Ouray and Ironton
Courtesy of Denver & Rio Grande Railway
scenery (particularly along the Mears' Toll Road from Ouray to Ironton) and interesting mining towns, including Ouray, Telluride, Rico, Silverton and Durango; returning via the great agricultural San Luis Valley.

**Over the Atchison, Topeka & Santa Fe Railway—**

To Colorado Springs and Pueblo; thence down the fertile valley of the Arkansas, with its numerous growing agricultural towns.

**Other Railways—**

The Union Pacific Ry. (dating from 1870) runs from Denver via Greeley to Cheyenne (Wyo.), the Julesburg Division branching off at La Salle and running down the valley of the South Platte to the State Line, en route for Omaha. The K. P. Division runs S.E. from Denver over the Eastern plains of Colorado to the State Line, en route for Kansas City.

The C. B. & Q. Ry. (known as the Burlington) runs N.E. from Denver to Brush, thence over the Eastern plains of Colorado to the State Line, en route for the Missouri River; also has a branch running N.W. from Denver to Longmont and Lyons; also a branch running from Cheyenne (Wyo.) via Sterling (Colo.) over the Eastern plains of Colorado, en route for the Missouri River.

The C. R. I. & P. Ry. (known as the Rock Island) runs from Denver and Colorado Springs over the Eastern plains of Colorado, en route for the Missouri River.

The Missouri Pacific Ry. (connecting with the D. & R. G. Ry.) runs from Denver, via Pueblo, over the Eastern plains of Colorado, en route for the Missouri River.
Colorado for Investors

It has been said that—

(1) An investment is an operation based on sight or knowledge.
(2) A speculation is an operation based on faith.
(3) A gamble is an operation based on chance.

FARM LANDS

The 1910 U. S. Census Report states that the average value of Colorado farm land per acre, in that year, was $26.81, as compared with $9.54 in 1900—an increase of 181 per cent!!!

The U. S. Census Report for 1920 will, in all probability, show an even greater rate of increase during the decade 1910-1920.

Carefully selected Colorado farm land at present prices is therefore an attractive speculative investment.

The 1910 U. S. Census Report states the average value of farm land per acre, in the various Counties of Colorado, as follows:

$125 and over per acre: Denver, Mesa.
$100 to $125 per acre: Delta.
$75 to $100 per acre: No County.
$50 to $75 per acre: Boulder, Garfield, Jefferson, Montrose, Otero, Rio Grande.
$25 to $50 per acre: Adams, Arapahoe, Bent, Chaffee, Conejos, Eagle, Fremont, La Plata, Larimer, Montezuma, Morgan, Pitkin, Prowers, Sedgwick, Weld.

Less than $10 per acre: Baca, $3.46; Clear Creek, $9.51; Gilpin, $8.07; Las Animas, $9.32; Kiowa, $8.57; Kit Carson, $9.57; Park, $9.68.

The above average values are presumably exclusive of buildings, etc., and the average is doubtless reduced by reason of the large as yet uncultivated area classified as farm land. To that extent, while furnishing a general basis, the above figures are more or less misleading. For instance, the average values in
Mesa and Delta Counties are influenced by the high values of fruit-bearing orchards. So, also, in Weld, the foremost farming County in the State, the average is lowered by the great area of as yet uncultivated land.

Such average values in all the Counties are certainly very much below the market prices of improved farm land, including buildings, water rights, etc.

On the other hand, the prices asked in some cases are higher than the real intrinsic value, simply because the owners do not need or wish to sell except at practically a bonus price.

**There never was a better time for the purchase of farms and orchards in Colorado.** There are everywhere cases—such as old age, death in the family, or other similar good and sufficient reason—which bring desirable properties on the market.

A shrewd buyer, with cash, by going on “a still hunt” (with the assistance of an experienced, reliable real-estate agent) and looking at 20 farms or orchards before he purchases one, can invariably make a wise and advantageous purchase.

**CITY AND TOWN REAL ESTATE**

For similar reasons to those before mentioned, there never was a better time for the purchase of real estate in Colorado cities and towns with marked certain future growth. For instance, as in the case of farms and orchards, a shrewd capitalist, by going on “a still hunt” in Denver (with the aforesaid professional assistance), looking at 20 pieces of Denver property, whether improved or unimproved, before he purchases, can invariably make very wise and advantageous investments, certain to enhance in market value very materially over the prices at which they can now be obtained.

