

Shall a  
NATIONAL RESOURCE  
Be Wasted?

« « « « « «



*A Yuma Date Garden*

THE NATIONAL VALUE  
*of the*  
RECLAMATION OF AMERICAN LANDS  
*In the Lower Colorado River Basin*



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# THE GILA PROJECT ASSOCIATION

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*Yuma Pecans Interplanted with Alfalfa*

The Gila Project Association is a non-profit corporation, composed of loyal citizens who organized for the purpose of supporting the development of the agricultural resources of

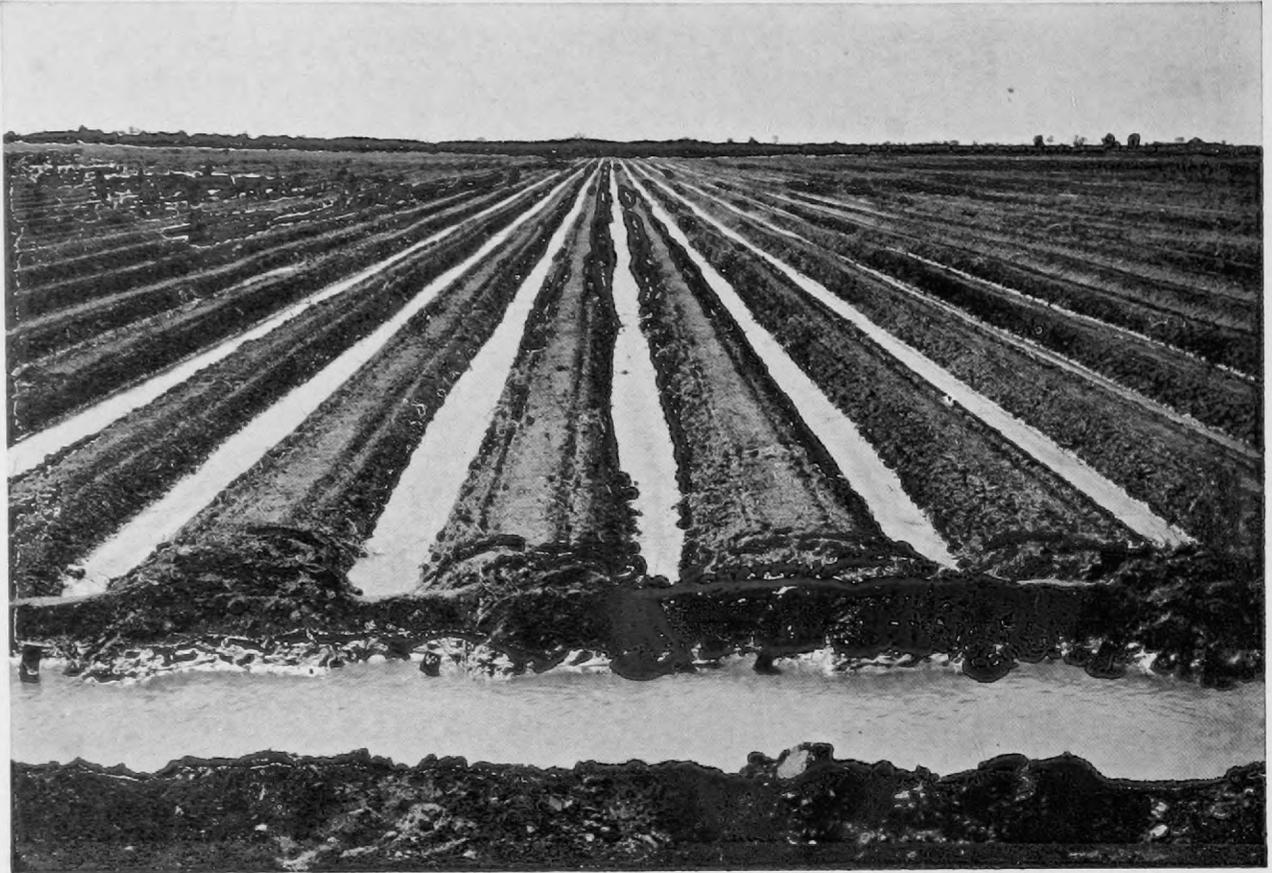
## THE GILA PROJECT

The Gila Project Association is sincerely grateful to all who assisted in the preparation of this work. It is under special obligation to the Yuma County Chamber of Commerce, the Yuma County Agricultural Agent, The President and officers of the University of Arizona, and the Salt River Water Users' Association, for their valuable assistance.

Respectfully submitted,

HUGO B. FARMER, *Secretary*.

