

# Irvine Historical Society

## Irvine, California

**The Irvine Historical Society is dedicated to preserving the rich heritage of the Irvine Ranch, once one of the largest private ranches in the United States**

## Irvine Development to 1950s

The outside world had only to look at James Irvine's farm to realize that this man was a gifted agronomist. The thousands of acres of celery, corn, sugar beets, chili peppers, alfalfa, barley, lima beans, black-eyed beans, potatoes and other crops were abundant proof of his farming acumen. The thousands of acres of perfectly laid out rows of citrus, persimmon and walnut trees earned him the awe of everyone in the valley. Though he had wealth beyond most people's comprehension, Irvine was the hardest working person in The Irvine Company and that is not to say that he did not employ a lot of hard-working people.

Irvine was in the position of having almost total control of a quarter of Orange County, and he knew every square inch of the property under his control. His love of the land was unmatched, and he planned that it would remain an agricultural preserve in perpetuity. He also made plans to build the town of Myford as a shipment center for the crops.

## Myford Springs Up Around Railroad

In 1887 when the San Bernardino and San Diego Railroad, a Santa Fe subsidiary, purchased a 300-foot-wide right-of-way across the ranch and a four-acre site for a depot, one of the conditions of passage had been that a first-class passenger station be built within six months. That did not happen. Instead, the railroad built a small covered, but open-sided way station where passengers could be shaded from the sun though not fully protected from the elements. The first-class passenger station would not be built for another 13 years.

The first tenants harvesting barley crops on the Irvine Ranch had to go through the Tustin warehouses for processing and shipment. After the railroad was built through the ranch, Irvine's Uncle George, who exercised control of the ranch until Irvine reached age 25, decided against continuing that method of shipping crops since it involved loss of control and a resultant loss of money.

In 1889, George Irvine commissioned builders Newmark and Edwards to build a barley warehouse on the north side of the railroad tracks, about one hundred yards east of where the

depot would eventually be built. In order to maintain control of the land upon which the warehouse was built, Irvine reduced the railroad's right of-way to the ten-foot space between the warehouse and the tracks. The elevation at the site selected for the railroad depot was, at 130 feet, the highest ground in the flatland area of the Irvine Ranch. Even so, heavy rains in late December 1889 washed out the newly laid tracks. The tracks were laid again as soon as the ground stabilized.



### *New Irvine School*

*This new school (left), built in 1929 on the northeast edge of town facing a bean field, was the second in Irvine and indicative of the growth of the community. The original school became a community hall when this larger one opened. The new school eventually was vandalized repeatedly and finally destroyed by arson. (Photo courtesy of Irvine Historical Society.)*



*Thousands of acres of the Irvine Ranch were set out in crops of celery, corn, sugar beets, chili peppers, alfalfa, barley, lima beans, black-eyed beans, potatoes, lemons, avocados, walnuts and Valencia's.*



### *Depot Site*

*The depot site was to the right (where tree is now). The tracks, shown here heading towards Santa Ana, dropped 110 feet between the depot site and Culver Drive.*



### *Myford Post Office/Second Warehouse*

*This home, located on the southwest corner of the railroad and Central Avenue, was the first post office in Myford (The Duke Paschall family is in front yard). The school district boarded its teachers here. The house was moved in 1935 to make way for the construction of a home for the*

*bean and grain warehouse manager (Photo courtesy of Arthur Paschall). Right: the second warehouse, built immediately east of the Newmark and Edwards warehouse, was for both barley and beans. It opened for business as the Irvine Warehouse Ltd. (Photo courtesy of Irvine Historical Society.)*

When the railroad's right-of-way had been let through the Irvine Ranch, there were no obstacles in the way. The strip of land upon which the right-of-way was obtained was parallel to the foothills and basically flat. From the depot site on the Irvine Ranch to Santa Ana, the grade was all downhill. The tracks dropped 110 feet from the depot site (close to present day Sand Canyon

Avenue) westward to Culver Drive. Culver Drive was 18 feet above sea level at the railroad tracks.

Engineers on trains coming from El Toro towards Santa Ana found the straight downgrade one of the fastest stretches of tracks in the United States. Those coming from Santa Ana towards El Toro, however, would find it one of the slowest sections. The train, powered by steam engines, often had to be split, and the grade overcome in two trips.

Soon after the Newmark and Edwards barley warehouse was constructed, a home was built on the south side of the tracks to house the family of the town cook. It had sleeping quarters that were rented to overnight guests, and a dining area for patrons. Seasonal workers who did not live nearby could eat all their meals there. A cistern was installed immediately outside the back door for the water supply. Sam Munger, who was foreman of the warehouse from 1891 to 1896, rode on horseback to work from his home in El Toro.

When James Harvey Irvine took control of the ranch in 1892, he realized another crop storage warehouse would soon be needed. The barley crop was still being expanded and did not reach its peak until 1895. That year, the Irvine Ranch had more than 31,000 acres planted in barley. By comparison, all the other farms in Orange County had 19,610 acres in barley. Maximum capacity of the 30- by 100-foot Newmark and Edwards warehouse was fewer than 20,000 sacks. It could not hold all of the barley crop, much less the bean crop as well.

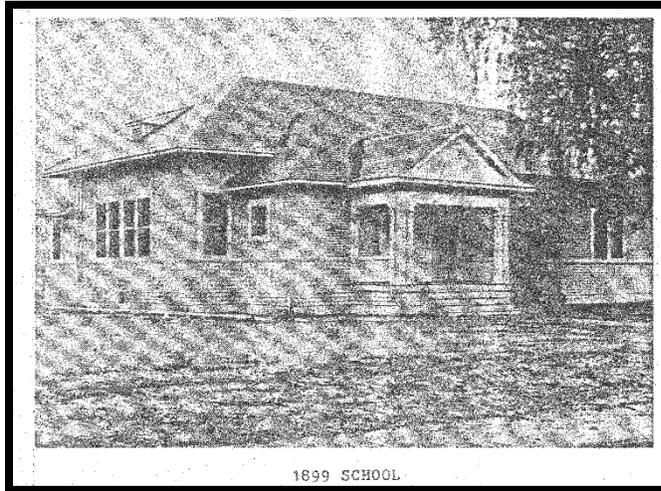
The second warehouse was built immediately east of the first. A 20-man carpentry team completed the warehouse within six months, using 140,000 board feet of pure pine. The lumber, hand selected and without a knothole, was cut by a steam driven sawmill set up on site. The floor was of thick walnut planks.

Operated initially as the San Joaquin Warehouse Company and later as the Irvine Warehouse Ltd., the new 40- by 350-foot warehouse was considerably larger than the Newmark and Edwards warehouse. It had storage capacity of 200,000 sacks of beans or barley, each weighing 100 pounds. The sacks were stacked from the floor to the rafters in interlocking piles to prevent them from falling. The warehouse operation sacked lima, garbanzo, and black-eyed beans, barley, and oats.

