The Agricultural Promise of the Sacramento Valley: Some Early Views

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The first impression that a modern observer has of the Sacramento Valley of California is usually one of bounteous agricultural productivity. It is one of the world’s most favored agricultural regions and even casual or uninformed onlookers cannot fail to be impressed with the huge tracts of level, alluvial soils, the abundance of irrigation water, and the subtropical climate. The vast fields, the profusion of mechanized equipment, the variety of facilities for crop processing and storage, and the diversity and plenteousness of the field and tree crops, all bear striking witness to the fruitfulness of this area.

Early observers of the Sacramento Valley, however, at the time of pioneer settlement around the middle of the last century, perceived the region quite differently. Even though the landscape was essentially the same as it is now, the pristine Valley differed from the modern one in a number of important details. These significant differences, in the context of the agricultural technology prevailing at the beginning of American occupancy, evoked varied appraisals of the agricultural worth of the Sacramento Valley. The unanimously favorable opinion of modern times, based on abundant evidence and aided by hindsight, was not present among early observers. Indeed, some were pessimistic about the region’s agricultural prospects.

Early investigators of the Sacramento Valley who wished to assess the region’s agricultural potentials, faced considerable problems. First, the Valley’s sparse aboriginal population lived by hunting and collecting and practised no agriculture. Accordingly, there were no agricultural examples to follow or store of knowledge to appropriate. In addition, the early observer was generally operating far outside of his accustomed frame of reference. This was so since geographical conditions in the Sacramento Valley were significantly different from those in the humid East or northern Europe from whence most early visitors came.

The landscape presented by the pristine Sacramento Valley had many features which must have seemed unpromising for the agricultural future of the region. In general trees were scarce. Dense growth of trees occurred only among the natural levees that bordered the principal streams. Elsewhere, trees occurred only in scattered stands and there were extensive areas more or less devoid of tree growth where only annual grasses grew. The most numerous trees were valley oaks, handsome and impressive but a species lacking most of the qualities associated with oaks and affording wood that was mainly useful as fuel. The lowest-lying areas supported a heavy growth of tule, a bulrush, and other aquatic vegetation. This paucity of trees in the Sacramento Valley was taken as a discouraging indicator of agricultural promise because at this time of the nineteenth century trees were believed to betoken high soil fertility. Natural areas devoid of trees were considered to lack agricultural value.

Climate was the other major factor that conditioned early visitors’ impressions of the agricultural promise of the Sacramento Valley. Like most of lowland California, the Valley experiences a modified version of the Mediterranean type of climate. Its principal features are long, hot, dry summers and fairly short, mild winters during which moderate rainfall occurs. Practically all the rainfall is between November and May, with precipitation being erratic both within the seasons and over the years.

Climatic and topographic conditions in the Sacramento River basin are highly conducive to flooding. Indeed, before the construction of numerous dams, artificial levees, and other flood control works, the Sacramento Valley was subject to almost annual inundation. According to the season, the pristine Sacramento Valley displayed a strikingly different appearance. Both in winter and summer it presented forbidding aspects. The winter rains caused the bottom lands to be so wet and muddy, or actually flooded, that travel was difficult or impossible. Even a moderate amount of rain could make the heavy clay soils of some areas so gummy that wheeled vehicles or even animals moved with difficulty. The winter and spring rains promoted the growth of annual grasses and herbs so that the Valley assumed a lush and green appearance. With the advance of the hot dry season the annual vegetation turned brown and the parched clay soils developed numerous gaping cracks. Wildfires, either started by the Indians or of natural origins, burned over vast areas of the Valley so that early travellers in the area often complained of a lack of feed for their animals.

The first recorded entry into the Sacramento Valley...
Fig. 1. Sketch-map (Diseño) of the first land grant application, the Rancho Rio Ojotska, in 1833. Note the references in Spanish to swamps, and sterile and fertile areas.
proper was by the Spaniard Gabriel Moraga in 1808. His objective was to locate potential mission sites in the Central Valley. While travelling north to the Mokelumne River (actually just south of the Sacramento Valley but in similar country) Moraga noted: "All the land that we travelled over today is without water and nothing good was found in the distance traversed."  