1154/1511



#### YUMA LETTUCE

*The mild climate, fertile soil and abundance of water for irrigation combine to make southwestern Arizona one of the most productive winter vegetable districts in the United States. Less than 90 days elapse between planting and harvest.*



# International Problems of the Colorado River

THE AMERICAN and Mexican sections of the International Water Commission held meetings at intervals from February 27th, 1928, to November 9th, 1929, during which efforts were made to reach agreement as to amount of water from the Colorado river to be allocated to Mexican lands in the lower delta of that river.

No agreement was arrived at, the Mexican section insisting upon a minimum amount of 3,480,000 acre feet, and the American section offering a maximum amount of 750,000 acre feet. (See excerpt from their report, Appendix "A").

## MEXICAN AGRICULTURE

THE MEXICAN lands in the delta of the Colorado river are principally devoted to the production of short staple cotton and wheat. During the year 1936 there were at least 130,000 acres in cotton and approximately 20,000 acres in wheat.

It is reliably reported that practically all of a tract of 463,000 acres in Lower California belonging to the Colorado River Land Company, an American corporation, is either being cultivated, or being prepared for cultivation at the present time.



*Alfalfa Seed, ready for threshing.*

During the meetings the Mexican section submitted maps and data showing a minimum amount of Mexican lands in the delta of the Colorado river of 1,500,000 acres, which they claimed to be irrigable at a low cost. (See excerpt from their report, Appendix "B").

SINCE THAT TIME WE HAVE RECLAIMED THOSE MEXICAN LANDS FROM THE ANNUAL FLOODS OF THE COLORADO RIVER BY BUILDING BOULDER DAM AT A COST OF \$114,000,000.00, TO US, AND WHOLLY WITHOUT COST TO THE MEXICAN GOVERNMENT.

There is a large amount of cheap labor available for farming these lands; one colony so engaged includes approximately five hundred Japanese. It is also reported that there are about three thousand Chinese and several thousand Mexican laborers in the Mexicali Valley south of the international boundary line.

The Anderson-Clayton Company, an American corporation, is actively encouraging the development of these Mexican lands; it has an extensive plant at Mexicali, representing an investment said to be not less than \$3,000,000.00, in which cotton is ginned, and various by-products, such as cotton seed meal, oil, cake and soap, are manufactured.

One tract of undeveloped farm land approximating 500,000 acres, lying partly in Sonora, Mexico, and partly in Lower California, and running southerly from the international boundary line at San Luis, is the property of the Colorado River Land Company. That company has recently concluded an agreement with the Mexican government whereby those lands are to be colonized with Mexican citizens within a period of twenty years.

The Colorado River Land Company has recently made application to the Mexican government for a permit to construct a weir dam across the Colorado river at a point opposite Pescadero, Mexico, and about seven miles south of the international boundary line, for the purpose of irrigating said lands; maps and plans for same having already been prepared.

In order to facilitate development of the Mexican lands in Lower California the Mexican government is permitting the importing of farm equipment into that country at Mexicali, duty free.

New railroad facilities are rapidly being developed in the construction of a railroad across the Mexican delta lands connecting Mexicali with Port Otis, on the Gulf of California. The new developments now being rushed to completion for the reclamation of the Mexican delta lands will enable representatives of the Mexican government to present a strong case for a large amount of Colorado river water in future negotiations over the waters of that stream, especially if for any reason work is not prosecuted diligently in the reclamation of our American lands.



*The all-year growing season makes luxuriant pasture land.*

## American Lands, Including Gila Project

ENGINEERS of both the American and Mexican sections of the International Water Commission, made investigations and estimates of the amount of irrigable lands in the lower basin of the Colorado river, the amounts arrived at for both countries being 4,216,600 acres. (See Appendix "C")

Surveys and soil investigations of the American lands in the Gila Project, were made under the authority contained in the Boulder Canyon Project Act, by engineers and experts of the United States Bureau of Reclamation. A report thereof was made and filed December 10th, 1934, showing that there were 585,000 acres of such land suitable for farming pur-

poses, after deducting 6 percent for roads, canals and building sites, all of which could be reclaimed by irrigation from the Colorado river at a reasonable cost per acre. (See excerpts, Appendix "D".)