In less than five years, a third warehouse was needed. Irvine used the plans for the second warehouse and had the third built as a mirror image to it. The east end of the second warehouse held two fumigation chambers where the produce subject to weevil infestation - black-eyed beans, for example - were fumigated in the sacks. This was a dangerous process using methyl bromide, a colorless and odorless - but very deadly - gas, and workers were careful not to enter the fumigation chambers without knowing when the last canister had been set off. By building the third warehouse as a mirror image to the second, the four fumigation chambers were localized for safety and convenience.

In 1899, James Irvine was approached by the newly formed San Joaquin School District to build a school for the children of his ranch tenants. Without delay, he selected a site immediately across the tracks from the Newmark and Edwards barley warehouse and ordered a schoolhouse

to be built. According to Armor's 1911 book, Irvine donated the school and land to Orange County for school purposes.



### *Irvine Public School*

*In 1899, Irvine built a school for the tenants' children. It is said that the person who made the sign did not know how to spell "school." This 1908 photo shows the postmaster/cook's son, Arthur Paschall, standing fifth from right in front row. Many of the children are barefoot (Photo courtesy of Arthur Paschall). Below: The original Irvine*

*school and gazebo can be seen behind wagons waiting to unload at the warehouses. (Photo courtesy of the late Irene Thomas.)*

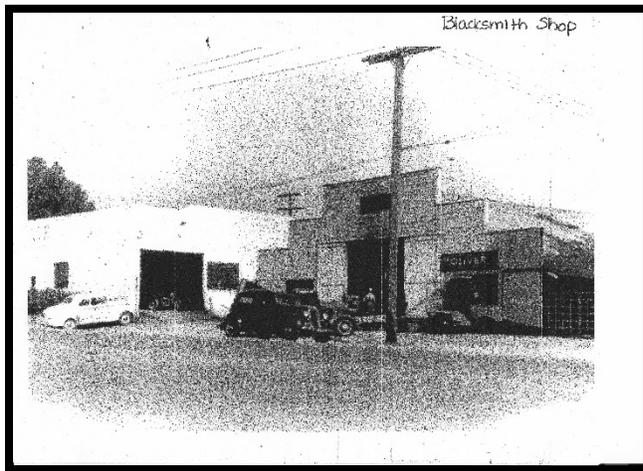
The school was large and accommodating. It had one large room, two smaller rooms, a kitchen, cloak room, and two restrooms. The large room had a stage at one end. A gazebo was built on the north side of the school near the railroad tracks, and a shed for horses was behind-the school. In 1911, the school had an enrollment of 100 pupils, all children of the tenants. Average attendance was 80.

At the peak of harvest season, 100 or more workers were needed to run the warehouse operation. To enable them and the Irvine Warehouse Ltd. to receive mail, a post office was opened in the little house across the street from the school on May 20, 1899. Since a town in Calaveras County was already named "Irvine" - after Irvine's Uncle William, who had immigrated from Ireland with Irvine's father in 1846 - Irvine elected to name the post office "Myford" after his infant son.

Perpendicular to the railroad tracks in front of the Newmark and Edwards warehouse was a wagon road that continued south between the school and the little house that served meals, rented beds and handed out the mail. By the turn of the century, it had become a quiet street extending from Irvine Boulevard past the Harkleroad orchard's main camp, a mile southwest of town, and was named Central Avenue. Years later, under The Irvine Company's Master Plan for development, Central Avenue was extended to pass near the Sand Canyon Reservoir and the name of the street was changed to Sand Canyon Avenue.

The combination boarding house/post office directly across the street from the school was operated by Mr. and Mrs. Duplin (Duke) Absalom Paschall who had two children, Arthur and Maybell. Arthur Paschall remembers that the Irvine School paid for the two school teachers, Miss Utley and Miss Sheets, to board at the house for one year.

The road to Laguna Beach passed through Myford. People on horseback or in carriages headed for the popular beach on weekends and holidays sometimes stopped at Paschall's to eat or to visit. It was a four-hour ride to Laguna Beach from Orange by "tally-ho," an open wagon with a roof. Often, two families would share a tally-ho and spend the best portion of the day on the road, with at least two hours at the beach.



### *Blacksmith Shop*

*By 1909, the blacksmith shop was built by Frederick Culver for his brother Willard. The blacksmith shop was operated by Gene Thomas from 1928 to 1978. He added the office door to the right and possibly the center upper window seen in photo below, which was taken after a snowfall on January 11, 1949.*

## **Irvine Sets Aside Land for Town**

By the turn of the century, many of the elements of a town were in place. Irvine knew one would eventually develop around the warehouses to service the seasonal workers, and there were permanent workers who needed a place to live in the area as well. There were no houses other than the one the Paschalls were living in at the time.

Irvine decided to set aside enough land for the town to develop and grow. He designated four, eighty-acre quadrants, which met at the intersection of Central Avenue and the Santa Fe Railroad tracks, for the town's location. No permanent crops, such as citrus groves or nut-bearing trees, were to be planted in these 320 acres.

Though no fruit or nut trees were to be planted on the town's plot, Irvine continued to plant them elsewhere on the ranch. In 1906, Irvine, C. E. Utt and Sherman Stevens formed the San Joaquin

Fruit and Investment Company. The Irvine Company provided 1,000 acres to Irvine, Utt and Stevens and enabled irrigation water to be lifted from the swampy lowlands to the orchards - all at the expense of the three lessees. They planted 400 acres of lemon trees and Valencia orange trees, and 600 acres of walnut trees and apricot trees. Under the terms of the agreement, The Irvine Company was to sell the orchard to Irvine, Utt and Stevens at the end of four years. Irvine eventually deeded all 1,000 acres to his partners. This property makes up part of the present day Village of Northwood.

Irvine had just moved his family to the ranch following the devastating earthquake in San Francisco when these orchards were planted. Beginning in 1909, following his wife's death, Irvine concentrated solely on the ranch and ordered hundreds of additional acres of citrus planted.

About this time, Frederick Culver, who leased the most acreage on the ranch, asked Irvine's permission to build a blacksmith shop for his brother Willard. The Irvine Company already had its own blacksmith at the agricultural headquarters area, so Culver inquired if a shop wasn't needed near the warehouse operations.

Permission was granted, and the blacksmith shop was built at Frederick Culver's expense by 1909. It was placed with its western-style false-front facing Central Avenue, enabling it to be seen from the Old Laguna Road, while backing up within easy access to the warehouse area. Willard Culver stayed busy keeping farming machinery in good repair and making wagon wheels, horseshoes, and buggy parts.

