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Railroad Lands

IN

CALIFORNIA AND NEVADA.

OCTOBER 1ST, 1872.

Record Printing House, corner Third and J streets, Sacramento.

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Lands of "Central Pacific Railroad."

The Central Pacific Railroad Company of California was one of the Companies authorized by Act of Congress to construct a railroad from the Missouri river to the Pacific ocean—a part of the Continental railroad that extends from the Atlantic to the Pacific oceans. It was empowered by Congress to construct its road eastward from the navigable waters of the Sacramento river until it should meet and connect with the Union Pacific Railroad. This connection was made near Salt Lake.

The California and Oregon Railroad Company was authorized, by Act of Congress, to construct a railroad northerly from a point on the Central Pacific Railroad, in the Sacramento valley, until it should meet and connect with the Oregon and California Railroad, which runs South from Portland, Oregon.

The Central Pacific Railroad Company of California and the California and Oregon Railroad Company, together with the Western Pacific Railroad Company, were merged and consolidated into one corporation, and a new name, "Central Pacific Railroad," given to the consolidated company.

The completion of these railroads was considered of such great national importance that the Congress of the United States, for the purpose of aiding in their construction, gave to each of the Companies an extensive grant of land.

As the grants are, in some respects, dissimilar in character, they will be described separately. First, the lands given to the Central Pacific Railroad of California (main line); and second, those granted to the California and Oregon Railroad, or California and Oregon Division of C. P. R. R.

Lands of Central Pacific Railroad (main line).

Under the Pacific Railroad Acts of Congress, passed July 1st, 1862, and July 2d, 1864, there is granted to this Company every alternate section of public land, designated by odd numbers, within twenty miles on each side of its railroad, excepting, however, mineral lands, and tracts to which pre-emption and homestead claims had legally attached. This grant is equivalent to about twenty sections to each mile of the road, and as the sections contain six hundred and forty acres each, it amounts to twelve thousand eight hundred acres per mile, less the exceptions above noted. On the reserved mineral lands, the timber is granted to the Company. These Acts are in terms a present grant, and are, therefore, a full and perfect conveyance from the original source of land titles, the National Government.

Mode by which Public Lands are Surveyed and Designated.

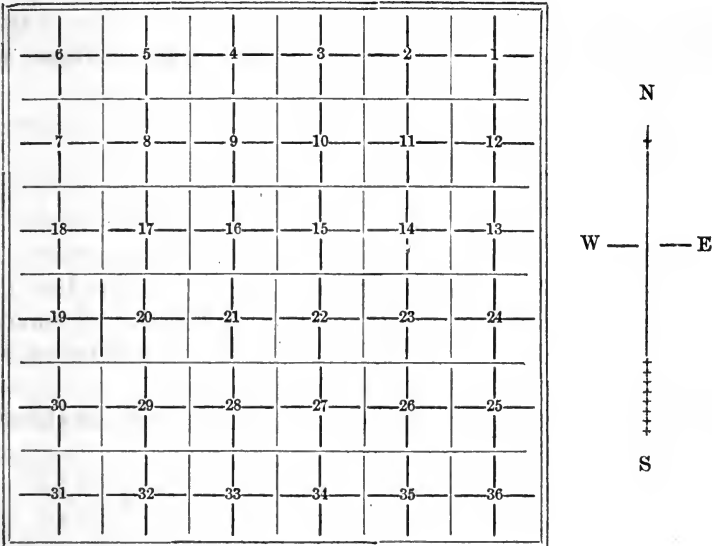
To persons not familiar with the public land system of the United States, it may be necessary to make a brief explanation of the manner in which they are surveyed, as, with an understanding of this, a definite idea will be had of the extent and situation of the Company's grant of lands.

The United States causes its lands to be surveyed by its officers into townships of six miles square; these townships are subdivided into thirty-six sections of one square mile each—or six hundred and forty acres. Each section is again subdivided into four quarters of one hundred and sixty acres each, and again into sixteen quarter-quarter sections of forty acres each, which is the smallest quantity sold, except fractions on the borders of rivers, lakes, etc. In making these surveys in California, Mount Diablo, a prominent peak near the junction of the Sacramento and San Joaquin rivers, was selected as the initial or starting point, from which four lines were run, two north and south called the meridian line, and two east and west called the base line, and from these lines the several townships are surveyed, those north and south being numbered from the base lines 1, 2, 3, etc., north or south of the base line as the case may be, and those lying

east and west described in the same way, as east or west of the meridian line. Thus, the city of Sacramento is described as being in township eight north, of range five east, of Mount Diablo base and meridian; that is, it is in the eighth tier of townships north of the base line, and the fifth east of the meridian line.

The following is a plat showing the manner of subdividing and numbering the sections in each township :

T. 8 N., R. 5 E.



The Lands Granted to the Company.

From the Acts of Congress quoted, it will be seen that the Government has granted to the Company all the alternate sections designated by odd numbers, as 1, 3, 5, 7, etc., for twenty miles on each side of the line of the road, that had not at the date of the grant been otherwise disposed of by the Government; thus, as before stated, for each mile of road constructed it receives 12,800 acres.

Process by which Title is Acquired.

As each section of not less than twenty miles of the railroad is completed and accepted by the Government, the Company makes a list of the lands to which it is entitled lying within twenty miles on either side of such completed section. This list, if found correct, is duly certified by the proper United States Land Officers and forwarded

to the Land Department at Washington, where it is again examined. Upon this the patent is issued and thus the title of the Company is perfected.

Even Numbered Sections Retained by the Government.

The minimum price of ordinary public land is \$1 25 per acre, or \$200 for a quarter section of one hundred and sixty acres, but from the fact that the construction of railroads increases the value of the land in their vicinity, a general Act of Congress provides that when the alternate sections are donated to aid in the construction of a railroad, the remaining ungranted sections are increased in price to the "double minimum," or \$2 50 per acre, so that the even numbered sections within the limits of the grant to this Company can only be purchased at that price.

Character of Country through which the Road Passes.

The City of Sacramento, which is the western terminus of the Central Pacific Railroad, is situated near the center of the great valley of the Sacramento; it is in latitude 38° 31' north, and longitude 121° 29' west. It is the Capital of the State of California, and has a population of twenty-five thousand. From this city the general course of the railroad is northeast, over the river bottom and level prairie lands, a distance of twenty-five miles; at this point it meets the rolling timber lands and low hills that lie at the base of the Sierra Nevada mountains; reaching one of the main spurs of the Sierras it ascends to the Summit, a distance of one hundred and five miles from Sacramento, and at an elevation of 7,042 feet above the sea. At the crest of the mountains it passes through a tunnel and along the mountain side to the bank of the Truckee river. This river is the outlet of Lake Tahoe, whose surface is 6,247 feet above the sea; its waters flow northeast and empty into Pyramid Lake, one of the lakes of the Great American Basin, whose waters have no outlet to the ocean. The road follows the banks of the Truckee river to the Big Bend of the Truckee, a distance of one hundred and ninety miles from Sacramento. From this point its course is northeast until it meets the Humboldt river, which flows westward and also empties into the Great Basin. It follows up the banks of the Humboldt river to its source, and so on in the same general direction around the northern end of the Great Salt Lake.

Alluvial or "Bottom" Lands.