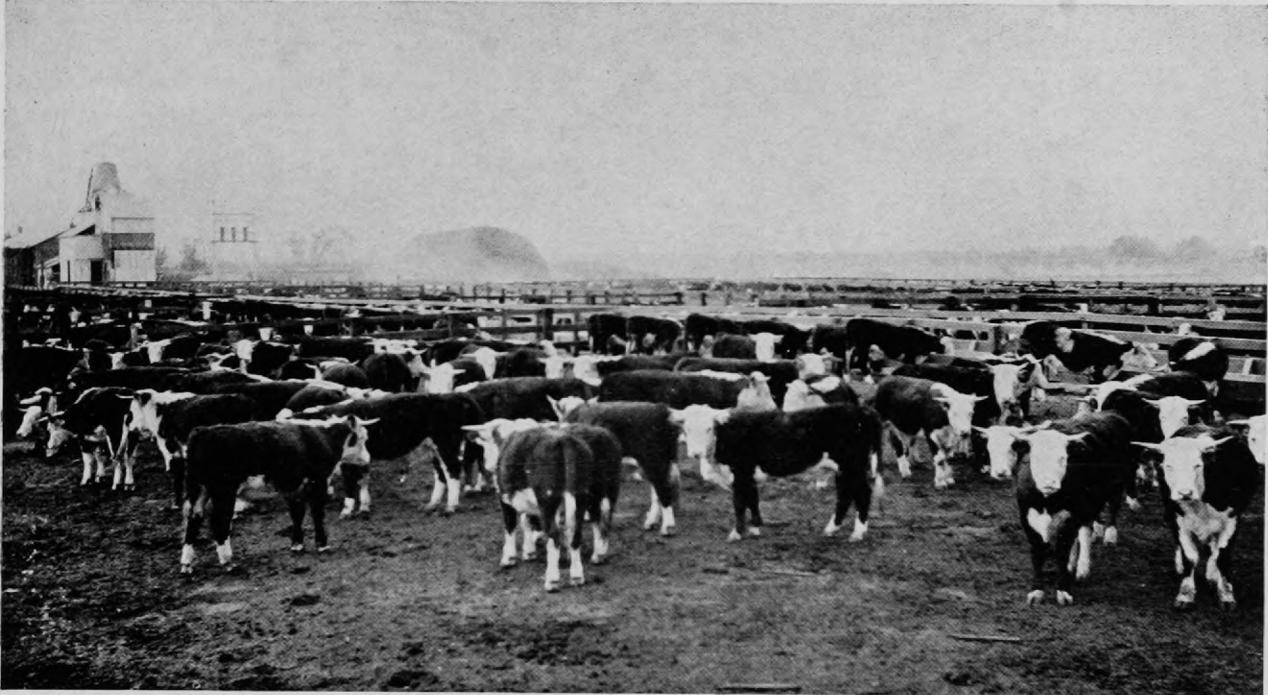
ADJOINING the lands of the Gila Valley Project on the west is a tract of flat, mesa land approximating 45,000 acres. These lands are a part of the original Yuma Project, and, like the Gila Project lands, are mostly unoccupied public lands of the United States. The total area of 630,000 acres is good land and enjoys special climatic advantages which makes it a very valuable natural resource of the United States. *If the reclamation of these lands*

is prosecuted diligently so as to preserve a sufficient water supply for its irrigation, it will eventually become a vast winter garden capable of producing non-competitive crops, and furnishing homes for thousands of American citizens, while its non-development will result in the water being used in a foreign country to produce cotton and wheat with cheap foreign labor, in direct competition with the eastern farmer.

The Secretary of the Interior has caused careful surveys and estimates to be made of the cost of re-

claiming the first unit of the Gila Project, which comprises 150,000 acres of land, and the total cost of same, including construction of power transmission lines, has been estimated at \$19,480,000.00, or an average cost of a little less than \$130.00 per acre.

It has been determined beyond any reasonable doubt that there are in excess of 2,000,000 acres of good American lands in the lower basin of the Colorado river, all of which is valueless without irrigation and wholly dependent upon that river for water to make of it an empire of national importance.



Winter feeding of livestock is an important industry.

## Colorado River Water Available

ENGINEERS of the International Water Commission estimated the annual flow of the Colorado river at Lee's Ferry to be approximately 16,600,000 acre-feet of water, and that below that point an additional amount, not including the water of the Gila river, increased the total to 17,080,000 acre-feet per year.

The waters of the Gila river were appropriated and applied to beneficial uses in central Arizona many years prior to the execution of the Colorado River compact by any of the states of the Colorado river basin. In addition to the lands so irrigated there remains not less than a million acres of good land which engineers have determined to be above the point of economical irrigation from the Colorado river, and that cannot be irrigated from the Gila because of insufficient water. Such lands were not included by the engineers of the International Water

Commission in determining the amount of irrigable American lands in the lower basin of the Colorado river, and are not a part of the Gila Project. It is also true that water from the Gila river never reaches the Colorado river, except on rare occasions of extreme flood conditions, and then only during short periods, and when it does it empties into the Colorado river at a point below all points of diversion to be constructed for American lands.