A home was built for Willard Culver and his ten children, and several other homes - for the warehouse manager, the secretary, and the machine operator were added to the town about the same time.

The Santa Fe finally got around to building the first class depot in 1910, and hired a section chief. No special "section" was needed unless there was a depot and a section house. Phillip Ahern, the son of a Ventura farmer enticed to the Irvine Ranch to grow lima beans, became the section chief for the Santa Fe's Irvine station and its spur, known as the "Venta spur" after a tiny town between Myford and Tustin. The Santa Fe built the section house in September 1910 and the Ahern family moved in. Prior to moving to Myford, Ahern had worked for the El Toro section. Between the time he started the new job and the section house was built for his use, Ahern walked back and forth from his home in El Toro.

Ahern had eight to sixteen men working for him all the time. Over the next few years, the railroad added two additional buildings to house the mostly Mexican labor working the Venta spur. A total of 18 miles of track were maintained, the largest section on the Santa Fe line. From Myford, it stretched to the town of Venta and for three miles toward El Toro. Together, the men maintained a total of eight miles of main line and ten miles of spurs.

Ahern prided himself on having the best section of main line on the railroad. The track was a straight line between Santa Ana and El Toro, and Ahern knew the engineers tried to make up time on his section. He kept the track tight so the trains didn't wobble when they passed over.

A large underground cistern with a hand pump was added as an emergency water supply for the steam engines. It also provided water for the men who worked the line and their families. The water was delivered by a tank car.



### *Orange Trees Planted*

*In 1906, the Orange industry began on the Irvine Ranch on a large scale. Irrigation water was lifted from the swampy lowlands to the orchards.*



### *First Class Depot Finally Built*

*By September 1910, the Santa Fe first-class depot was built. Phillip Ahern was hired as section chief.*



*Glenn Martin*

*Glenn Martin used the Irvine Ranch during his historic first successful flight in California in 1909.*

## **Historic Flight on the Irvine**

In 1909, James Irvine granted aviation pioneer Glenn Martin permission to use a small portion of the ranch to fly an airplane he had designed and built. Martin took off in a bean field on the ranch, climbed eight feet, and managed to stay airborne for 12 seconds, long enough to cover a distance of 100 feet. It was the first airplane to fly successfully in California. Within three years, a ship of Martin's design would make the first over-water flight (from Newport Beach to Catalina Island) in history.

Four years after his first flight from the Irvine bean field, Martin convinced Irvine to fly over the ranch with him. Irvine undoubtedly was thrilled to see his land from a bird's perspective.

## **First County Golf Club Formed**

Many of the county pioneers were as fond of golf as James Irvine was of hunting and fishing. As early as 1899, Irvine had been willing to provide land for a golf club near the entrance of Peters Canyon, according to an article in the *Santa Ana Blade*. In an interview, George Shattuck, known as the father of Orange County golf, described the course as "picturesque, but too far from town. In those days almost everyone traveled by horse and buggy, and the old-timers soon got tired of those long hauls." In 1910, after the automobile became more common, the golf club was again established and again Irvine offered the land near Peters Canyon. The nine-hole course became known as the Santiago Golf Club. The site of the Santiago Golf Club, the first in Orange County, was just up the street from today's new Tustin Ranch golf course.

Even with the automobile, it was still an all-day venture to play golf. The roads were quite rough and the old El Modena Grade was difficult for the early vehicles to climb. There was no

groundskeeper, according to Shattuck, and a golf professional was out of the question. Members brought along hoes, shovels, and rakes to work the ground before starting to play golf.

"We would work for a while, trying to level the fairways and remove the weeds and brush. Then, tired of work we would play a bit. The soil was extremely hard, and I recall after we scraped it once the ground was absolutely alive with tarantulas," Shattuck recalled.

In 1914, the Santiago Golf Club asked for and obtained a 19-year lease from Irvine to relocate the club to the head of Newport Bay. Irvine donated the land and a clubhouse, and charged the club, renamed the Orange County Country Club, \$100 a year in rent. By 1924, the club was doing so well that its directors gave up the Irvine lease, purchased a tract of nearby land and changed the name to the Santa Ana Country Club.

## **Myford Gets A General Store**

In 1909 Kate Munger, whose father had once managed the Newmark and Edwards warehouse, wrote to James Irvine and asked permission to start a general store in Myford. She believed a store there would offer enough opportunity to make a living, and it would be a considerable convenience to the families living in Myford, who were then having to go to Tustin and Santa Ana to purchase groceries.

Kate, who was 29 and generally considered an "old maid," was a successful businesswoman living in El Toro. She controlled one of Irvine's bean leases, managed an apricot grove in El Toro, and ran a successful insurance business.

Irvine didn't believe in women operating a public business. He felt they should work in the home - preferably raising children. Kate's correspondence was also ill-timed. After the loss of his wife Frances, Irvine was concentrating on agricultural pursuits, and a store was just not a priority. Kate continued to correspond with Irvine for two years before she either convinced him of the need for a store and her ability to operate it, or he simply got tired and gave in to her persistent requests.

Kate signed a lease in 1911 after her father, who was a well respected citizen of El Toro, guaranteed a six-month lease. Irvine's charge reflected his feelings: \$50 a month was no small potatoes. Kate was undaunted. Irvine contracted with Chris McNeill to build the store and its ample living quarters above.

McNeill was a highly respected local contractor who had just completed Irvine's sugar beet cooperative warehouse (the old landmark Holly Sugar Factory on Dyer Road). McNeill had built several prominent buildings in Orange County, including the Balboa Pavilion (1905) and the Orange County Courthouse (1901).

The store, completed in 1912, had a post office designed into the left corner, and 94 brass boxes filled the front window area. Kate offered for sale to the town folk practically everything they

needed, from milk and bread to chewing tobacco and harness rivets. She also dispensed gas from a crank pump behind the store.

While under Kate's proprietorship, sometime within the first four years, the store was enlarged. The first-floor flat roofed section was added first, and an upper level addition over the flat roof was built later.



### *General Store*

*The Irvine General Store was originally built as a two-story structure without the flat-roofed addition to the right, which was in place by June 1916. An upper level*

*to the addition was added later. (The Cochems Collection.)*

## **‘Tomato Springs Bandit’ Brings Trouble to Myford**

On December 15, 1912, a drifter headed through Myford. Two miles out of town, he stopped at William Cook's place and asked for work. When told there was none, the drifter left. That evening, unbeknownst to the Cooks, he returned. A dog barked. Cook's 13- and 16-year-old nieces went out to check, and the drifter grabbed them. He tied up the 13-year-old and took the 16-year-old behind a haystack. The younger girl got loose and went for help.