From this statement of the route of the road it will be seen that

the Company has every variety of land, situated in the different climates between semi-tropical and temperate. It has some bottom lands—that is, lands that are overflowed by the swelling of the rivers and streams in Winter, and which are annually enriched by the deposits brought down by the water from the mountains. Like the valley of the Nile, they produce yearly unvarying large crops, the deposit during each rainy season causing them to be inexhaustible in their fertility. They yield every variety of garden and field vegetable cultivated in a semi-tropical climate, including potatoes, onions, cabbage, pumpkins, beets, tomatoes, peas, and the various small fruits. Large tracts are annually planted with maize or Indian corn, of which large crops are produced. Many farmers have cultivated tobacco, which has always been found profitable. On these lands are also grown large quantities of hops, from the cultivation of which many persons have become wealthy. The hops produced are not excelled by any known in the markets of the world. From the fact that it never rains in this climate during the season they are maturing, they lose no portion of the extractive principle for which they are used, and are said by brewers and others who make use of them, to be from ten to fifteen per cent. more valuable than those grown in climates where there are Summer rains. Many plantations have been made on these lands with mulberry trees, which thrive almost without cultivation. It is found that the climate of California is admirably adapted to the silk worm, and that here it is not subject to the diseases that affect it in Europe. The weaving of silk goods has been commenced in California, and there are not as yet mulberry trees sufficient to supply the yearly increase of silk worms. It is expected that in a few years California will export silk. Many kinds of fruit are grown on these lands, such as the pear, apple, plum, cherry and peach. The largest peach orchards of the State are situated on “bottom lands.”

Wheat, Grazing and Orchard Lands.

Within the railroad grant, above the bottom lands, and less than twenty miles on each side of the road, and for the length of twenty miles are the prairie lands. This is pre-eminently the wheat, grazing and orchard section of the State. The land is level, without trees, or with scattering and small groves of oak; it has no underbrush, and with the first rains of November is, without any preparation, ready for the plow. If preserved from the herds of cattle and sheep, it produces annually, without cultivation, large crops of native grasses and wild oats, which make excellent hay.

The exports of wheat from California within the past few years

have attracted the attention of the world. From July 1, 1871, to January 1, 1872, there were exported, generally to the Eastern States and Europe, from San Francisco 2,007,436 centals of wheat, divided as follows :

231,919 barrels of flour, valued at.....	\$1,515,673
1,311,679 centals of wheat, valued at.....	3,178,980
Total value of wheat exports.....	<u>\$4,694,653</u>

Being the surplus over and above the amount required for home consumption for a population of about 600,000. The shippers and best informed business men estimate the probable wheat yield of the State for this year (1872) at 7,000,000 centals.

The report of the Surveyor-General to the Legislature, shows that for the year 1869-70, 1,263,010 acres were cultivated to wheat, from which the product was 19,041,190 bushels, and 471,785 acres to barley, from which the product was 9,045,225 bushels. The number of acres cultivated and statistics of the product for this year have not, as yet, been reported.

The greater part of these large quantities was produced in the great valleys and on the prairie lands. The principal sales by the Railroad Company have, thus far, been of this class of its lands, over 125,000 acres having been sold. There still remains unsold of the same kind of land quantities sufficient to support a population of 50,000. These prairie lands, in addition to producing wheat and other cereals, are perhaps the best in the State for general farming and orchards. All kinds of fruit that will grow in a semi-tropical or temperate climate thrive on these lands, including the almond, olive, pomegranate, plum, pear and apple, as well as many of the nut-bearing trees. They are also well adapted for grazing and dairy purposes. The native grasses start after the first Winter rains of December and grow to June, when they dry to hay in the rainless Summer and remain standing upon the ground until the rains of the following year. Farmers, therefore, are not required to cut and save hay for their dairy cattle, except for the short period between the early rains and the springing up of the new grass.

Grazing Lands and Sheep Ranges.

Still going east along the line of the railroad, after leaving the prairie lands, the road passes over about twenty-five miles of rolling lands and low hills. These contain groves of oak trees, and many tracts are heavily timbered. In the more elevated regions of this

section the oaks are intermixed with pines. The land in this section not only produces wheat and barley, but will, if not cultivated or too closely grazed, produce the native wild oats, which were found growing upon them at the time the Americans took possession of the country. Among these hills are grazed large herds of cattle, horses and sheep. At a distance of twenty-five miles from Sacramento, on the line of the railroad and within a distance of fifteen miles on each side, as many as seventy-five thousand sheep are grazed throughout the year. No hay is cut or saved for these sheep, or if any is given them it is for the short period after the first rains in December, before the springing up of the new grass. The best sheep ranges of the State are in this section; the wild oats and native grasses are nutritious and abundant; the groves of oaks afford shade from the heat of the mid-summer sun, and the numerous streams flowing through these hills give a plentiful supply of water.

Wool.

See page 21 of this pamphlet.

Vineyard Lands.

The success that in California has followed the cultivation of the European grape, has led to the planting of numerous vineyards. After an experience of eighteen years, the fact has been demonstrated that in no place do the various kinds of European grapes, both for wine and the table, thrive so well and produce such excellent qualities of wine and table fruit, as on the hills that lie at the base of the Sierras. The soil is composed of the worn down particles of granite, quartz and slate, intermixed with lime from the numerous strata of limestone that traverse the mountains. Since the European grape was cultivated in this State—and there are vineyards planted by the Jesuit missionaries that are ninety years old—no instance has been known of a failure of the grape crop. There are no frosts to injure it at the time it is in blossom, and no rain to injure the fruit during the period of ripening. Some of the largest vineyards in the State are on lands that have been purchased from the Railroad Company; many of them producing from two to ten thousand gallons of wine annually, and in one instance producing yearly over forty thousand gallons. More than two hundred varieties of the grape have been imported from France, Spain, Germany and Hungary, and been propagated in California. Every variety that is grown in Europe succeeds well in this soil and climate, and bears more abundantly than in its native home.

The usual manner of planting vineyards in California, is to plow

the land thoroughly immediately after the early rains of December; holes are then dug with a spade, eight feet from each other, in rows; in these holes are planted cuttings, or one year old rooted vines. Cuttings can be obtained for a trifle, and often without cost, of the kind of grapes most cultivated, at any of the vineyards during the season of pruning—January and February. One year old rooted vines can be purchased for four or five dollars per hundred. The vines are planted eight feet from each other for the purpose of working among them with a one-horse cultivator; and as laborers are scarce in California, this and all other branches of agriculture are most economically conducted, by substituting the labor of animals for that of man. If the vineyard has been planted with cuttings, an average of from ten to fifteen per cent. fail to take root, and these have to be replanted the following year. If rooted vines are planted, not to exceed two or three per cent. will fail to grow. Each year the vines have to be pruned and the vineyard plowed; the vineyard should also be cultivated in May or June to kill the weeds. The third year the vines will commence bearing, and increase in quantity each year for a great many years. It has been estimated that the average annual production of all the vineyards in the State, of five years old and upwards, is one thousand gallons of wine to the acre. The process of making wine is as simple as that of making cider. The grapes when ripe are pressed, and their juice poured into clean casks, where it is left to ferment. In 1871, as shown by the report of the Surveyor-General, there were made in California three million seven hundred and ninety-five thousand seven hundred and twenty-nine gallons of wine, and one hundred and fifty-seven thousand nine hundred and forty-six gallons of brandy.

Raisins.

A considerable industry has lately been developed in California; that is the cultivation of the raisin grape and the manufacture of raisins. The process of converting the grapes into raisins is so simple that it can be done by children! When the grapes are ripe, the bunches are cut and spread upon boards, in the sun, and turned each day until cured; after which, they are boxed and forwarded to market. Some vineyardists, in addition to making large quantities of wine and brandy, have each year also made thirty thousand pounds of raisins. Of the unsold lands of the Railroad Company there are, at least, 75,000 acres suitable for vineyards.

Valley Lands Among the Hills.

Ascending the Sierras, and above the vineyard lands, the oaks

give place to dense forests of pines, firs and cedars. In the valleys of these hills are numerous farms and dairies, as well as sheep ranges. In these valleys all the fruits of the temperate climates are cultivated with remarkable success. The principal field crops of this region are barley, potatoes, turnips and hay.

Timber Lands.