IN DIVIDING the waters of the Colorado river between the upper and lower basin states, the Colorado River compact reserved to the upper basin states the consumptive use of 7,500,000 acre-feet annually. If that amount is used, there remains under the estimates arrived at an estimated annual flow of 9,580,000 acre-feet, from which must be deducted 1,212,000 acre-feet per year which

the Metropolitan Water District of Southern California and the City of San Diego, are permitted by contract to take by trans-mountain diversion out of the lower basin of the river. Under the estimates of the engineers of the International Water Commission there would then remain an annual flow of 8,568,000 acre feet of water for 4,216,600 acres of American and Mexican lands in the lower basin of the Colorado river.

The warm climate of the lower basin area causes excessive evaporation, and the exceedingly dry atmospheric conditions and all-year growing season make it reasonable to believe that successful farming will require a water duty of approximately four acre-feet of water per acre annually. If the amount of irrigable land in the lower basin of the Colorado river were only 3,500,000 acres it would require approx-

imately 14,000,000 acre-feet of water annually for its successful irrigation. *It therefore seems imperative that the United States protect its valuable arid lands in the lower basin of the Colorado river by perfecting water rights for same.*

It is unthinkable that our Government would use \$114,000,000.00 of money out of the United States treasury to construct Boulder Dam, one of the principal reasons for the construction of which was to store water for American lands, and then allow these good American lands to remain dry. We feel confident that members of the United States Congress will not fail to support sufficient appropriations for the orderly development of irrigation works necessary to protect a water right for the lands of the Gila Project if the matter is properly brought to their attention.



*Thompson Seedless Grapes.*

## Values Created By Reclamation of American Lands On United States Reclamation Projects. Salt River Project.

**I**N 1906 the Roosevelt Dam, the first unit of the Salt River Valley Project was commenced, at which time the city of Phoenix, located in the center of the Salt River Valley Project, had a population of approximately 9,000 people, and the County of Maricopa, including all the project lands, had a population of only about 28,000. The dam was completed in 1911, and 24 years later in 1935, reasonable estimates fix the population of Phoenix as 111,078, and of Maricopa County as 167,340.

The total amount expended by the United States Bureau of Reclamation in the construction of the Salt River Valley Project is \$10,166,000.00, of which the settlers, in addition to other necessary expenditures incurred in developing their lands, have repaid \$7,117,000.00, leaving a balance, not yet due, of \$5,049,000.00. The irrigated and farmed area of the Salt River Valley Project in 1935 amounted to 242,000 acres, and there were 187,000 acres of lands outside the project which had been developed

through the water and power made available through federal reclamation. The project lands have produced field-crops during the 19 years, 1917 to 1935, inclusive, of a value of \$336,792,535.00, and the value of field-crops produced in the whole irrigated area of the Salt River Valley during the year 1935, amounted to \$33,087,893.00 to which must be added the value of livestock produced of \$6,050,000.00, or a total of \$39,087,000.00. These figures do not consider value of by-products or other wealth produced in the area, which is directly attributable to the original investment of the government, most of which has been repaid.

Four of the more important farming activities on the 242,000 acres of the Salt River Valley Project during the year 1935, named in the order of the

railroad records show that 65 percent of all car lot shipments of agricultural products from Arizona consist of winter vegetables, melons and fruits, the two sections of the state supplying these being the two Government reclamation projects: the Salt River Valley and Yuma.

**T**HE MARKET for eastern products furnished by reclamation should be considered, as it is one worthy of consideration by representatives of eastern states not familiar with reclamation. The Salt River Valley Project is not devoted to manufacturing, and during the year 1935, the value of commodity wholesale sales of manufactured goods in the Salt River Valley Project amounted to \$35,125,000.00, not less than 80 percent of which originated



*Green peas in winter—another Yuma industry.*

amount of lands so used, are: (1) Livestock production, including dairying, with 23,014 milk cows, (*no data showing value of dairy products, same is not counted in the values shown.*) This required 109,376 acres winter pasture, and 23,014 acres summer pasture; (2) Alfalfa production, 70,376 acres; (3) Winter vegetables, 29,616 acres, and (4) Citrus fruits 13,110 acres. There were also 22,990 acres devoted to the production of long staple cotton, not produced in the eastern states. It should be mentioned that the all-year growing season makes double crop production possible. There was a total of 186,340 acres in the project producing two different crops the same year. It is important to note that