Cook rushed out, but was driven back by gunfire. He raced to his brother's home nearby, then alerted neighbors and the Santa Ana Sheriff. The men returned to William Cook's place, found the 16-year-old girl unharmed, and the bandit gone. A posse made up of ranch hands and farmers was rounded up. Willard Culver was at his anvil when he heard the call. The men scoured the plowed fields by lantern light and found boot tracks heading into the hills toward Tomato Springs. The search was called off until morning.

The next morning, the bandit came down to the first ranch he saw and had the owners serve him breakfast at gun point. He told them to spread the word that he was waiting for anyone who dared to come up the hill after him.

The bandit took a position in the foothills above the ranch near Tomato Springs. Situated on top of a low hill, he shot at anything that moved. When Deputy Sheriff Robert Squires and his posse arrived, the ranchers regrouped. Squires skirted the hill alone trying to come up behind the bandit. The others inched up the canyon for a frontal attack.

Squires unexpectedly found himself almost face to face with the bandit. They both opened fire at once. Squires shot the bandit in the forearm, but the bandit's Winchester found its mark, and Squires lay dead with six bullet holes. Deputy Jim "Tex" Stacey was the next to be hit, first in the shoulder, then in the hand and again in the abdomen. Al Prather, a farm laborer for William Cook, fell with a hole in his temple, seriously wounded. Another blast dropped Willard Culver, the blacksmith, who was shot in the knee.

The news reached Santa Ana that the deputy sheriff had been killed, and that 200 men had been unable to dislodge the deadly marksman. A dozen militia members volunteered for emergency duty. They advanced down the ravine, shooting as they went. Six hours after the battle began, a shot rang out and it was all over.

Several men were sure it was their bullet that brought down the "Tomato Springs Bandit." During the autopsy, a single bullet was taken from the man's brain. The .32 slug, fired through his temple, matched the empty chamber in the bandit's own pistol. And, he had been dying of tuberculosis.

No one recognized the bandit. His body was propped up in the back of an open car and he was paraded around Santa Ana for all to see. Four days passed before authorities announced that the bandit was one Joe Matlock from Oregon. Two days later, he mysteriously became Ira Jones, and was quickly buried in a county box. For 55 years, Ira Jones - a fictitious name - took the rap for Joe Matlock, the black sheep son of a former mayor of Eugene, Oregon. The secret of his ill-famed demise was kept in deference to his influential father.

Willard Culver's left leg was amputated above the knee. A wooden leg was fitted after the wound healed, but it was never comfortable, and from that time on, he swung his leg out as he walked. Now both the Culver brothers had affectionate nicknames: Frederick, who was a hunchback, had long been known as "Humpy." Now Willard was "Gimpy."



### *Irvine Ranch Rock Formations*

*Unusual rock formations are not uncommon on the Irvine Ranch. The Tomato Springs bandit hid from the posse in such terrain and died by his own hand only after his gun jammed from the heat. (Photo courtesy of the*

*Irvine Historical Society.)*



### *Eucalyptus Trees aerial*

*Fast growing eucalyptus trees protected the newly set out groves from the winds. Farmers planted between the rows to take advantage of the irrigation until the trees cut out the sunlight. (Photo courtesy of Irvine Historical Society.)*

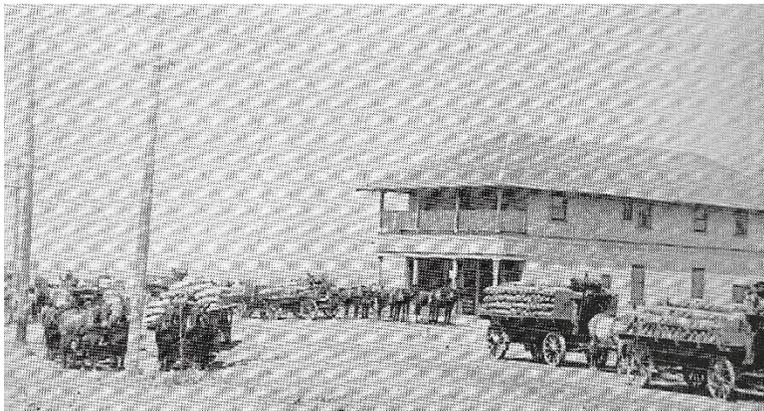


### *Irvine store and hotel*

*In 1911 Kate Munger signed a six-month lease to operate a store in the little town of Myford, near the train station. The store was completed one year later and was designed to be the post office as well. In 1913, a hotel was built behind the store to house seasonal workers who came to the ranch during harvests.*

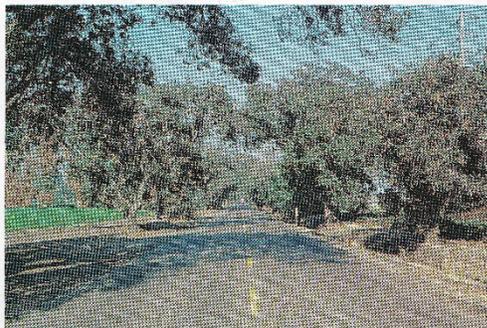
During harvesting season, migrant workers, who provided the seasonal labor for gathering crops from the fields and unloading sacks from the wagons at the warehouses, had no place to live. They resorted to makeshift hovels built of any material they could find. James Irvine didn't like their squalid living conditions, and ordered suitable temporary housing to be built for them. In 1913, the Irvine Hotel was built behind Kate Munger's store, facing the road to Laguna and the train tracks. It was also a Chris McNeill structure.

People getting off a train in Myford and looking for a hotel were people who had a major misunderstanding about the Irvine Ranch. A person with no business in town need not attempt to stay, for the Irvine was a closed ranch. The people who farmed Irvine land did so at the invitation of James Irvine. Squatters, a continuing plague, were unwelcome by everyone on the ranch. People who were not known simply were not welcome.



*Irvine Hotel*

*This hotel was built to house migrant workers who stayed in town during the harvest season. When the old road to Laguna in front of the hotel was realigned in 1929, the hotel was turned 180 degrees to face northeast. (Photo courtesy of First American Title Insurance Company.)*



*Central Avenue Oaks*

*Oak trees from nursery stock from Orange County (Irvine) Park were set out along Central (Sand Canyon) Avenue in 1916.*

## Town of Myford Renamed Irvine

When James Irvine's Uncle William died in 1914, the Calaveras County Irvine townfolk, who apparently had no deep love and abiding respect for William Irvine, immediately took steps to rename their town Carson Hill once again. The people in Myford felt differently about James Irvine. On May 1, 1914 the name of the Orange County town was changed from Myford to Irvine. The post office, still in operation, is the oldest post office in continuous use in Orange County.

C.F. Krauss, James Irvine's brother-in-law and superintendent of the ranch, left The Irvine Company in 1915. He was replaced by Willis G. Mitchell.