Significantly, this negative observation was recorded on October 1, toward the end of the long summer drought. On reaching the Mokelumne River, Moraga rather grudgingly inserted the observation that "the only good things found were good plains for sown crops." Several other Spanish expeditions investigated the Sacramento Valley, including the well-known journey of Luis Arguello, but no moves were made toward agricultural colonization of the Valley which may possibly indicate negative first impressions.

Negative or otherwise, many of the very earliest impressions of geographical conditions in the Sacramento Valley were simply erroneous. Moraga, for example, implied that the Valley had an east-west orientation. Josiah Meigs' 1818 map of western North America indicates an unnamed river extending east of San Francisco Bay. Much confusion surrounded the location, or even existence, of the Sacramento River itself.

Initial investigation of the interiors of new countries is generally best performed by means of river navigation. However, the Sacramento River did not provide the convenient access to the interior that one might expect. Because of drastic fluctuations in flow, navigational impediments such as sand bars, a meandering course, and the bewildering maze of waterways at the river mouth (where it forms a so-called delta with the San Joaquin River) the Sacramento provided an imperfect avenue of approach. However, despite its deficiencies as a navigable stream, the river route was employed by several early visitors to the area. It was, of course, via the river in 1839 that John Augustus Sutter established his agricultural settlement in the Sacramento Valley. Sutter had probably learned of the richness of the Sacramento Valley during the stay in New Mexico. During Sutter's time with the Russian colonists, at Sitka, his attention had been called to this area by a report of Otto von Kotzebue who had sailed up the Sacramento as far as its confluence with the American River in 1824. Sutter must also have been aware of Belcher's 1837 exploration of the Sacramento River. Belcher had made an investigation of the Delta and lower Sacramento Valley and reported favorably on the area. His report contained much information on vegetation, soils, and related matters. He noted: "The soil on the banks [of the Sacramento River] is generally a loose mixture of sand and clay, entirely alluvial." Smith noted the Valley's potential for cultivation in the dry season because "Mt. Joseph [the Sierra Nevada] fills the streams to overflowing and completely saturates the light rich soil of the valley."  

Philip Leget Edwards, a former mountain man, journeyed through the Sacramento Valley in 1837. He appears to have taken an ambivalent impression of the area's agricultural promise. After remarking on the apparent fertility of some of the soils he noted that "At this season [August 20] it presents a parched and uninviting appearance. Large tracts are covered with pebbles, and a great portion of the valley is subject to annual inundations."

Among the earliest accounts of the Sacramento Valley settlers, was that of Josiah Beldon. He first visited the Valley in 1841 and subsequently obtained a land grant along the Sacramento River near Red Bluff. Beldon agreed with the first migrants that the area was poorly endowed for farming, though he did feel it was suited for raising livestock. Another pioneer settler, George W. Browning, while favorably impressed with...
sections of the Valley dismissed the outer slopes as "not susceptible [sic] of cultivation owing to its barro-ness [sic] and drought.""

In the period just before the discovery of gold in California, expeditions sponsored by the United States government conducted wide-ranging investigations that included the appraisal of agricultural resources in the area. One of the best known of these expeditions was carried out by the United States Navy, under the leadership of Lieutenant Charles Wilkes. In negative terms Wilkes described the Sacramento Valley's climate and the flood hazards, and suggested a connection between the paucity of trees and low fertility in the soils."

Other early settlers in the Sacramento Valley also voiced misgivings concerning the cropping prospects of the area because of the apparent winter flood-summer drouth pattern. Alfred Baldwin considered the Sacramento Valley climate as inimical to stable and prosperous agriculture. In 1846, he claimed "The plains of dried grass" proved concretely that all California was a land of no rain and therefore a desert."" Equally pessimistic views were expressed at about the same time by Robert Semple, an early political figure, who also believed that most of the Sacramento Valley was unsuited to cultivation because of the extreme aridity during summer."

Even a more thorough investigation did not always remove the initial pessimism evoked by the bleak appearance of the Sacramento Valley. In 1850 a medical doctor, James L. Tyson, expressed the same pessimistic appraisal: "I came to the conclusion...it is not adapted to agricultural purposes.""