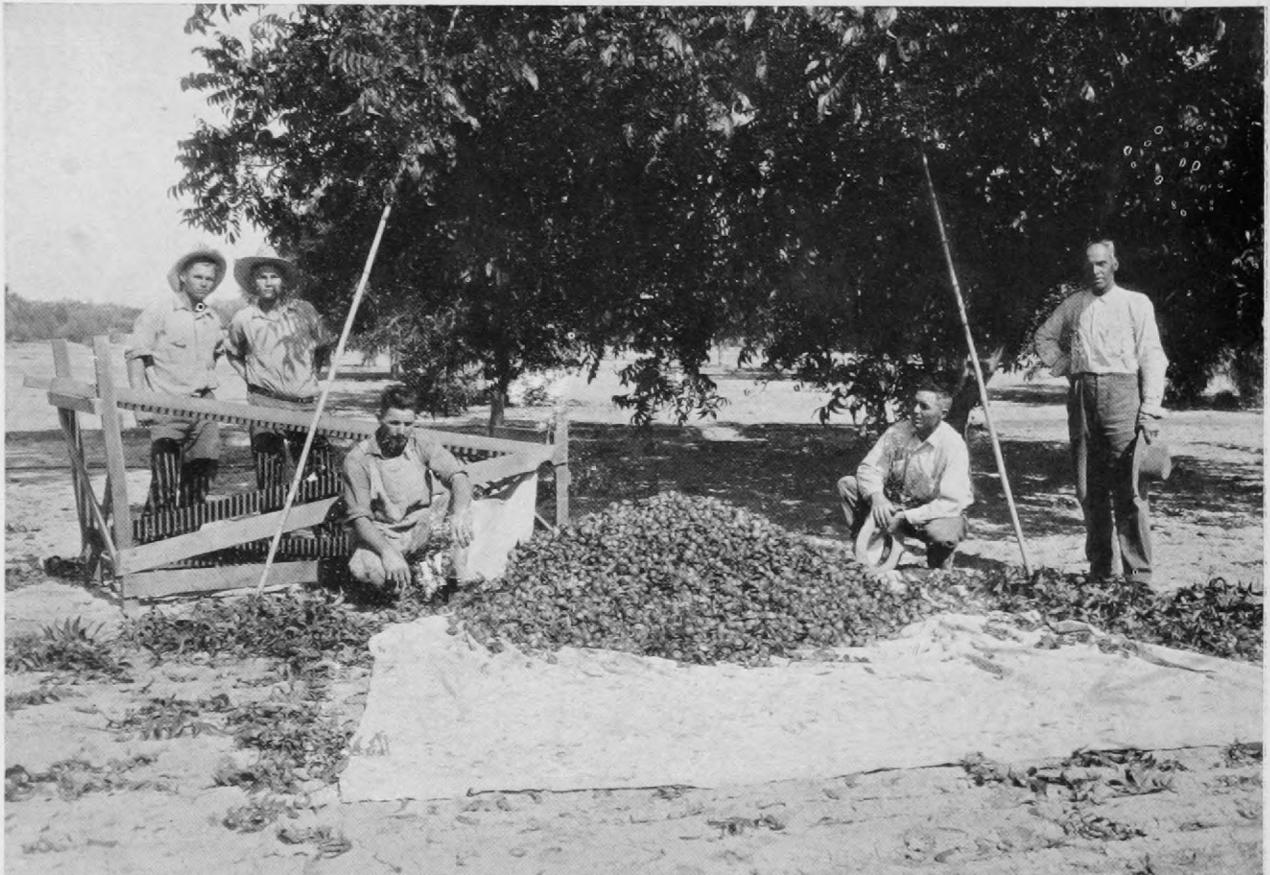
in states east of the Rocky Mountains. Another important factor, other than commodities, is life and fire insurance business. In the year 1935, life insurance policies amounting to \$21,228,362.75, and fire insurance \$185,852,897.00—practically all of which is written by eastern companies—were written in Arizona, at least half of which were written in the Salt River Valley. *It should also be considered that in every purchase of goods of every nature, some factor in connection with its production increases the business of some state east of the Rocky Mountains, whereas, the local production of reclamation projects in no wise adversely affects the agricultural products of the same states.*



## Yuma Project

THE YUMA Project and its auxiliary, comprise about 55,000 acres of irrigated and cropped lands. Situated on the Colorado River immediately north of the international boundary line between Sonora, Mexico, and the United States, it enjoys an all year growing climate, making possible the production of large amounts of non-competitive crops

Since the beginning of the construction of the Yuma Project by the United States Bureau of Reclamation, Yuma has developed from a small town into a city with a population trade area of 20,000 people. Of the \$7,754,000 construction cost for irrigation works on the Yuma Project, the settlers have, in addition to building their homes and clearing and



*Produce of one tree—Yuma Papershell pecans.*

such as winter vegetables and fruits. Yuma, for which the project is named, is styled the Sunshine Capital of the World, and the United States Weather Bureau records for the year 1936 show that the average per cent of sunshine for that year was 92.1, and the rainfall for the year was 1.29 inches. The summers are hot, but exceedingly dry atmospheric conditions make them much less oppressive than many other places in the United States, and for eight months of the year the climate is the most pleasant in the Southwest.

leveling the project lands, repaid to the Government \$4,596,000.00 of the construction costs, leaving a balance yet to be paid of \$3,138,000.00.