The pine forests of these hills, in quantity and in the quality of lumber made, are hardly excelled on the North American Continent. They give employment to many saw mills and a large number of men. The construction of the railroad through this region has cheapened the price of lumber, and in a large measure stopped its importation from other States. A large feature in the business of the railroad, is the transportation to the valleys of lumber for building and fences. The average price in the valleys for lumber for fences, since the construction of the railroad through the pine forests, is from eighteen to twenty dollars per thousand feet. In a few years, when branch railroads shall have reached the vast mineral region of the treeless interior of the continent, these inexhaustible forests will support a large population of men engaged in felling trees and manufacturing lumber. Of timber lands and valleys among the hills of the timber region, there remain unsold lands—to which the Company is entitled—amounting to at least five hundred thousand acres.

Dairy Lands of the Mountains.

Among the higher ranges of the mountains are extensive and numerous valleys that produce nutritious and luxuriant grasses, which are extensively grazed by large and numerous herds of cattle and sheep during the Summer and Autumn months. The amount of butter and cheese that is sent to market from these valleys is yearly increasing. The quantity of butter made in this State in 1870-71, was 4,419,627 pounds, and of cheese, 5,488,266 pounds, not nearly sufficient to supply the demand; and as yet large quantities are imported.

Mines and Quarries.

The railroad passes through the entire length of Placer county, one of the principal gold mining counties of California. Lands containing gold and silver are not included in the grant to the Company. All the lands in the mineral region are not what are denominated mineral lands. The mineral lands are a very small proportion of the area, even in the strictly mineral regions. Lands containing coal and

iron are not deemed mineral lands. Near the line of the road are extensive beds of iron ore, said to be valuable, but none of which have yet been worked. The granite quarries near the road are numerous, and those that have been opened give employment to a large number of men. Nearly all the granite now being used in the State, including that used by the Government for fortifications, by the State for its Capitol, and for the bulkhead in the harbor of San Francisco, as well as for street and building purposes, is from quarries on lands purchased from the Company.

Lands belonging to the Company containing limestone, with an abundance of oak and pine wood on the same, are to be found at various points near the line of the road, within a distance of forty miles from Sacramento. Many of these quarries have been opened, and large quantities of lime are transported by the railroad to Sacramento, and from this point distributed over the State. White and variegated marble, for building and ornamental purposes, have been discovered at several points, and work has been commenced in opening the quarries and forwarding the product to market.

Grazing and "Bottom" Lands in Nevada.

The railroad passes through the whole length of the valley of the Humboldt, in the State of Nevada. On the banks of the Humboldt river, and on the banks of the streams that flow into this river, are extensive tracts of bottom land that are being successfully cultivated. The hills in this section of the country are covered with bunch and other grasses, which support large herds of cattle and sheep, and within the past year the San Francisco market has been largely supplied with beef fattened on the natural grasses of these hills. Settlement has but commenced on these lands, and the Company has at least one million acres of them yet unsold.

Estimated Population the Lands will Support.

From what has been stated, it will be seen that the Railroad Company has every variety of land for sale, including alluvial, bottom, prairie, grazing, wheat and vineyard lands, as well as lands covered with forests of oak and pine, and containing iron ore, granite, limestone and marble. It has been estimated that the lands of the Company, remaining unsold, will support a population of one and a half million, while the estimated present population within the limits of the railroad reservation does not exceed 30,000.

Markets.

There yet remain large quantities of land to be sold, within distances from five to ten miles from railroad stations. There are also many towns and villages at various points within the reservation, and at various distances from the line of the road, so that a purchaser has no difficulty in finding land in the immediate vicinity of schools, stores, blacksmith and wagon shops. The farmer cultivating these lands has a choice among three markets in which to dispose of his productions. He can send them to the cities and towns in his immediate neighborhood; to the gold mining regions of California, or to the silver bearing regions of Nevada. Wheat, barley, and various other crops, can always be sold on the land where produced to the agents of millmen and shippers, who traverse the country for the purpose of making purchases.

Stations on the Line of the Road.

The following table shows the various stations on the line of the road, at which the cars stop and discharge and receive passengers and freight, as also the distance of these stations from San Francisco, and their elevation above the sea :

NAMES OF STATIONS.	Total Distance from San Francisco.	Elevation—in Feet.
San Francisco.....	0	0
Oakland Wharf.....	3	0
Oakland.....	6	11
Brooklyn.....	8	12
Melrose.....	11	18
San Leandro.....	15	49
Decoto.....	26	72
San Jose.....	47	91
Niles.....	29	87
Pleasanton.....	41	351
Livermore.....	47	485
Altamont.....	55	740
Midway.....	63	357
Ellis.....	69	76
Bantas.....	74	30
Lathrop.....	81	26
Stockton.....	91	23
Mokelumne.....	103	55
Galt.....	112	50

NAMES OF STATIONS.	Total Distance from San Francisco.	Elevation—in Feet.
Elk Grove.....	123	53
Brighton.....	133	51
Sacramento.....	138	30
American River Bridge.....	141	52
Arcade.....	145	55
Antelope.....	153	154
Junction.....	156	163
Rocklin.....	160	249
Pino.....	162	403
Newcastle.....	169	970
Auburn.....	174	1,363
Clipper Gap.....	180	1,759
New England Mills.....	187	2,289
Colfax.....	192	2,421
Cape Horn.....	196	2,692
Gold Run.....	202	3,206
Dutch Flat.....	205	3,403
Alta.....	206	3,612
Shady Run..	211	4,154
China Ranch.....	213	4,411
Blue Cañon.....	216	4,678
Emigrant Gap.....	221	5,230
Cisco.....	230	5,939
Tamarack.....	233	6,191
Cascade.....	237	6,520
Summit.....	243	7,017
Strong's.....	246	6,781
Truckee.....	257	5,846
Boca.....	265	5,533
State Line.....	276	5,138
Verdi.....	281	4,927
Reno.....	292	4,507
Vista.....	300	4,404
Clark's.....	312	4,263
Wadsworth.....	327	4,077
Two-Mile Station.....	329	4,155
Desert.....	335	4,017
Hot Springs....	346	4,070
Mirage.....	354	4,199
White Plains.....	361	3,894
Browns.....	372	3,925
Granite Point.....	379	3,918
Lovelock's.....	389	3,977
Oreana.....	400	4,183

NAMES OF STATIONS.	Total Distance from San Francisco.	Elevation—in Feet.
Rye Patch.....	411	4,257
Humboldt.....	422	4,234
Mill City.....	433	4,228
Raspberry.....	441	4,327
Rose Creek.....	451	4,322
Winnemuca.....	462	4,332
Tule.....	468	4,315
Golconda.....	479	4,387
Iron Point.....	490	4,375
Stone House.....	502	4,422
Battle Mountain.....	522	4,508
Argenta.....	534	4,548
Shoshone.....	545	4,636
Be-o-wa-we.....	555	4,690
Cluro.....	563	4,766
Palisade.....	573	4,841
Carlin.....	583	4,903
Moleen.....	594	4,982
Elko.....	606	5,065
Peko.....	626	5,204
Halleck.....	630	5,228
Death.....	642	5,340
Tulasco.....	654	5,484
Wells.....	661	5,629
Moore's.....	669	6,118
Independence.....	676	6,007
Otego.....	688	6,154
Pequop.....	689	6,184
Toano.....	698	5,970
Montello.....	715	4,999
Tecoma.....	724	4,812
Lucin.....	734	4,495
Bovine.....	747	4,347
Terrace.....	757	4,619
Matlin.....	768	4,630
Ombey.....	778	4,500
Kelton.....	790	4,222
Monument.....	804	4,223
Lake.....	812	4,223
Promontory.....	828	4,905
Blue Creek.....	838	4,600
Corinne.....	857	4,230
Brigham.....	862	4,220
Bonneville.....	871	4,300
Ogden.....	881	4,301

Schools—Education.