During the first World War, the Irvine Ranch was briefly considered as a location for an air base and a training center. The local business community was most desirous for the Irvine Ranch to be selected because of the revenue that would be generated.

Camp Kearny, in San Diego County, was chosen instead. According to historian Jim Sleeper, the Irvine site was rejected because it was "choice bean land." No doubt James Irvine was pleased that his ranch was spared. Lima bean production on the Irvine Ranch peaked during the war. In 1918, 60,000 acres of limas, yielding 900,000 sacks valued in excess of \$6 million, were produced.

To encourage the paving of roads throughout the state, California introduced the "Good Roads" program in 1915. Orange County participated, first paving the old Highway 101, which crossed the railroad tracks in Irvine on a north-south diagonal. Orange County began a beautification program in conjunction with the state program. Oak trees from nursery stock at Orange County (Irvine) Park were set out along Central (Sand Canyon) Avenue by county prison chain gangs shortly after Highway 101 was paved. Many of the oak trees were only two years old when planted.

The road to Laguna through Irvine was now paved, beautiful - and exceedingly dangerous. A large billboard on the south side of the tracks proclaimed the virtues of Laguna Beach. It also blocked the view of the train and other vehicles. Many lost their lives as a result. For years, the intersection vied with Culver's Corner as the worst intersection in Orange County.

With its location on the main highway to Laguna, the town of Irvine needed more than Kate Munger's single hand pump to provide gasoline to the increasing automobile traffic. In 1915 Irvine provided a site for a new service station. The modern station was built on the north side of the railroad tracks, between the tracks and the highway, across the road from the hotel. It had four pumps. The service station was the first building in town not owned by The Irvine Company. It was owned by Chick Dietrich and two partners, one of whom was an executive with Union Oil Company.

In 1916 the Newmark and Edwards barley warehouse was leveled by a barley-dust explosion. The fireball was so intense that it burned the paint off the side of the General Store across Central Avenue. The flames could be seen from Tustin.

An outbreak of Spanish influenza struck in October 1918, near the end of the First World War. This Great Flu Epidemic struck one out of three county homes, including that of George O. Cook, who had the largest lima bean lease on the Irvine Ranch. Cook's wife, Florence, and their baby died during the epidemic in 1920.

The 1920s brought prohibition to the Irvine Ranch, but there was little change in the hard working men and women's selection of refreshment. There were two major changes in town, however. The first was the conversion of the hotel into an apartment building for warehouse and town workers. The second was the marriage of Kate Munger to an Internal Revenue Service agent. To say the townsfolk didn't approve of her marriage would be an understatement. For whatever reason, the marriage didn't last long. The couple separated and Kate quit the store. A. C. Newell acquired the store lease in 1921.

Around 1924, the Irvine Service Station was remodeled and enlarged to accommodate increased traffic. A pop stand was added where customers could get a drink. Gene Thomas set up an auto repair shop underneath a pepper tree right next to the service station. As Dwight Ahern, Phillip Ahern's son, recalled, "Gene was out here working on the cars, just a man of the community. Brad Hellis (ranch manager) went to a picnic - I think it was the Irvine picnic at Irvine Park - and his car broke down.

Gene could fix anything. He fixed Brad's car, and Brad thought he was the best mechanic in the United States. Anybody that befriended Brad Hellis was "in". And anybody that wasn't his friend, wasn't very well liked, that's for sure. But a fellow that had ambition and got things right, Brad would go to bat for anybody like that. He was a good man."

Within two years, Gene Thomas had built a small garage near the back of the hotel.

By 1928 the service station's pop stand had been replaced with a small cafe and before 1930, a kitchen was added onto the back of the cafe, enlarging the building by about half. The cafe had a reputation for serving the best beans in the countryside.

A flood in 1926 left an enormous amount of silt along Central Avenue in front of the Irvine General Store. The silt first filled up the drainage ditch that ran along the railroad tracks to just past the depot, where the ground began heading downhill. Then it started backing up into town. A farmer got his mule stuck in the silt between the store and the warehouse, and a Hudson Super 6 automobile had to pull it out. The store had to be raised up three feet and set on a new foundation.



### *Service Station*

*The first service station was a Union Oil dealer. The 1915 building (above) was tucked in between the store and the hotel. (Photo courtesy of Hal Thomas.) In*

## Orange Production Increases

By 1916, the orange groves were so productive that Irvine built a 48,000-square-foot packing house on Shop Road (Yale Avenue) and the Santa Fe Venta spur. Both the packing house and the stop were named Frances in honor of Irvine's late wife. Irvine was a great supporter of the cooperative farming concept, and the Irvine Ranch joined the California Fruit Grower's Exchange to market its oranges.

In the 1920s, the San Joaquin Fruit and Investment Company, started in 1906 by Irvine, Utt and Stevens, subdivided its lease into 40-acre plots and sold them to select individuals. Plot owners became members of the recently formed Frances Citrus Association.

In 1923 the California Fruit Grower's Exchange became the Sunkist Growers, Inc. Sunkist had three local branches, two of them on the Irvine Ranch. The prizewinning oranges of the Irvine Ranch were cleaned and labeled at the Frances Packing House before being shipped all over the world.

The Frances Packing House continued Irvine's tradition of excellence in craftsmanship. The packing house was a beautiful building, rather undistinguished on the exterior, but with an interior of significant architectural interest. An intriguing truss system spanned large, open spaces well lit by clerestory windows. The simplicity and beauty of its design would later win the Frances Packing House a position on the National Register of Historic Places, the first packing house in the southwestern United States to be so honored.

By 1925, the San Joaquin Fruit Company had purchased land in the San Fernando Valley. Irvine's partners proposed to subdivide and sell the property, but Irvine was not convinced the venture would be successful. He arranged to exchange his interest in the property for three hundred acres of Irvine Ranch land held by the San Joaquin Fruit Company.

Irvine's decision proved correct. Within a few years, as the Depression set in, the San Fernando property became a major liability as purchasers of the land defaulted on their contracts. Irvine took over part of Utt's stock to prevent him from facing financial ruin.

Another cooperative was formed in 1926, the Irvine Valencia Growers Association. For three years, IVGA packed oranges at the Frances Packing House. In 1929 the association built its first packing house, which still stands on Jeffrey Road, south of Irvine Boulevard. The railroad terminus that picked up the oranges for shipping was called Kathryn, in honor of Irvine's late daughter, Kathryn Helena Irvine.

Kathryn Helena Irvine had married World War I Navy pilot and attorney Frank Lillard in 1918. Their daughter, born in 1920, brought both joy and sorrow to the Irvine family, as Kathryn Helena became ill with pneumonia after childbirth and did not recover. Her death four days after the birth of her child, who was also named Kathryn, brought great sorrow again to Irvine. Kathryn Helena, like her mother, was beautiful and kind - and in an early grave.