During the year 1936 the Yuma Project lands produced field-crops of an approximate value of \$4,226,585.00, or an average yearly production per acre of more than \$79.00, and during 18 years, 1919 to 1936, inclusive, these lands produced new agricultural wealth of at least \$74,750,000.00.

THE MORE important farming activities in the Yuma Project are winter vegetables, melons, fruits, alfalfa seed and hay. Wholesale values on board the cars at Yuma of winter vegetables, melons, and fruits shipped from Yuma by railroad during the year 1936, amounted to \$1,758,619.10. Freight charges on the shipment of these products to eastern markets amounted to \$2,405,550.00 making a value of Yuma vegetables, melons and fruits delivered to eastern markets during 1936, in the sum of \$4,164,169.10. In fact winter vegetables and fruits con-

is not available elsewhere; during the year 1936 there were approximately 8,000 head of cattle and 30,000 head of sheep so fed. The project is noted for the superior quality of many of its products. Yuma winter lettuce, grapefruit and pecans command superior prices because of quality, and it is noted as the premier producer of alfalfa seed, both because of large per-acre yields and viability of the seed produced. The wholesale value of alfalfa seed and hay produced on the project during 1936 amounted to the sum of \$1,508,950.00.



*Yuma Mesa citrus is unequalled in quality and flavor.*

stitute more than 72 percent of all agricultural products shipped by railroad from the Yuma Project. In addition to car-lot shipments a very considerable quantity of fruits and vegetables are shipped by truck, especially to California points. The Yuma Project furnishes valuable pasture lands for cattle and sheep which are brought into the project for feeding particularly during the winter months when such feed

The Yuma Project, like other western reclamation projects, to a very large extent depends upon eastern manufactured articles, farm implements, textiles, and other goods. Wholesale purchases by Yuma County merchants for resale during the year 1936, amounted to \$5,578,500.00, and retail sales during the same period amounted to \$9,501,500.00, not less than 80 percent of which originated in states east of the Rocky Mountains.

## SUMMATION

**I**T SEEMS clear that there is NOT SUFFICIENT WATER in the lower basin to irrigate the lands therein which are susceptible of economical irrigation; and

That the lands of the Gila Project ought to be reclaimed for the following reasons:

(a) According to all the investigations of these lands, which have been made by qualified engineers and soil experts, they are of good quality and are susceptible of economical irrigation from the waters of the Colorado River;

(b) They have exceptional climatic advantages for the production of specialty crops which are non-competitive with eastern agriculture;

(c) One of the principal reasons for the expenditure of \$114,000,000.00 in the construction of Boulder Dam was to store waters for American lands;

(d) These lands are mostly unoccupied public lands and are valueless without irrigation;

(e) Their reclamation will protect a national resource and provide homes for thousands of American citizens;