Every sixteenth and thirty-sixth section of land, or one-eighteenth of all the land in the State was given by Congress to the State to be sold and the proceeds applied to the support of public schools. In addition to this, Congress gave to California five hundred thousand acres of land for purposes of internal improvement; the proceeds of the sales of these lands are also devoted by the State Constitution to public education. The interest on the money derived from the sales of these lands, as also an annual tax levied on all property, are annually distributed to all the school districts in the State. Whenever, in a neighborhood, a sufficient number of children can be gathered to form a school, it becomes entitled to support at the public expense. The public free schools of California are the pride of its people, and are not excelled by those of any of the new States. No child need lack an education because of the poverty of its parents; the State provides free education, and establishes schools in every neighborhood. Every increase of population but adds to the demand for the State's land, and thus increases the fund to be applied to the support of public schools. The foregoing also applies to the State of Nevada.

Climate.

Our climate is similar to that of Spain, Italy and the south of Europe. The greater part of California is within the limits of the influence of the trade winds. There is no rain in Summer, from May until November. The period from November till May is called the rainy season, for in the great valleys and the lower hills at the base of the Sierras this season cannot be called Winter. In the valleys the average annual fall of rain is twenty-five inches; this gradually increases, as the slopes of the mountains are ascended, to sixty inches. During the twenty-two years the Sacramento valley has been inhabited by Americans, snow has covered the ground but twice, and this had disappeared by the noon of the day on which it fell. The rainless Summers give every facility to the farmer in gathering his crops; the hay is cut and left to cure on the ground as it fell from the mowing machine; the wheat or barley is cut and permitted to remain for days or weeks before it is gathered and threshed, with the certainty that there will be no rain to injure it. Plowing and the sowing of grain commence with the first rains, in November or December, and by the first week in June the crop is ripe. Grapes ripen, the earlier kinds in July, the latest by the last week in October. In the valleys the heat of the midsummer sun is oppressive at noon, but the mornings, evenings and nights are cool and bracing. There are no prevalent diseases.

In some of the low lands, overflowed by the rivers, and in places where the reservoirs for the supply of water to the miners are constantly emptied and refilled, exposing the bottom to the sun, there are, in the Autumn, some forms of miasmatic disease. The prairie land, the rolling lands and hills, as well as the mountains and valleys among the mountains, are free from any peculiar disease, and their climate is considered conducive to health, especially to persons of weak lungs.

Counties in which the Company Owns Lands—Agricultural Productions, Etc.

The Railroad Company has lands for sale lying in the counties of Sacramento, Placer, El Dorado, Sutter and Nevada, of California, and in many counties in the State of Nevada. Of these five counties in California, where large quantities of land have already been sold by the Company, the clearest exhibit of their soil and climate, and of their varied agricultural productions, will be made by the following statistics, taken from the sworn returns of the Assessors of these counties to the Surveyor-General of the State for the years 1869-70 and 1870-71. In these counties there were in those years :

	1869-70.	1870-71.	
Acres inclosed.....	605,714	670,457	
Acres cultivated.....	199,880	235,424	
Wheat.....	1,057,858	848,190	Bushels.
Barley.....	1,096,951	1,069,106	"
Oats.....	30,278	43,843	"
Rye.....	1,159	5,048	"
Indian Corn.....	84,202	107,035	"
Buckwheat.....	250	1,536	"
Potatoes.....	71,115	109,379	"
Sweet Potatoes.....	78,882	134,117	"
Onions.....	42,915	26,473	"
Beans.....	18,676	14,770	"
Peanuts.....	8,260	18,460	Pounds.
Castor Oil Beans.....	13,000	"
Hops.....	281,934	274,400	"
Butter.....	479,112	434,191	"
Cheese.....	48,650	92,408	"
Honey.....	40,613	25,797	"
Wool.....	435,457	534,433	"
Turnips.....	119	169	Tons.
Squashes and Pumpkins.....	2,679	2,749	"
Beets.....	295	272	"
Hay.....	46,490	58,503	"

	1869-70.	1870-71.	
Horses.....	19,591	22,137	
Mules.....	1,469	1,428	
Cows.....	17,611	20,796	
Calves.....	12,361	15,103	
Beef Cattle.....	14,197	19,277	
Oxen.....	1,750	1,365	
Sheep.....	170,574	171,840	
Angora and Cashmere Goats.....	1,224	2,715	
Hogs.....	32,251	38,005	
Domestic Fowls.....	105,917	156,542	
Hives of Bees.....	3,777	4,052	
Apple Trees.....	249,532	282,840	
Peach ".....	180,528	196,734	
Pear ".....	55,033	72,318	
Plum ".....	49,623	45,123	
Cherry ".....	9,715	18,595	
Nectarine ".....	6,906	10,014	
Quince ".....	8,077	8,344	
Apricot ".....	16,035	19,733	
Fig ".....	9,763	10,960	
Lemon ".....	191	651	
Orange ".....	240	792	
Olive ".....	165	226	
Prune ".....	1,028	1,892	
Mulberry ".....	542,630	475,254	
Almond ".....	3,709	8,205	
Walnut ".....	8,680	23,338	
Raspberry and Gooseberry Bushes.....	96,719	128,182	
Strawberry Vines.....	665,210	867,352	
Grape Vines.....	4,048,279	5,129,481	
Wine.....	406,843	534,684	Gallons.
Brandy.....	22,703	14,371	"
Steam Grist Mills.....	6	6	
" " " Run of Stones..	26	26	
Water-power Grist Mills.....	2	2	
" " " Run of Stones..	3	2	
Flour.....	244,500	259,400	Barrels.
Indian Corn made into Meal.....	19,000	21,500	Bushels.
Saw Mills, Steam.....	56	56	
" " Water.....	19	24	
Lumber sawed.....	60,940,000	61,671,620	Feet.
Shingles.....	32,224,000	12,955,000	
Broom Corn.....	198	1,144	Acres.

The official returns for this year (1872) are largely in increase on almost every article produced, in consequence of the growth of population by immigration, and the greater breadth of land cultivated.

How Lands are Sold.

The price fixed by the Company for the best class of agricultural, wheat, orchard, dairy and vineyard lands, is from \$2 50 upwards per acre, according to quality and location; oak wood land \$5 00 per acre, and first-class pine timber land \$10 00 per acre. With a desire on the part of the Company to dispose of its lands to men who will cultivate the soil, it sells its agricultural lands on a credit of five years if desired, the purchaser paying at the time of the purchase twenty per cent. of the principal, and the remainder bearing interest at ten per cent. per annum. Oak and pine lands are required to be paid for at the time of purchase. At the Land Office of the Company in Sacramento are maps showing the route of the road, the counties through which it passes, the rivers and streams that flow through the land, and the United States surveys designating the lands granted to the Company and those retained by the Government; also the towns, villages and settlements within the railroad grant. A person desiring to purchase is directed to points near the line of the road, where he can examine the kind of land desired. After selecting the land, if he wishes to pay for it in full at the time of purchase he can do so, and takes a fee-simple deed under the United States patent. A purchaser from the Company can buy any quantity of land, or as many sections as he may desire, but, as has been explained, each odd section being surrounded by four even numbered sections, which are retained by Government for settlers, no compact body of land can be sold of greater extent than one section of 640 acres. Supposing the purchaser desires to buy a quarter section—a tract of half a mile square, containing 160 acres—and that he wishes this land on the credit allowed by the Company; 160 acres, say at \$2 50 per acre, would be \$400; twenty per cent. of \$400 is \$80; he would pay this \$80 to the Company, leaving \$320 due; on this he would pay interest at ten. per cent., or \$32 per year for five years, payable yearly in advance. At the time of making the payment of \$80 and the first year's interest, he would receive a contract for a deed from the Company, signed in duplicate by him and the officers of the Company, in which he would agree to pay the yearly interest and the balance due at the end of five years, and the company agreeing on its part to give him a fee simple deed when the balance was paid. At any time the purchaser desires, he is allowed to pay the balance due and take his deed, thus stopping the payment of interest; the Company will not, however, receive it in instalments. Practically but few persons avail themselves of the five years' credit, although purchases are frequently made on credit, yet in most instances by the second or third year they are enabled,

from the sale of their crops, to pay the remainder due and receive their final deeds.