### *Frances Packing House*

*The Frances Packing House, closed in 1971, was the first one in the Southwest to be named to the National Register of Historic Places. The rail terminus for the Frances Packing House was also called "Frances." The packing house stood at the current*

*intersection of Yale and Bryan in Northwood. The Sunkist facade is in the First Bank building in Heritage Plaza. (Photo courtesy of Hardy Strozier.)*



### *Bean Pickers*

*This 1939 photograph shows the "modern" picking room above the 1895 warehouse. Forty-eight ladies worked at six tables, each equipped with a moving conveyor belt, removing broken or cracked beans and any remaining dirt clods or stems. By the mid 1950s, electric eyes replaced all but eight picking ladies. (Photo courtesy of Dwight and Martha Ahern.)*

## **Irvine Ranch: Leading Lima Producer**

The Irvine Ranch was the world's leading lima bean producer. By the late 1920s, the 1895 warehouse was remodeled to add an upstairs picking room. A stairway was built outside both the front and back of the building. Upstairs, five tables approximately 40 feet long by two and one-

half feet wide were installed. The tables were conveyor belts which moved the prescreened beans in front of the picking ladies who normally sat about four feet apart and directly across from each other. Up to 60 women - usually 48 - picked out bad beans, dirt clumps, small rocks, and vines that had made it past the initial screen cleaning. This was the final inspection point as the beans were graded and before they were sacked for shipment.

After the beans came off the picking tables, they were fed into a bin that dropped them to the first floor where they were "sacked off" - put into burlap sacks, 100 pounds of beans at a time into a bag. For many years, the sacks were sewn closed by hand; by 1949 a machine sewed the bags shut.

The picking was seasonal work. Every year the picking room would be painted before the ladies arrived so everything would be fresh and nice. It usually took a few days for the ladies once again to become accustomed to looking down at the moving belt. Until then, they would get dizzy and often spent considerable time in the women's rest room.

The beans usually were first quality and the ladies were very careful during the cleaning stage. Occasionally, a crop of unusually poor quality beans would come in, which would irritate the picking forelady. She could control the amount of beans allowed on each table's conveyor belt, and when she was unhappy with the quality, she would just dump the low-quality beans on the table. There was no way the picking ladies could begin to sort beans coming across the table piled high and moving so fast. They would just sit back and watch them pass by. The poor quality beans would go straight down to the men who were re-sacking them, and they would literally be standing up to their knees in sample grade beans. There was no way to keep up with "Sample Grade Myrtle," as she was affectionately known after the first such incident.

During the rough times of the Depression, men needing work often took turns at the picking tables to earn money, but they didn't work as well at this job as the women. Their clumsy fingers were no match for the quick, delicate hands of the women. Once the Depression subsided, no man ever again requested a job in the picking room.

## **Velocity of Light Measured on Ranch**

In 1929 James Irvine granted Polish physicist Dr. Albert Abraham Michelson land on which to build an experimental tube to refine Michelson's previous measurements of the velocity of light. Michelson, who had been living in Chicago and was in poor health, was encouraged to move to California and join the Mount Wilson staff, which he did.

As told by Michelson's daughter and biographer, Dorothy Michelson Livingston, the ranch terrain was flat and well-suited to Michelson's purpose, varying only a few feet in elevation over the distance of a mile. At a cost of \$50,000, the California Corrugated Culvert Company

furnished 36-inch steel pipe in 60-foot lengths, which was set up to extend the distance of slightly over one mile.

By the spring of 1930, the pipe was in place and the optical system was installed. The alluvial soil of the ranch and rapid changes of temperature during the day combined to introduce large discrepancies in the measurements - fluctuations up to 12 miles per second - and Michelson's 1927 Mount Wilson tests proved to be the most precise measurements of the velocity of light. However, the Irvine Ranch figures - 299,774 kilometers per second - are frequently quoted.

Michelson died on May 9, 1931, two days after the experiment was complete. Michelson Drive, in Irvine, is named in honor of this great physicist.



*Albert A. Michelson*

*Albert A. Michelson was the first person to "accurately" measure the speed of light. His final experiment was conducted in a mile-long vacuum tube erected on the Irvine Ranch. (Photo courtesy of Irvine Historical Society.)*

## **Decade Ends with Changes in Irvine**

A.C. Newell reportedly bought the store lease from Kate Munger to please his young daughter, to whom he was very close. Around 1928 he sold the lease to Horace Munger, one of Kate's brothers. Newell then moved to Tustin to manage an apricot grove. His daughter, still a young lady, died shortly after they left the store.

According to some old-timers, Horace Munger was "as mean as they come, not worth the powder it would take to blow him up." He would throw rotten tomatoes at little children as they walked past the store on their way to school. After the service station was moved across the street in 1930, he installed gas pumps on the north side of the store, cater-corner from the service station, and competed for its business. James Irvine, seeing this gross infraction of his rules on one of his trips around the ranch, stopped and got out of his car. He asked Horace if he was experiencing difficulty in making a living selling groceries. Horace replied that he was not, that he was just doing what any enterprising businessman would do. Irvine noted that the service station sold only gas and oil, no groceries. He informed Munger that if he couldn't make a decent living selling groceries, he should get out of the business. He then gave Munger a very short period of time to get rid of the gas pumps.

The person who owned the store lease was postmaster by default. After Horace Munger's first wife died, he remarried and his second wife helped out as the postal clerk.

A second and considerably larger Irvine School was built in 1929, on the northeastern edge of town. At this time, the old 1899 school became the town's community hall. Dances were held there once a month, and a live band or orchestra would play for really special occasions, such as the New Year's Eve Dance. More than 150 people usually turned out for the dances, which were so popular citizens became concerned they would wear out the oak floors. In 1932, a Sunday School was established and used the community hall as its headquarters. On Sunday mornings after a dance, the ladies would often come in early to "clean the place up."

In 1929 a wealthy car dealer from Los Angeles lost his life at the dangerous Laguna Road and Santa Fe crossing. This accident set the wheels in motion to realign the intersection. Laguna Road was moved just north of today's Interstate 5 freeway alignment. The portion of the road lined in oak trees reverted to a farmer's field. Irvine, an ardent tree lover, refused to grant the tenant's request to cut down the trees so he could more easily plow his field. Irvine told him to work around the trees.

The realignment of the road brought a new sense of place to some of the buildings in the town of Irvine. A side road, later named Burt Lane, was created and the old hotel, which by now was an apartment building, was turned 180 degrees to face it. The service station and cafe were moved to the northeast corner of Burt Lane and Central Avenue. Gene Thomas' garage, which had to be moved for the apartment building adjustment, was relocated to the southeast corner of Central Avenue and Burt Lane where it was attached to the east end of the old Ford dealership that had been built a few years earlier.