Not all early observers of the Sacramento Valley were so pessimistic concerning the region's agricultural future. Maybe on account of superior foresight, or because of a wider range of experience on which to draw, some early visitors anticipated a promising agricultural future for the Valley under American settlement. This optimism was manifested in the 1840's by a new type of migrant to California. These new immigrants differed from their predecessors in that they mainly originated in the Middle West and travelled by the overland trails. Many of them opted to settle in the interior sections of California, including the Sacramento Valley, rather than along the coast.
The overland migration was in part a response to the spreading waves of highly favorable California publicity. The region was described in the most roseate of terms. L. W. Hastings, an early California booster, invited easterners to make California their home. He asserted that “The deep, rich, alluvial soil of the Nile, in Egypt, does not afford a parallel.” Hastings also declared the valley of the Sacramento possessed “a soil, which is scarcely paralleled, for fertility and productiveness.” Other widely read California promoters of this period included Thomas J. Farnham, who characteristically wrote in glowing terms of the new land.

After the discovery of gold in California, descriptive and promotional material became even more exuberant. Specific references to the Sacramento Valley included the 1850 statement of T. Butler King who claimed that its soil was “very rich, and, with a proper system of drainage and embankment, would undoubtedly, be capable of producing any crop, except sugar cane, now cultivated in the Atlantic States of the Union.” King also declared that rich alluvial lands would produce from 40 to 60 bushels of wheat and barley, from one bushel of seed, without irrigation.

E. Gould Buffam, also writing in 1850, was of the opinion that the low alluvial bottom lands along the Sacramento River were amenable to cultivation and presciently declared that when the “mineral region shall offer less temptation than at present the capacities of the soil will be fairly tested... The extensive and fertile valleys of the Sacramento and San Joaquin, which offer the greatest inducements to the agriculturalists...” Others at this time saw agriculture in the Sacramento Valley as complementary to, rather than replacing, gold mining in the nearby Sierra Nevada. Thus, Phillip Lynch, a resident of Ophir, Placer County, replied in 1851, to the “Agricultural Circular” (soliciting various kinds of agricultural information) of the U.S. Commissioner of Patents, that not only would California have an inexhaustible supply of gold, but also would become one of the leading agricultural states in the union.

A few years later, F. Langworthy, in his sober and sophisticated narrative written in 1855, was moved to declare that “The soil, in all the principal valleys, is of surpassing fertility...” and predicted that “California’s will...become an earthly paradise, rivaling in beauty Eden’s primitive garden.” On a more mundane note, he also suggested that the tule lands could be reclaimed and converted into rice fields of great value.
After 1848, gold seekers came from afar and also from nearby. Great numbers of local residents left their homes in town and country to seek fortunes in the mines. Thus, arrivals in California in the early stages of the Gold Rush were apt to receive a distorted impression of the agricultural merits of the area with much of the farmland abandoned in favor of mining. Agricultural land, including the plains of the Sacramento adjacent to the mining areas, was without interest; gold was the focus of all attention and eclipsed all other economic endeavor. This situation was described by Justus Rogers, an early pioneer of Colusa County, when he commented about the typical miner: "California to him was productive of nothing but gold, and when that was exhausted, then would come the retreat and stampede back to the East, where they know how to farm."30

A number of the earliest commentators on the Sacramento Valley's agricultural promise properly drew important distinctions between different sections of the valley floor. Generally the strip of natural levees bordering the major streams (extending for several miles in width in some places) was seen as offering special advantages. Most importantly, the slightly elevated surface of these natural levees provided a comparative freedom from flooding, at least in all but the severest inundations. Additional advantages of the levees were access to navigable waterways and the occurrence of sandy alluviums, which provided much more tractable arable soils than the extremely sticky, heavy "adobe" soils of the lower parts of the Valley. Natural sub-irrigation from the streams also favored plant growth and reduced fire hazard during the long summer drouth.