Applications for Lands and Privileges gained thereby.

(For full information on this subject, see page 23 of this pamphlet.)

Grading Lands and Manner of Ascertaining their Value.

(See page 24 of this pamphlet.)

Advantages to the Purchaser of Railroad Lands.

The purchasers of railroad lands have many advantages over those purchasing from the Government, some of which can be best explained by stating the mode in which the Government disposes of its public lands—the even numbered sections—within the railroad reservation. A person, to acquire title from the Government by pre-emption, must first go upon the land, commence its cultivation and erect a dwelling house; he then files in the United States Land Office his “declaratory statement;” that is, a document setting forth that he has selected a certain piece of land, describing it, together with the date of his settlement, the fact that he is a citizen or has legally declared his intention to become a citizen, his age, etc. After three months he must appear at the United States Land office, with two witnesses, where a trial is had and proof made on oath before the Land Officers that he has complied with all the provisions of the pre-emption law. If the law has been complied with he then pays \$2 50 per acre and a receipt is given him; in a year or two a patent is received and he returns his receipt and obtains the patent for his land. No man can obtain from the Government, by pre-emption, more than 160 acres of land, and having received this, his privilege is exhausted.

There is one other way by which a person can obtain lands from the Government—on even numbered sections within the railroad reservation—and that is by filing a homestead claim on eighty acres. As in the case of pre-emption, he must erect a dwelling, live on and cultivate the land; he must then file in the United States Land Office his declaration of homestead, setting forth substantially the same facts as in the case of pre-emption. On the day he files, he receives a homestead certificate. If he continues to live on the land and cultivates it for five years from the day of filing, he can, after that time, make proof of the facts as in the case of pre-emption, and if the law has been complied with he returns his certificate, and in time will receive a patent without other expense, except the fees of the officers and the fees of an attorney, if necessary that one should be employed. A

pre-emption cannot be for more than 160 acres, nor a homestead for more than 80 acres on Government land within the railroad reservation. Neither the pre-emption nor homestead can be abandoned, sold, mortgaged or leased until after the patent is issued. On the other hand, the purchaser from the railroad is not limited as to quantity, and when the money is paid and the deed issued, he can do as he pleases with the land—it is his in fee simple. There are no complicated laws or rules—he selects his land, pays for it and takes a deed, or buys on credit and takes a contract for a deed, which is assignable. In either case he does with the land as he deems proper—he may sell, lease, reside on the land, or reside elsewhere, or he may let it remain to increase in value, by the settlement of the country about it. Many purchasers of railroad lands do not build upon the land purchased, but erect their dwellings upon the adjoining even sections, thus taking advantage of the privilege granted by Government, and obtaining in one body a larger tract than could otherwise be acquired.

Policy of the Company in the Sale of its Lands.

The policy of the Company is, and has always been, to sell its lands at low prices, and upon easy terms of payment. Its Directors believe its best interests are promoted by selling its lands near the line of the road to men who will personally cultivate the soil, and who will own the land they cultivate. Any man coming to California, who can and will labor, may be certain of employment, and if he so desires, he can, with the proceeds of seven months' labor, become the owner of eighty acres of the finest wheat land in the world, in a climate that for salubrity has no equal; in a State where all children are educated in free schools at the public expense, and where slavery never had existence; among a people who honor labor, and whose laws give ample protection to life and property.

General Remarks.

The information contained in the following pages regarding the lands of the California and Oregon Division of the Central Pacific Railroad, and the remarks concerning "Markets," "Wool," "Policy of the Company," "Grading of Lands," "Applications," etc.; may be considered as applying also to these lands. The Central Pacific Railroad Company has adopted a uniform system for the sale of *all* the lands under its control.

All communications in relation to the lands of the Company, if addressed to B. B. Redding, Land Agent Central Pacific Railroad Company, Sacramento, California, will be promptly answered.

Lands of Central Pacific Railroad.

California and Oregon Division.

Under the Act of Congress, approved July 25th, 1866, the California and Oregon Railroad Company has a grant of lands from the United States, consisting of all vacant odd numbered sections within twenty miles on each side of its road, and where the odd numbered sections have been taken up by pre-emption or otherwise, the Company has the right to select other vacant odd numbered sections as indemnity, within thirty miles on each side of its line. This road commences at Roseville, in Placer county, California, on the line of the Central Pacific Railroad, and extends north by way of Marysville, in Yuba county, through Chico, in Butte county, to Red Bluff, in Tehama county, and so on north through Shasta and Siskiyou counties to the State of Oregon. This road is now completed to Redding, in Shasta county, and is being rapidly extended.

The route of this road is nearly parallel to the general course of the Sacramento river, and its grant embraces some of the finest bottom lands of the Sacramento valley.

The grant lies in the counties of Placer, Sutter, Yolo, Yuba, Butte, Colusa, Tehama, Shasta, Plumas and Siskiyou.

The lands are diversified in character, consisting of plains, alluvial bottoms, rolling prairie, low hills and mountains.

The plains and rolling prairie contain large quantities of rich agricultural lands, adapted to the growing of wheat and other cereals, which, when properly cultivated, yield most abundantly; also, to the culture of grapes, apples, peaches, apricots, plums, nectarines, and other fruits, which are produced in endless variety, of most excellent quality and in large quantities. The portions not suitable for farming purposes are covered with wild oats, bunch grass, and a variety of other grasses, affording rich and abundant pasturage.

The alluvial bottoms in the Sacramento valley, as also in the smaller valleys of the tributaries of the Sacramento river, are very rich. Here is a broad scope of the best grain growing lands in this State. Almost every species of agricultural productions can be raised on these lands. Here can be made large and prolific gardens, orchards

and vineyards. The pastures on the low lands for cows are rich, green and succulent, giving opportunity for profitable employment in making cheese and butter. Swine thrive and fatten on the tule roots growing on the low lands, which, furnishing a cheap and nutritious food, enables the farmer to raise these animals with but little expense.

The low hills furnish also pasturage of excellent quality for sheep and cattle, while for the culture of grapes and fruits of almost every kind, the soil is unsurpassed. Nearly all the grapes from which wine is made in California are grown in the foot-hills.

The mountainous districts contain a heavy growth of coniferous forests, comprising sugar and yellow pine, red spruce, cedar, fir, etc., also a heavy growth of oak timber. There are many fertile and well sheltered valleys and mountain meadows, admirably suited for agricultural and grazing purposes. Most of these valleys are covered with a luxuriant growth of natural grasses, the adjacent mountains in very many places also affording much pasturage. The greater part of these lands are generally well watered.

Markets.

There is always a ready market for all farm and agricultural products at Marysville, Sacramento, San Francisco, and in the towns and villages of the mining districts.

Wool.

Among these lands are some of the best sheep ranges in the world. In 1869 the product of wool in California was 18,000,000 pounds. In 1870 it was about 20,000,000 pounds, and in 1871 it was over 24,000,000 pounds. Many persons in this State, who commenced this business in absolute poverty, have in a few years grown wealthy. The climate is peculiarly favorable to sheep. They need neither shelter nor cultivated food—at least most of them never receive either. Sheep husbandry in California will always pay better than in any other State in the Union, for here the weight of the animal is ten per cent. greater than in the Eastern States, while the fleece is twenty per cent. larger and the increase one hundred per cent. more; besides, the sheep generally live longer. There is no disease among them except scab, and that is never fatal. If the exemption from disease, the more rapid increase, the greater weight of fleece and mutton, the saving in buildings, sheds and in cultivated food, and the difference in the cost of the pasture land, be taken into consideration, there is a large total in favor of the wool grower in California.

Stations on the Constructed Line of the Road.