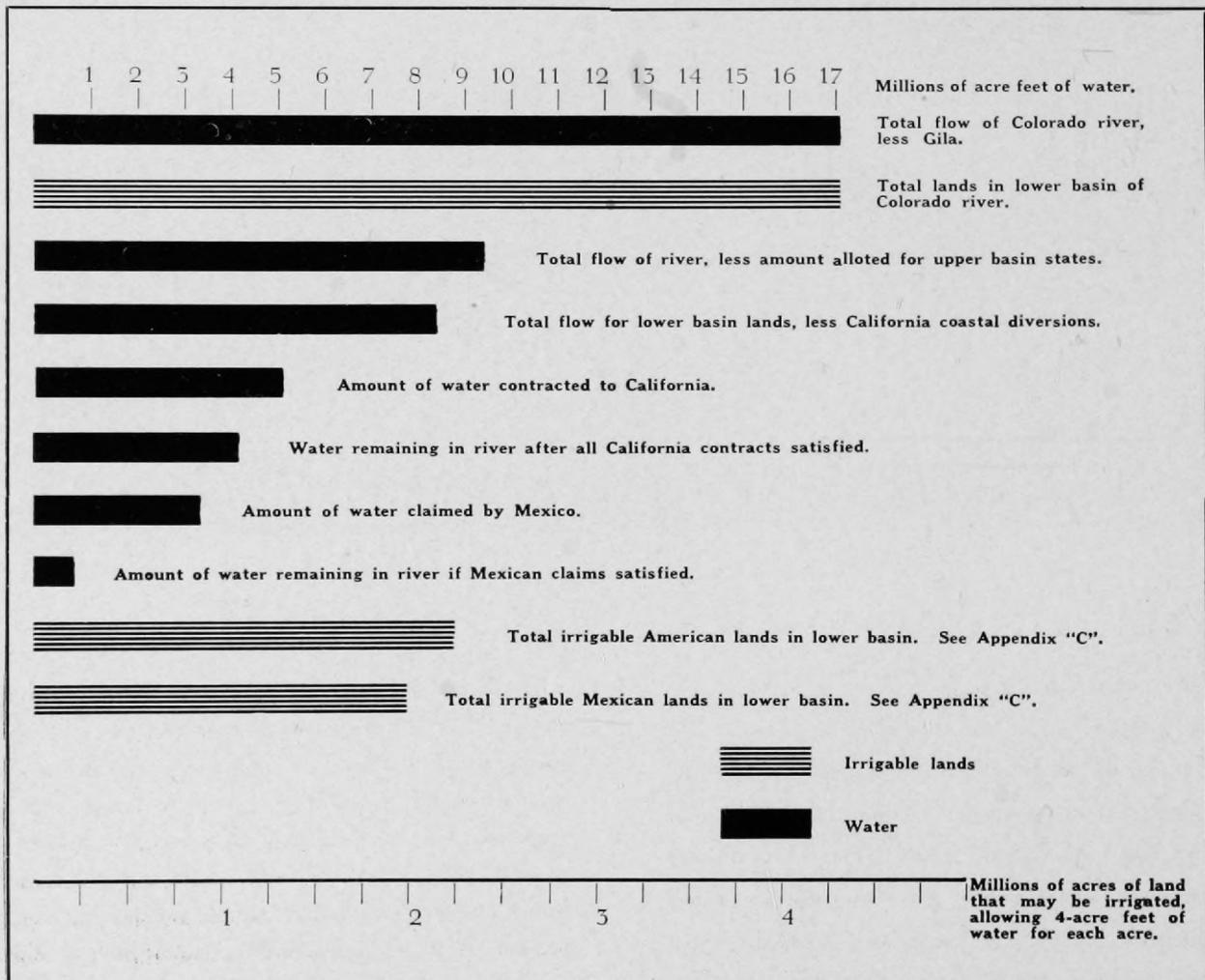
(f) These lands lie directly between two of the

premier reclamation projects of the United States, the Salt River Valley and the Yuma Project, and they have all the advantages of both of those projects:

(g) Their development constitutes a good business investment for the United States, as it will result in the creation of rich agricultural wealth that will pay a material amount of taxes into the Federal Treasury;

(h) THEIR NON-DEVELOPMENT WILL RESULT IN THE WATERS STORED AT YOUR AND MY EXPENSE BEING USED IN A FOREIGN COUNTRY TO CREATE A WATER RIGHT FOR, AND TO PRODUCE, WITH CHEAP FOREIGN LABOR, CROPS THAT ARE DIRECTLY COMPETITIVE WITH THE EASTERN FARMER.

Western reclamation is one of the best investments which has been made by the Government; crop failures are unknown on reclamation projects; the Government provides homes for its people, creates taxable wealth and has its money returned. It represents true conservation of one of the most valuable of our national resources.



## APPENDIX A

*Excerpt From Page 69—Report of International Water Commission*

"Point 8. The Mexican section will doubtless take into consideration the remarks regarding the expenses of the constructions at the river delta and is of the opinion that as soon as the division of the waters has been agreed upon, any action could be undertaken under better auspices, and the work will be greatly simplified.

"On the face of this slight analysis of the facts adduced by the American section which, I must repeat, in my opinion do not in any way affect or modify the conclusions of the memorandum of the Mexican section, I, as a member of this committee, ratify in its entirety point 8 of said memorandum, and beg to conclude my statement regarding the distribution of the waters of the Colorado River in the following terms:

"The Mexican section, in demanding waters of the Colorado River for Mexican lands, has taken into consideration the area of the lands, the rights exercised by Mexico up to the present time and the flow of the Colorado River.

"The Mexican section is of the opinion that the area of American lands which require improvement or pumping lift below 80 feet is approximately 6,000,000 acres, and the area of Mexican lands in similar conditions is 1,500,000 acres. Considering that the flow of the Colorado River at Yuma is 17,400,000 acre-feet, and taking into consideration the principle of proportionate distribution to the lands in each country under similar circumstances, the share of Mexico should be 3,480,000 acre feet, and the American portion 13,920,000 acre feet.