**BUSINESS OPENINGS**

Home-seekers desiring to open a store or other business in Colorado, by reading the “List of Cities and Towns” (elsewhere in this book) can learn their size and rate of growth. Personal visits to several places, selected as likely, will show which seems the best for the purpose in view.

**MORTGAGES ON FARM AND CITY PROPERTY**

The 1910 U. S. Census Report states that 73.6 per cent of the farms of Colorado were then free from mortgage.

Mortgages on Colorado irrigated farms, conservatively appraised, on a mere alfalfa-producing basis—say, justifying a loan of $40 per acre—are safe investments. They are made for periods of from three to five years, bearing 7 per cent interest, usually payable semi-annually, sometimes annually.

Mortgages, based on moderate appraisement, on carefully selected city or town real estate, depending on the size and probable future of such city or town, are also safe investments.
commanding rates of interest of from 4.5 per cent on business property to 6 per cent on residence property, payable semi-annually. Rates of 7 per cent and over on city property indicate more or less risk.

MUNICIPAL AND CORPORATION BONDS

Colorado, like other States, has its proportionate local supply of these and of the same general character, which therefore do not call for comment here.

IRRIGATION BONDS

As Irrigation Bonds have attracted considerable public attention in the past few years and are not yet clearly understood by many, the following explanation is given:

The Colorado Legislature in 1901 enacted The Irrigation District Act, by which—

"Whenever a majority of the resident freeholders owning lands in any district, desire to provide for the irrigation of the same, they may propose the organization of an irrigation district under the provisions of this Act."

So organized, the district is virtually a municipality analogous to a school district.

Such a district is administered by a Board of three directors, chosen by the qualified electors. Under their direction, bonds may be voted for the purpose of—

"acquiring all lands, water rights, franchises and other property necessary for the construction, use, repair and improvement of its laterals, reservoirs and water works."

"The district is also authorized to purchase irrigation works already constructed, and to enlarge and complete the same for the needs of the district, and may pay for the same in its bonds. But no contract involving a consideration exceeding $10,000 shall be binding unless ratified and authorized by the voters of the district."

The Statute, in other particulars, thoroughly safeguards all parties in interest.

The bonds mature in ten to twenty years, payable in series, obviating the necessity of a sinking fund. They draw six (6%) per cent interest, and are payable to the County Treasurer, ex officio, the District Treasurer, or at such other place as may be named. They are an underlying lien, prior to all mortgages, etc. All levies of taxes are made by the Board of County Commissioners, and are collected in the same manner as all other taxes. The lands are assessed at a uniform rate per acre.

About twenty-five million ($25,000,000) dollars of these bonds have so far been issued in Colorado. In every instance where the projects have been completed there has been no default in the payment of interest. If a failure has occurred, it is ascribable to an underestimate of cost, or an inability to market the required

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amount of bonds. More than 80 per cent of the bonds voted have been issued by districts whose systems are completed, and payments of interest and principal as they mature have been promptly met.

If ordinary business precaution be observed, no loss whatever should occur. The securities are inherently sound, for they are based upon the most solid of all forms of property—improved farms.

MINING

There is much prejudice on this subject, based on lack of real knowledge and on bitter experience from past mistakes.

Legitimate metalliferous mining is as much a leading local industry in Colorado as cotton-spinning is in New England and woolen-manufacturing in Pennsylvania, and, by experienced capital, is entered upon on the same business principles.

Legitimate mining (i.e., looking solely for profits from the ore and not from the money in other people's pockets) is a business enterprise, and not a gambling venture.

The Portland and Independence Mines, Cripple Creek District
These Two Mines Have Produced About Sixty Million (60,000,000) Dollars Since 1891

Where entered upon with the same care and judgment that are recognized as necessary for success in any other business, mining, on the average, is more profitable than any other productive industry.

It goes without saying that by far the greater portion of Colorado's immense past production of the metalliferous minerals—over one billion one hundred and eighty-seven million five hundred and forty-three thousand ($1,187,543,000) dollars—was mined, treated and marketed at a profit to the owners of the mines.