NAMES OF STATIONS.	Total Distance from San Francisco.	Elevation—in Feet.
Junction (on main line C. P. R. R.).....	156	163
Lincoln.....	166	161
Ewens.....	170	113
Sheridan.....	174	113
Wheatland.....	177	84
Reeds.....	183	69
Yuba.....	188	68
Marysville.....	190	67
Lomo.....	197	71
Gridleys.....	207	97
Biggs.....	211	98
Nelson.....	221	124
Durham.....	227	161
Roble.....	229	176
Chico.....	233	193
Nord.....	240	153
Anita.....	243	162
Soto.....	248	186
Vina.....	252	212
Sesma.....	260	240
Tehama.....	261	222
Red Bluff.....	273	307
Hooker.....	283	545
Buckeye.....	288	432
Cottonwood.....	290	421
Anderson.....	296	432
Clear Creek Town.....	303	467
Redding.....	307	558

Price of Lands and Manner of Selling them.

The price fixed by the Company for its agricultural, farming and grazing lands, is from \$2 50 upwards per acre, according to quality; for first class timber land, \$10 per acre, and for second class timber and wood land, \$5 per acre. The timber and wood lands must in all cases be paid for at the time of purchase; but the other lands can, in tracts of not less than eighty acres, be bought on credit, if the purchaser desires—twenty per cent. cash, and the remainder payable at any time within five years, with interest at ten per cent. per annum,

which must be paid yearly in advance. This will be better explained by the following

EXAMPLE:

160 acres (say at \$5) is	\$800 00
20 per cent. of \$800, cash down, is.....	160 00
	\$640 00
Remainder, payable within five years.....	\$640 00
The first payment would, therefore, be 20 per cent., as above.	\$160 00
First year's interest on \$640, as above, in advance.....	64 00
	\$224 00
Total.....	\$224 00

The other payments would be the \$64, the annual interest in advance, and, at the end of five years, \$640, the remainder of the principal.

On page 17 of this pamphlet will be found further details on this subject, which can be considered as referring to these lands, the Railroad Company having adopted a uniform system for the disposal of all the lands under its control.

Policy of the Company—Applications for Land and Privileges gained thereby.

As soon as a section of twenty miles or more of the railroad is completed, equipped and in operation, it is examined by the United States Railroad Commissioners, who make a report to the Government. If found to be constructed in all respects as required by law, the section is accepted and the lands listed and patented. When the patent is received the lands are offered for sale. This road is now constructed to Redding, which is situated 170 miles north of Sacramento and about six miles east of the town of Shasta. A portion of the road has already been examined, and it is expected in a short time that the entire line, as far as completed, will be examined and accepted. Some of the lands, as far north as Chico, are now offered for sale. Applications to purchase are received and filed in the Land Office of the Company and blanks will be furnished for that purpose. The policy of the Company has always been, and is now, to encourage the settlement of its lands in small tracts, by persons who will live on and cultivate them. To this end settlers are invited to make applications to buy and to occupy and put to use the vacant lands until such time as they shall be ready for sale. If the settler desires to buy, the Company gives him the first privilege of purchase at the fixed price, which, in every case, shall only be the value of the land, without regard to the improvements. It must be understood that the application of a speculator, or of a person who does not improve or occupy the land,

will not, although received first, take precedence or priority of that of the settler whose application may, perhaps, be filed last of all. The actual settler, in good faith, will be preferred always, and the land will be sold to him as against every other applicant. The Company also wish it to be known that a mere application to buy land, unaccompanied by actual improvement or settlement, confers no right or privilege which should prevent an actual settler from taking it, if vacant, into possession, and cultivating and improving it. In filling in the blank application, persons are requested not to put the lands in two or more townships in the same application. Use a separate blank for each township.

Grading Lands and Manner of Ascertaining their Value.

When lands are ready to be sold, the Company sends a man well acquainted with the quality of soil and skilled in determining the kind of agricultural product to which it is best adapted, as also in determining its true market value, to look at the various sections and tracts. After personal examination, he grades the land as being first, second or third quality of farming, vineyard, timber, or grazing land, and reports the value of each piece. His report is examined and, if found correct, a price is established. The price is generally that of unimproved land of the same quality in the immediate vicinity at the time of the grading. In ascertaining the value, any improvements that a settler or other person may have on the land will not be taken into consideration, neither will the price of the land be increased in consequence of them. Further, there is but one price—that fixed by the Company—and land will be sold at that rate to those who in equity have the best right to buy, even if others should offer more per acre than the amount asked. Settlers are thus assured that, in addition to being accorded the first privilege of purchase at the graded price, they will also be protected in their improvements.

General Remarks.

All that has been written regarding the lands of the Central Pacific Railroad (main line) and the manner of acquiring title to them, as also respecting Climate, Vineyards, Schools, Education, etc., and all other matters (excepting the grant to the Railroad and its lands in the State of Nevada) may be taken as applying generally to ALL the lands of this Railroad.

All communications addressed to B. B. Redding, Land Agent Central Pacific Railroad Company, Sacramento, California, will receive prompt attention.

Lands of Southern Pacific Railroad.

Under the Act of Congress passed July 27, 1866, the Southern Pacific Railroad Company has a grant of lands from the United States consisting of all vacant odd numbered sections within twenty miles on each side of its road, and where the odd numbered sections have been taken by pre-emption or otherwise, the Company has the right to select other vacant odd numbered sections, as indemnity, within thirty miles on each side of its line. This road commences at San Jose, in Santa Clara county, California, at one of the termini of the Central Pacific Railroad, and runs by way of Gilroy, Pajaro valley, touching at a point seven miles west of Visalia, and so on by Bakersfield, in a southeasterly direction, through the counties of Santa Clara, Monterey, Fresno, Tulare, Kern, and San Bernardino, and going through Tehichipa Pass in the Sierra Nevada mountains, extends to the Colorado river. About two years ago the San Francisco and San Jose Railroad consolidated with the Southern Pacific. The consolidated line begins at San Francisco.

The San Joaquin valley branch of Central Pacific Railroad, which leaves the main line at Lathrop, on the San Joaquin river, ten miles from Stockton, runs along the east side of the San Joaquin valley for a distance of 152 miles and connects with the Southern Pacific at Goshen, near Visalia.

A branch of the Southern Pacific, commencing at Gilroy and extending by way of Watsonville to Salinas City, and through the Salinas valley to the Mission of San Miguel and the country beyond, is now completed to Salinas City, and is in course of rapid construction further south. A line of railroad will very shortly be built from Watsonville to Santa Cruz.

Another line of railroad, to connect with the Southern Pacific, is contemplated and a part of it is in an advanced stage of construction. It will start from a point near Tulare lake and run north through the west side of the San Joaquin valley, and crossing the Central Pacific Railroad between Ellis and Bantas stations, will go thence, via Point of Timbers, Antioch, Martinez, and Suisun and San Pablo bays to Oakland and San Francisco. This railroad will be parallel to the San Joaquin Valley branch of the Central Pacific Railroad, and about twenty-five miles west of it. The portion between Ellis and Oakland will probably be in operation within the coming year.

Another branch of the Southern Pacific Railroad, to which Congress has given a land grant, will commence at a point on the main line near Tehichipa Pass, and running southerly across the Mohave Plains through the San Fernando Pass to Los Angeles, will extend thence by San Gabriel, Cocomongo, San Bernardino, and the Coahuila Valley, to Fort Yuma.

The lands of the Company, in California, lie in the counties of Santa Clara, Santa Cruz, Stanislaus, Merced, Fresno, Monterey, Tulare, San Luis Obispo, Kern, Santa Barbara, San Bernardino, Los Angeles, and San Diego.

It will be seen that all this country is situated in the midst of what will be, within a few years, a perfect network of railroads, and will be more immediately in connection with the whole railroad system of California than any other part of the State. Lands, therefore, anywhere within this section must, outside of their intrinsic worth in consequence of situation, increase very rapidly in value. But independent of situation, the general excellent quality of the soil, its great productiveness, its adaptability in many places to almost every species of agricultural production, together with the mildness of the climate, the bright skies, and the equability of temperature which prevails over the greater part of its extent, render it a very desirable section for the immigrant or settler who wishes to make a happy home in a place where all the comforts and most of the luxuries of life can be had with but little trouble, and where industry and thrift will be sure to meet with an abundant reward.