These advantages of the natural levees were noticed by some of the very early observers. Edwards, as early as 1837, had noted that: "The soil, as far as my observation extends, is of excellent quality and immediately on the banks of its rivers superior to any I have seen on the Pacific Coast."31 R. S. Williamson, in 1853, confirmed the favorable view of the riparian lands after making a careful investigation of regional soil difference in the Sacramento Valley.32 Still later, John Hittell declared simply that "The richest soil is on the immediate bank."33

For intensive and varied crop production in the Sacramento Valley, irrigation is essential. The pioneer settlers in the Valley, however, were mostly from eastern areas quite lacking any tradition of irrigation agriculture. Even so, the possibility of irrigation was raised very early. Possibly the first recorded proposal for irrigation of the Sacramento Valley was made in 1839 by Alexander Forbes. Doubtless after observing Mexican irrigation in the southern coastal area, he noted that: "The Jesús María empties itself into the Sacramento, at some distance from its mouth. . . . It flows from the south and west, through country said to be of great fertility and susceptible of irrigation by it."34

Williamson, author of a pioneer investigation of the soils and vegetation of the Sacramento Valley in 1853, declared that the region could be one of the most productive in the world but that one indispensable element was required, namely, water.35 A few years later Henry Eno compared the Sacramento Valley with the Plains of Lombardy, but expressed the view that development comparable to that of northern Italy would not occur until development of large-scale irrigation systems.36

The first impressions of the agricultural potentials of the Sacramento Valley were quite varied but tending towards the negative. These initial judgments were made on the basis of fairly hasty observations and without the benefit of practical knowledge of the local situation. Closer and more extended observation, together with actual experience, led to more favorable opinions as the true agricultural worth of this fruitful region began to be realized.

This transition from negative impressionistic opinion to solid optimism on the Sacramento Valley's future is well illustrated by the carefully thought out judgment of the area as expressed by Alonzo Delano in 1850. After first taking a negative view, Delano came to realize that with appropriate adaptation to California conditions, agriculture could be consistently productive. His conclusion was that while irrigation was necessary for some crops, "California had its regular seasons, as well as the Atlantic States, and that grain put into the ground in season to have the benefit of the winter and spring rains, grows rapidly in the prolific soils, and matures before the summer sun withers it."37

Delano's reasoned opinion was typical of a general shift from an uninformed and prejudiced negativism to a more realistic appraisal of what was to prove to be an immensely rich farming region. Many factors influenced this change of opinion including an appreciation
Fig. 6. The Derby map of the Sacramento Valley, 1849, shows the extensive plains and areas prone to flooding, the riparian forests, and the enclosing uplands. The map contains comments such as "rich arable soil," "plains usually overflowed in winter," "large herds of wild cattle and horses," and "good grazing."
of the necessity to adjust to a Mediterranean-type seasonal rhythm of cropping. Equally important were the technological responses necessary for effective agricultural land use in the Sacramento Valley. These involved substantial investments in engineering works of various types to drain, protect from flooding, and eventually to irrigate, the bottom lands. Early visitors, especially those unfamiliar with the techniques of irrigation, can hardly be blamed if they did not immediately realize the necessity for a sequence of reclamation and flood-prevention works in order to prepare for artificial distribution of water. Inevitably, realization of the natural advantages of the Sacramento Valley became widespread and after passing through a phase of extensive dry-farming (mainly for wheat) in the 1870's and 80's, the region developed along the lines that led to the present forms of land use.

Of course, there is no way of telling how many early pioneers were diverted from settlement in the Sacramento Valley because of the initial negativism regarding the area. Similarly, there can be no estimate made of the numbers who were attracted to the Valley by later, favorable reports as successful agricultural exploitation proceeded. Nevertheless, regardless of motivations, the Sacramento Valley bottom lands quickly filled up once agricultural settlement got under way. Valley counties contained only 27,559 persons in the 1850 Census. This had increased to 71,509 by the 1860 Census and reached 122,220 by 1870. The Sacramento Valley was by that latter date well on its way to achieving its destiny under Anglo-American occupancy.

NOTES


3. On August 5, 1833, John Work wrote "The country has been recently overrun by fire so that we can scarcely find feeding for our horses," Alice B. Maloney ed., Far Brigade to the Bonaventura, John Work's California Expedition 1832-33 for the Hudson's Bay Company (San Francisco: California Historical Society, 1945), p. 70.


9. Ibid., p. 132.


11. Ibid., p. 61.

12. Ibid., p. 61.


17. Alfred Baldwin, Recollections, (no date), mimeographed from a typescript at the Bancroft Library, Berkeley, California, with added notes by Charles N. Edmonston, p. 1.


21. Ibid., p. 77.


24. Ibid., p. 34.


28. Ibid., p. 194

29. Ibid., p. 172.