"The volume of water to which Mexico is entitled by virtue of the concession of the Sociedad de Riego y Terrenos de la Baja California is 3,600,000 acre-feet.

"The apportionment to Mexican lands of 750,000 acre-feet, which the American section considers just and generous, is notoriously disproportionate to the figures just stated, and therefore Mexico can not accept the amount of 750,000 acre-feet as its equitable share of the waters of the Colorado River."

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## APPENDIX B

*Excerpts From Page 45 Report of International Water Commission*

"Mr. Dozal then stated the position of the Mexican section to be as follows: He invited attention to the map which had been prepared by the Mexican authorities, showing the irrigable area in the Colorado River Delta below the international boundary line, which indicated in green the lands, regarded at the time the map was made, as susceptible of cultivation and irrigation. He explained that the position of the Mexican section was based on the following premises:

"1. Only land that could be served by ditches and where quality is good and which could be util-

ized economically and without very expensive improvement had been included.

"2. No land is included except that which could be supplied by a lift of not exceeding 80 feet.

"3. Land immediately north of the upper end of the Gulf of California has not been explored and was not included.

"4. That a water duty of 3 feet was regarded as sufficient.

"That means that we claim that in Mexico the lands irrigable, including the lands irrigated, have an area of 1,500,000 acres, for the irrigation of which we believe we require 4,500,000 acre-feet."

## APPENDIX C

*Excerpts From Page 91—Report of International Water Commission*

Lower Basin:	Acres	Acres	Acres
Nevada (S. Doc. No. 186, p. 78).....			15,000
Arizona—			
Parker Project .....		110,000	
Yuma Project .....		95,000	
Parker Gila .....		652,000	
Minor Areas:			
Cottonwood .....	4,500		
Bullhead .....	500		
Hardysville .....	2,300		
Mojave .....	30,500		
Chem. Valley .....	3,000		
Wms. FK R.....	1,600		
Cibola Valley .....	16,000		
Below Cibola Valley .....	4,000	62,200	
			897,200
California—			
Mojave Valley .....		1,000	
Chem. Valley .....		2,000	
Opposite Parker .....		4,000	
Palo Verde Valley .....		79,000	
Palo Verde Mesa .....		40,000	
Chuckawalla Valley .....		124,000	
Yuma Indian Reservation .....		15,000	
Imperial and Coachella Valleys.....	1,166,000		1,451,000
			2,545,000
Mexico—			
Sonora:			
East of old channel of Colorado River north of Lerdo Colony .....		65,600	
South of Lerdo Colony.....		171,000	
San Luis Mesa and Lerdo Colony (pumping lift under 75 feet) .....		350,800	
			585,400
Lower California:			
Irrigable from Alamo Canal and siphons and in delta region .....		862,700	
Algodones Mesa (pumping lift under 75 feet)....		59,400	
East foot of Cucapa Range slope (pumping lift under 60 feet).....		35,800	
Laguna Salada .....		285,500	
Laguna Salada slopes (pumping lift under 80 feet)		155,500	
			1,576,500
Total Lower California.....			1,576,500
Total Mexico .....			1,961,900

## APPENDIX D

### EXCERPTS FROM ENGINEERING REPORT BY U. S. BUREAU OF RECLAMATION ON GILA PROJECT

"The greater portion of the area within the project is Government land which was withdrawn from entry March 14, 1929.

"The land was classified to determine its fitness for irrigation farming prior to the planning of the irrigation system, and 585,000 acres were found suitable for farming purposes after reducing the total arable area 6 percent for land taken up by roads, canals and building sites out of a total of 1,065,000 acres within the project boundaries.

"The Gila Valley Project as far as now planned is the only large body of land in the State of Arizona other than the Colorado River Indian Project of 90,000 acres susceptible of reclamation by the waters of the Colorado River at a reasonable cost per acre.

"The project has a climate with an all year round growing season for diversified crops adapted to the various seasons, justifying higher irrigation costs than

would be possible in most other irrigated sections.

"Little seepage trouble is anticipated will develop in the First Unit, due to the great depth of soil free of any hard pan or other impervious strata to sustain a high water table.

"The cost of the project is reasonable in consideration of its advantages and it is believed that the land can carry the annual O. & M. charges and repay the construction cost over a forty year period under normal farm conditions."

"The climate in the Gila Valley area is dry and hot with temperature ranges from slightly below freezing to 120 F. Light frosts occur in the valleys during November, December and January but on the Yuma Mesa portion of the Yuma project of the U. S. Bureau of Reclamation there has been no material frost damage for the 40 years that citrus has been grown there."



Thousands of sheep are brought into the Yuma area each fall to be pastured.