The Irvine service station now had six pumps, and at different times, it pumped Union 76, Rio Grande, Hancock, and Gilmore gasoline. It became a Union 76 station once again in September, 1939 when a large Union distributing station was built on the southwest side of the tracks and Central Avenue. The distributing station was needed to provide farmers on the Irvine with fuel for their tractors. When the service station became a Union 76 station, it obtained its gas there too. When the distributing station first opened, the temperature was higher than 100 degrees for ten days in a row. During that period, the distributing station showed a loss of 700 gallons due to evaporation.

The cafe, located directly east of the service station and facing Burt Lane, was the social hub of the town. Farmers came several times a day for coffee, especially when it rained. They played poker and the slot machines in the back room. Having slot machines was no small chance for the cafe owner to take, because the sheriff lived just down Burt Lane. But farmers and those who worked with them didn't worry too much about it. They left it to the cafe's proprietor, Henry Sizer, to worry about. Just as the sheriff was getting wise, Sizer closed the operation down.

*The 1922-23 class of the original Irvine School included Dwight Ahern (front row, right) who was born and raised, worked all his life and retired in the original town of Irvine. His father was the section chief for the Santa Fe track through Irvine. Right: the interior of the Irvine Cafe. Henry Sizer, who ran the café for many years, served a luncheon special every day, "the best food for miles around." People would come in to eat and "they didn't even know what they were going to get."*



*Jase Irvine*

James (Jase) Irvine, Jr., whom his father intended to follow him as manager of the Irvine Ranch, died at 42 in 1935. Irvine, Jr., who was vice-president of The Irvine Company at the time of his death, had experience in every aspect of the ranch's operation except dry crop warehousing and shipping. This house, considerably nicer than the normal tenant home, was built for the warehouse manager across the street from the warehouse operation. Irvine, Jr., who lived at the Irvine ranch house at the Agricultural Center, would have worked closely with the warehouse manager to garner this last bit of experience. The house was used continuously for the manager of the bean and grain operation until 1971 when the warehouse operations ceased. (Judy Liebeck photo.)

## **Thirties: Depression, Tragedy**

James Irvine, Sr. started the new decade by marrying again. He and Katherine Brown White, called "Big Kate" by many of the tenants, were married in 1931. Katherine Irvine was tall and commanding, and an excellent horsewoman. She also was a tireless volunteer with a global perspective. Mrs. Irvine was responsible for The Irvine Company shipping several large shipments of beans and grain to needy countries across the ocean. The Irvine Company also shipped food that other people donated.

Irvine made sure his own tenants received enough to eat during the Depression. He provided as much meat, vegetables and fruit as the tenants needed throughout the difficult period, asking that they pay what they could, though few could pay the actual cost of the food. Irvine also set up a

medical pool for the workers on the ranch who could not afford a doctor of their own. Again, he asked that they repay as much of their expense as possible, but did not expect them to pay it all.

The ranch superintendent position changed again in 1931. Willis G. Mitchell was replaced by Paul Dinsmore, James Irvine's financial advisor. By this time it was common knowledge that Irvine ranch superintendents earned little more than respect. But once they quit the ranch, they often entered the local business world and earned a fortune.

In 1935, the little house (where the Duke Paschall family lived) that had served meals, rented rooms and once served as the Myford post office, was moved. A new modern residence was constructed in its place for the warehouse manager.

Irvine's son, James Harvey Irvine, Jr., known to all the ranch employees as "Jimmy" and to the family as "Jase" was a real "people person" and was well liked by everyone on the Irvine Ranch. Irvine, Sr. had been grooming Jase practically since birth for his eventual takeover of ranch operations. But it was not meant to be: on June 23, 1935, at the age of 42, with experience in almost every aspect of ranch management, James Irvine, Jr. died of tuberculosis. Tragedy had once again struck James Irvine.

Boyd Munger bought out his brother's lease for the General Store in 1936. He was the exact opposite of Horace and everyone liked him. Boyd became the official postmaster and his wife, Lillian, was the postal clerk.

Presumably Lillian was a good enough postal clerk to keep track of all the Bill Cooks receiving mail in Irvine. In 1939, there were nine men named Bill Cook working on the Irvine Ranch.

Boyd Munger managed the store for a decade. In 1946, he sold the lease to Burt Bentz, a farmer who did not do well with the store. Within four months, he had sold the lease to Paul and Thelma Zitlau.

## **Eddie Martin Airport Gets Its Start**

In 1923, a young aviator named Eddie Martin began using - without permission - an unused portion of the Irvine Ranch to land the Jenny airplane he had just purchased. He stored his tools in a wooden box, built to ship an upright piano, which he covered with tarpaper to keep out the rain. Martin also had a Model T Ford pickup that he used to carry his tools and five-gallon bottles of water and gasoline.

Martin worked as a mechanic from five in the morning until two in the afternoon, then flew his plane until dark. He wanted very much to start an airport, but he hesitated contacting Irvine about a lease, fearing the answer might be "no."

James Irvine was initially opposed to aviation, but son Jimmy soon convinced him that it was a lasting development. A lease agreement for 80 acres was worked out with Martin and the Eddie Martin Airport, Orange County's first full-service field, was established.

In 1927, Rear Admiral William A. Moffett stopped by the Eddie Martin Airport and asked Martin to take him and several other War Department heads up in an airplane so they could see where the best site might be to locate a Naval Lighter-Than-Air Base. Martin took Moffett and the others up and showed them the local terrain. Moffett selected the site and started the paperwork for acquisition through Congress, but acquisition did not become a priority until the beginning of World War II.



### *Eddie Martin Airport*

*The Eddie Martin Airport began operation on the Irvine Ranch in June, 1923. Located at the intersection of South Main Street and Newport Boulevard in Santa Ana by 1933, the airport was the oldest airport on the west coast and maintained a 100 percent safety rating during its operation. This photograph was taken in*

*1933 during one of Martin's frequent air shows. The airport was closed in 1939 and the Martin Aviation operation moved to the new orange County Airport site. (Photo courtesy of the late Eddie Martin.)*

## **WW II Ends Irvine Agricultural Empire**

According to local photographer Rich Bassett, a close friend of Myford Irvine, not long after World War II had begun, the United States Navy approached the Santa Ana Chamber of Commerce with a request for assistance in locating a site for the Navy's air operations. At that time, Santa Ana was the only local chamber, and had by far the greatest number of businesses in the county. Since almost all local businesses then revolved around agriculture, which was not necessarily conducive to business growth, chamber officials were extremely pleased at the possibility of the Navy locating air operations close by. The rallying cry was: "Think of what this could mean to the county!"