The great extent of level land in this scope of country admits of the use of all descriptions of agricultural implements, so that farm work can be done with incredible rapidity. One thousand acres are sometimes plowed, seeded and cut in less time than is required on farms of 160 acres in many parts of Europe. To be convinced of

this, a person need but visit the immense wheat fields of the San Joaquin valley, and look at the operations on a large scale in farming as they are carried on with the aid of modern appliances and inventions. This advantage, together with the much larger yield per acre, compensates for the higher price of land, labor, and material.

Climate and Rainfall.

In Winter, the average of the thermometer is about 44° at sunrise and about 56° at midday. In the counties on the sea coast and those further inland under the influence of the trade winds, which blow from the ocean, the thermometer does not rise higher than from 70° to 80° in the Summer time. In the sections beyond the influence of these winds, the degree of heat in the Summer time is greater, sometimes ranging as high as 90° , while in exceptional localities it at times reaches 100° . This high degree of heat prevails only for about three months in the year, and generally lasts but from three to four hours each day. With the decline of the sun comes a cooling and refreshing breeze, which, toward morning, makes the air feel so chilly that a heavy blanket is required to make sleeping comfortable. The thermometer falls as low as 50° or 55° during the night. There is none of the suffocating and enervating atmosphere which is experienced in the Eastern States during the nights in Summer. Here, a person rises invigorated and refreshed and is prepared to commence again, with renewed strength and health, the labor of the day. The sudden fluctuations of temperature incident to the climate of the Atlantic States are unknown in California.

The rainy season commences about the beginning of November, and continues, with frequent intervals of bright, clear weather, until April. For fully half of the Winter no more rain falls than is required by the necessities of agriculture. In the southern part of the State the rainfall is much less than in the northern, and there are some years of drouth. Farmers have, in the past, suffered severely from these drouths, chiefly in consequence of having pursued a defective system of agriculture, not adapted to the peculiarities of a California climate. Now, having learned from experience, instead of sowing and planting crops in the Spring when the rainfall is nearly over, they sow and plant in the Autumn, so as to have the advantage of all the moisture of the whole Winter. When this system is pursued, the failure of crops is very rare. On the sea coast and country adjacent to it, good crops are produced every year, the dews and fogs from the ocean furnishing sufficient moisture for that purpose.

Irrigation.

Where the climate and soil are dry, farmers and agriculturists resort to irrigation as a means of procuring an adequate supply of moisture for their growing crops. The rivers and streams are diverted from their natural beds and led in canals and water-courses, frequently for long distances, and distributed through small ditches over the land. There are a great number of irrigating canals and ditches in the southern part of San Joaquin valley, in the counties of Kern and Tulare, and also in Fresno and Merced. Capitalists have commenced and are now engaged in perfecting a system of irrigation for this region on a very large scale. Wherever streams are not abundant and the prospects are favorable, artesian wells have been bored, in various cases with favorable results. Many persons think that water can be procured anywhere in the San Joaquin valley by boring to a sufficient depth; but whether or not this theory is correct, remains to be seen. The country is comparatively new, and as yet but sparsely settled, and much remains to be revealed by experiment. However, in nine years out of ten, if the farmer sows his seed in the Autumn, on properly prepared land, he may be very sure of a good crop—almost any Winter furnishing enough of rain for that purpose.

Character of Lands.

There is almost every variety of soil and climate to include all the products of the northern temperate zone with those of a semi-tropical character. Along the water-courses extend broad bottoms of exceedingly rich soil, upon which the crops hardly ever fail, either from excess of rain or drouth. Many of these bottoms, as well as portions of the plains lying between them, are covered with scattered oaks of a large size, and present the appearance of a nicely arranged park. In the neighborhood of Tulare Lake vast herds of swine are raised and kept on the low lands. They are branded and turned loose like cattle. Large sums of money have been realized from this business. Where the soil is light and sandy, wheat and other kinds of cereals, as also many kinds of vegetables, are cultivated. The means for irrigation necessary for such soil are, in many localities, never-failing and ample.

There are on the plains, foot-hills and in the mountains, a great number of sheep pastures and cattle ranges, abounding with wild oats and other kinds of native grasses. The temperature is so mild and equable in Winter that shelter is hardly ever required. The grasses commence growing immediately after the first fall of rain in

Autumn, so that generally through the Winter months there is an abundance of green feed. Sheep bring forth lambs in the month of February, and are shorn twice a year. Here are some of the largest flocks in the State, and cattle in innumerable herds have roamed over the hills and plains for years.

There are also timber lands, covered with redwood or red cedar, pine, oak, and other trees, which must, in consequence of the increasing scarcity of timber, become very valuable in a few years.

In fine, there are all kinds of land for farming, grazing, or fruit culture, from which to choose, mountain, plain, hill, valley, upland, lowland, meadow and garden, in a portion of the State which must become of the highest importance in a short time, and in the very center of commerce, where facilities for travel and for transportation in all directions will abound; where the climate, although in a northern latitude, is as mild and balmy as that of the tropics; where roses bloom in the open air through all seasons, and where there is easy access not only to the seaside but to some of the grandest mountain scenery in the world.

Productions.

These lands produce wheat, barley, oats, Indian corn or maize, hay in every variety, hops, flax, cotton, silk, ramie plant, tobacco, castor beans, etc., besides fruits, nuts, and vegetables, in great profusion, of fine quality and most excellent flavor.

Wheat, Barley, Oats, Alfalfa, Etc.

The wheat fields of the San Joaquin valley are probably the finest in the world, and the largest. Fields of 1,000 to 5,000 acres are not uncommon, while there are some that contain from 20,000 to 30,000 acres. In fact, a person can, at the proper season, ride on the trains of the San Joaquin Valley Railroad for 100 miles through one continuous wheat field. There are but few fences in the whole tract, the law making the owners of live stock liable for the damages resulting from trespass upon the land. The weevil is unknown. Of course where wheat can be grown, barley, oats, and other grain, can be produced with the same if not greater facility. It often happens that a farmer can, from the profits of a single crop, pay for his land and realize a handsome sum in addition. Fifty or sixty bushels to the acre is yielded on some lands. Not only can wheat and all the cereals be raised on these lands, but also nearly all the vegetables necessary for table use, including melons, potatoes, beans, peas, etc.,

etc. On the low or alluvial bottoms, two crops are sometimes taken from the same land in one year. First, a crop of wheat, barley, or oats, and afterwards a crop of maize or Indian corn. The bottom lands and also the uplands, where facilities for irrigation exist, are sown to alfalfa or Chili clover, in conjunction with barley. The barley is cut and the alfalfa remains, and is used for hay and for pasturage. Alfalfa is a species of lucern of exceeding great productiveness and nutritive qualities. It is cut three, four and five times in the year, yielding from one to one and a half tons per acre at each cutting, while in the Winter time it furnishes the best and most juicy of pastures. It is calculated that one acre of alfalfa, well seeded, will produce more pasturage in a year than ten acres of the same quality of land will in native grasses. Good dairymen say that cows taken from the ordinary native grasses and pastured on fields of Chili clover (alfalfa), will increase in the product of milk and butter or cheese from sixty to seventy per cent.

Cotton.

The prospect for cotton growing improves year by year. It has been tried this year on a scale of sufficient magnitude in the counties of Merced, Fresno, and Kern, and with such marked success and with such certainty of large yield and great profit, that it may with safety be classed among the most valuable of the agricultural staples of California.