As a matter of fact, from that vast output many citizens of Colorado and other States made individual fortunes, ranging from $100,000 up into the millions.
It is not "mining," however, to "speculate" in listed or unlisted stocks, or to take a mere "flyer" in the stock of a "get-rich-quick" mining company, organized by more or less irresponsible, unscrupulous promoters, inexperienced in mining, who look to promotion profits rather than to the profits from the ore mined. Mere "stock-selling companies" have done untold injury to the legitimate mining industry of Colorado and all other mining States.

The greatest and richest mines in Colorado to-day only a comparatively few years ago, at most, were undeveloped, or but partially developed, properties. The rich mines of the future are to-day merely awaiting development by a combination of intelligence, experience, capital and honesty.

"The Beginning of a Mine"

Legitimate, conservative mining in Colorado (i.e., "burning candles and powder," in contrast to the use of the printing-press and typewriter) will probably furnish as many individual fortunes in the future as in the past.

One great need of Colorado to-day is increased interest, on the part of capital, in the development (along conservative and intelligent lines, under the supervision of experienced Mining Engineers) of the metalliferous mining industry of the State. On such lines there is no better opening anywhere for the safe and profitable investment of capital.
Colorado for Health-Seekers

The special value of the climate of Colorado is in the combination of high altitude, maximum sunshine and dryness.

There are literally many thousands of Colorado citizens, long resident in the State, who came originally for reasons of health, and who know that their being still alive and practically well is owing to the beneficial effects of the climate of Colorado.

The air at high altitudes, as compared with air at sea level, has diminished density, lower temperature and less humidity. It contains an excess of ozone, and is comparatively free from organic and other impurities.

High altitudes involve the breathing of an increased quantity of air to obtain the necessary amount of oxygen. This results in permanent chest expansion of from one to six inches, the developing and aerating effect of which is most beneficial in chest diseases.

Recent careful investigations in Colorado, by eminent scientists from Oxford University, England, show that high altitude diminishes blood pressure; that in Colorado at 14,000 feet the blood pressure is lower than at 6,000 feet, and at 6,000 feet it is lower than at sea level; which diminished blood pressure is particularly beneficial in kidney diseases.

Malaria is practically absent, and cholera and yellow fever are unknown in Colorado.

The maximum continuous sunshine for which Colorado is noted (69 per cent of the possible, as against: Boston, 54 per cent, and Chicago, 53 per cent), combined with the dry air, acts as a tonic and has an all-round beneficial effect.

Dryness is especially beneficial in all chest affections, being antagonistic to the growth and multiplication of germs. The average relative humidity is a little below 50 per cent in Denver (Boston, 72 per cent; Chicago, 77 per cent) and is lowest in the summer months, thus precluding the sultry, oppressive days so common in the East.

The altitude and dryness minimize the heat in Colorado to the extent of 22°; in other words, from the recorded temperature it is necessary to subtract 22° to find the real heat felt by people. The Colorado summer, therefore, corresponds, as to the feelings of those who pass through it, to that of Manitoba, the Thousand Islands, the Adirondacks, etc. The altitude and dryness equally minimize the cold of winter.

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Davos Platz, Switzerland, is regarded by the medical fraternity of Europe as the best high-altitude health resort in Europe. The opinions of the following eminent European experts express concisely the highly beneficial character of the climate of Colorado:

The late Dr. Carl Ruedi, of Davos Platz, after a prolonged visit to Colorado, said:

"Colorado has natural advantages and climatic conditions which equal or surpass the best European health resorts."

Dr. Charteris, Professor of Therapeutics and Materia Medica, Glasgow University, Scotland, said:

"My autumn holiday has enabled me to visit Colorado and I am convinced that, in its pure, dry air, many patients who linger at home only to die, might there get better and work and do well."

Dr. C. T. Williams, Senior Surgeon of the Brompton Hospital for Consumption and Chest Diseases, ex-President of the Royal Meteorological Society and ex-President of the Medical Society of London, said:

"The climate of Colorado is dry and sunny, with bracing, energizing qualities, permitting outdoor exercises every day, all the year round, the favorable results of which are seen in large numbers of former invalids whom it has rescued from the life of invalidism, and converted into healthy, active workers."

Mount Ypsilon from the Horseshoe Ranch, Estes Park
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