One thousand acres have perhaps been cultivated during this year (1872)—say 650 acres in Merced, 250 in Kern, and 50 acres on Kings river, in Fresno. In the Southern States 25 bolls to each stalk is said to be about an average yield; but in California the yield is 100 per cent. greater, and the plants exhibited in San Francisco and elsewhere contain from 75 to 100 bolls, and in exceptional cases no less than 400 have been counted on each plant. The yield seems to be about 350 to 400 pounds per acre of lint cotton. Samples of California cotton were sent to New York, Memphis, and Mobile, and favorably reported upon. That sent to Mobile was pronounced superior to any grown in Alabama, except that of Sea Island, while the sample sent to Memphis was classed by the Board of Brokers as equal to the best middling upland of the State, and the staple was finer. The California cotton has a fine lustre, extra long staple, and it is thought will bring two cents per pound more than any other cotton sent to Liverpool. Cotton can be raised here at two-thirds less cost than at the South—say six to eight cents in California against twelve

cents in the Southern States. In Merced and Fresno counties the best time for planting is thought to be early in April, and wherever Indian corn or maize will grow to advantage, there cotton can be raised. It is confidently believed that within a very few years cotton will be at least the third great staple of California. The cost of making and marketing a crop is calculated by competent judges at about \$28, and the net profit at about \$45, per acre. In the southern part of Kern county, also in Tulare and Fresno counties, are large quantities of land suitable for the culture of cotton.

The California Cotton Growers' and Manufacturers' Association has been making extensive experiments in cotton growing near Bakersfield this season, which have resulted so successfully that, being fully assured of the profits to be realized, it is now preparing to carry on the business on a large scale, and, as a commencement, will plant next year from 1,000 to 1,500 acres in cotton.

Grapes, Raisins, Wine and Brandy.

Grapes can be grown on all these lands to a point where the altitude would be, say, 3,000 feet above the level of the sea. The Franciscan Monks, some fifty or one hundred years ago, planted vineyards in the southern part of California, the yield from which kept on increasing every year and to-day the amount of grapes taken from them would seem incredible. One grape vine, planted 43 years ago, three miles east of the town of Santa Barbara, on the sea coast, measures nearly twelve inches in diameter at four feet from the ground; at two feet higher the stem is divided and its branches are supported by a rude trellis work, forming a splendid bower, which covers an area of 10,000 square feet. It annually produces about 12,000 pounds of grapes. The bunches weigh six or seven pounds each and are from fifteen to eighteen inches long. Irrigation is employed very sparingly. The grapes are of the Los Angeles variety.

The grapes produced thus far, in the region under consideration, are suitable for the production of wine or brandy. Continual sunshine makes them very sweet, and in the process of fermentation the sugar is converted into alcohol in such quantity as to make the percentage of brandy very great. Near Visalia the raisin grape is, to a limited extent, cultivated with great success and raisins, rivalling in flavor those of Malaga and of larger size, have been made. A most profitable branch of industry, requiring but small capital or skill, could be built up in growing and curing raisins. The process of curing is very simple. The bunches of grapes are spread on a board

in the sun, and are turned every day until they are thoroughly dried. A child can do this. The raisins are then packed in boxes, sent to market and sold.

The most luscious and finest flavored table grapes in the whole world can be produced cheaply and in quantities only limited by the desires or means of the cultivator. Blight and mildew are unknown.

The ancient proverb which says that "gold springs up where the root of the vine descends," is amply verified in California, for those who have vineyards possess generally comfortable homes, while many of them are wealthy. This arises from the fact that the market for wine and brandy is neither local nor restricted. They can be sold in all parts of the world, and it will soon be demonstrated that money can be made by manufacturing wine at twenty cents a gallon. The net profit on an acre of grapes is calculated at \$50 each year.

Oranges, Lemons, Limes and Citrons.

The orange tree lives in the open air in the valleys in the interior of California, where the thermometer does not fall below 22°, and in many of them and in the foot-hills, thrives with as much luxuriance and productiveness as it does in its native climate and soil. In the region surrounding Los Angeles, the orange tree is cultivated with great profit to a very considerable extent. It is said not to be a profitable orchard tree except in the southern part of the State. This is probably more a matter of conjecture than otherwise, and arises from the fact that almost all the experiments, on an extensive scale, in orange raising, have been chiefly confined to the locality mentioned above, under the supposition that a very warm climate is necessary to its culture. There are some fine orange trees in many places in the middle portion of the State. There is an orange tree with good and abundant fruit at Bidwell's Bar, in Butte county; also one at Folsom, in Sacramento county. There are trees in Marysville, Sacramento, and Stockton, which, planted for ornament, have borne continuously for years oranges of excellent quality and good flavor and in large quantities. Doubtless there are many localities north of Santa Barbara and Los Angeles where they can be cultivated to advantage. Orange trees are planted about sixty to the acre, and at the age of ten to fifteen years bear most astonishingly. In an orange grove of two thousand trees, near Los Angeles, the annual crop averages 1,500 oranges to each tree, some of the trees producing as many as 4,000 each. The labor of one man is sufficient to keep

twenty acres in perfect order, and as oranges sell in San Francisco at from \$15 to \$35 per thousand, some idea may be formed of the great profit of this business. They can be sent by rail to the Atlantic States in six days.

All that has been said about the orange will apply to the culture of the lemon, lime and citron. Lemons are sold for about \$30 per thousand in the San Francisco market. The importation of them from Sicily and other foreign countries is now, in a great measure, stopped by the home production. In 1871 there were received in San Francisco from southern California 4,500,000 oranges, and 500,000 lemons.

Almonds, Olives, Walnuts and Figs.

The almond tree will also grow and yield abundantly in various localities on these lands. It bears safely at Santa Barbara and further north, and it is thought would do admirably in San Joaquin, Tulare, and Kern river valleys. It needs thorough cultivation and in most places irrigation. About 100 trees are usually planted to the acre. At four years each tree in the orchard would average a yield equal to a dollar; at six years, two dollars, while at eight years the profit is calculated at about \$400 per acre. The whole world furnishes a market for the sale of almonds.

The olive tree will also grow here. It is increased entirely from cuttings. Sixty trees are planted to the acre. The culture is very simple, consisting only of keeping the soil loose and free from weeds. When the trees are about ten years old they produce from twenty to thirty gallons of olive oil to the acre; and some trees, near San Diego, planted seventy years ago, are said to yield 120 gallons each. The profit of a tree, in full bearing, is estimated by culturists at about eight dollars.

The English walnut is another tree which can be successfully grown on these lands, the cultivation of which is very remunerative. Thirty trees are set to the acre. When at maturity, each tree bears from 100 to 150 pounds of nuts. The nuts fall to the ground when ripe. They are worth from ten to twelve cents a pound, and can be sold all over the world.

Besides these, there can be raised figs, pomegranates, the cactus pear, also pears, apples, quinces, peaches, apricots, plums, currants, etc., in the most infinite variety. Also melons, tomatoes, etc., etc.

Price of Lands and Manner of Selling Them

See pages 17 and 22.

Policy of the Company—Applications for Land and Privileges Gained Thereby.

See pages 19 and 23.

Grading Lands and Manner of Ascertaining their Value.

See page 24.

In everything relating to the price of lands and manner of selling them, policy of the Company, applications for land and privileges gained thereby, grading lands and manner of ascertaining their value, the remarks made on pages 17, 19, 22, 23, and 24 of this pamphlet in reference to the lands of the Central Pacific Railroad Company, will apply equally well to the lands of the Southern Pacific Railroad, the same system for the disposal of the lands having been adopted by this Company.

The same may be also said, generally, of the other things treated of in the part of this book relating to the lands of the Central Pacific Railroad, such as "mode by which public lands are surveyed and designated," "lands granted to the Company," "process by which title is acquired," "alluvial and bottom lands," "grazing lands and sheep ranges," "vineyard lands," "timber lands," "dairy lands in the mountains," "markets," "schools," "education," etc., etc.

WHEN LANDS CAN BE SOLD.

Application has been made for Patents for the lands as far as the railroad has been constructed and accepted. When and as the patents shall be received, the land will be graded and offered for sale.

For further information in relation to the lands of the Company, apply to B. B. Redding, Land Agent of Southern Pacific Railroad Company, Sacramento, California.