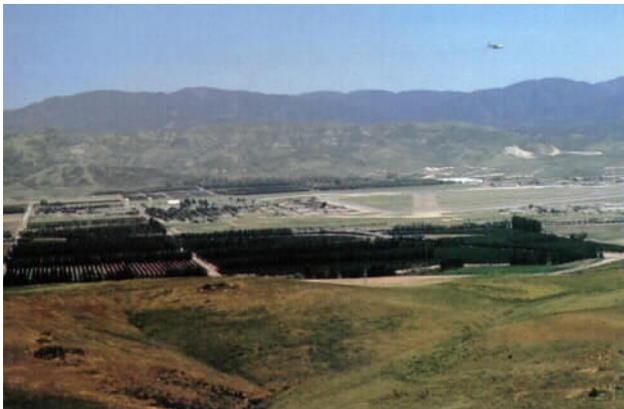
The chamber selected a site right in the heart of the largest lima bean field in the world, the 17,000-acre pride of the Irvine Ranch.

"J.I. was very unhappy. It was his most productive bean field," Bassett recalled.

James Irvine had a policy of never selling land if he could possibly avoid it. The county tax assessor, however, was anxious for sections of the ranch to be sold so it could be reappraised.

Irvine offered the Navy other sites on the ranch, for a dollar a year lease in perpetuity. The answer was no. He offered the sites deed free. The answer was still no.

At the fair market value determined by the Orange County tax assessor, the Navy purchased two of the best pieces of land on the Irvine Ranch for the El Toro Marine Corps Air Station and the Tustin Lighter-Than-Air base. The Orange County tax assessor had never been happier. Before the Navy purchase, the Irvine Ranch land had been taxed significantly below the value of other county lands. The Navy purchase provided the means of reassessing the ranch's land holdings.



*El Toro Marine Corps Air Station*

*The El Toro Marine Corps Air Station was once prime farm land, part of James Irvine's 17,000-acre lima bean field, the world's largest.*



*Lighter-Than-Air Base*

*The Lighter-Than-Air Base was built on the Irvine Ranch in 1942. The two blimp hangars are on the National Register of Historic Places as the largest clear-span timber structures in the world. (Photos courtesy of Irvine Historical Society.)*

The Second World War brought an end to James Irvine's agricultural empire. His prized bean field was lost to the El Toro base, the Lighter-Than-Air base destroyed another excellent field, and many tenant farm and ranch workers were lost to active duty, causing considerable hardship in the raising of crops. Worst of all, Irvine's coveted low tax base, which had enabled him to

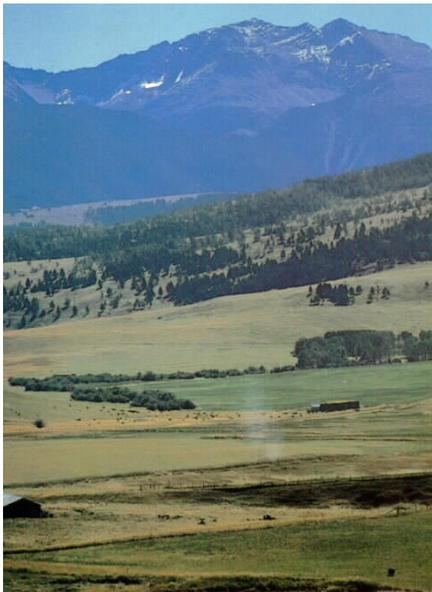
keep his land intact via agriculture use in an area that had been experiencing rapid growth even before the war, had been undermined. It was only a matter of time until dry farming would no longer be able to support the tax base on the land.

Irvine received \$1,000,000 for the 3,918 acres the Navy purchased for the two bases. To avoid capital gains tax, Irvine used the money to purchase the Flying D Ranch near Bozeman, Montana. The Flying D was composed of 82,000 acres of some of the best cattle grazing land in the world, beautiful fishing streams and rivers, and excellent hunting lands. Irvine leased out the operation of the Montana property, but visited as often as he could to get away from the troubles he knew were right around the corner on the Irvine Ranch.

No one was spared the hardship or the fear of the war. The runway at the El Toro base happened to be aligned with the warehouses. Based on food production capability alone, the warehouses would have been a prime target for enemy aircraft, but were even more so with the close proximity of the air base. A watch tower for enemy aircraft was installed off Trabuco Road between Jeffrey and Sand Canyon Avenue, a short distance from the warehouses. It was manned around the clock by Irvine Company employees during six, four-hour shifts.

The warehouse roofs were lined in corrugated tin, and when the Navy planes flew over - at about 30 feet - the picking ladies had no idea whether it was U.S. or enemy aircraft. The sound from the low-flying planes reverberated through the building, and the sound and shaking reduced the picking ladies to a bundle of nerves.

The Irvine Ranch continued to produce "energy food" for the war effort. The farmers farmed around the El Toro and Tustin bases, and wondered why neither base was named after Irvine. Planes landing short of the runway and tearing up bean fields became so common that it was a standing order for the farmer owning the damaged crop to send a bill to the base. The planes were only part of the problem - every time one went down in the field, several rescue units would cut across the field at different angles, tearing up the fields along their way and multiplying the damage by however many vehicles were sent to assist the plane.



*Flying D Ranch , James Irvine bought the 82,000-acre Flying D Ranch near Bozeman, Montana with the monies received from the U.S. Government for its two military bases. The Flying D was famous for its cattle grazing.*

## **Bill Cook, Named Warehouse Manager, Modernizes Operations**

In 1946, William C. (Bill) Cook was asked to be warehouse manager. He had come to the ranch in 1927 as a tenant farmer, and had farmed 240 acres of some of the best farm land on the Irvine Ranch - in what is now called Tustin Meadows. Cook had the distinction of being the first tenant ever to pay his debt for farming operations to The Irvine Company. James Irvine was impressed with Cook. He twice requested Cook to be his chauffeur on a drive around the ranch (a duty considered an honor by the locals), and occasionally sought his advice.

Cook had been the foreman of the Harkleroad Camp, the largest citrus orchard on the Irvine, for seven years. The 1400-acre orchard was located between the San Diego Creek Channel and Old Barranca (Alton) extending beyond Culver on the west and Central Avenue on the east. The main camp was on Central Avenue, across the San Diego Creek Channel from the warehouses.

While foreman there, Cook had a house with a basement located between Culver and Jeffrey right on the creek, which often flooded during the winter. When the creek went over the banks, Cook knew by the sound of the water slapping against the side of the house that it was time to go bail out the basement.

Cook had a reputation on the ranch of doing a job right - the first time. During the lean years, Irvine decided to have bean straw baled to use as cattle feed. He instructed Cook to go to the old ranch headquarters (where the French home and the main cattle camp were located) and prepare a shelter for the bales. "There was a trick to building them so they wouldn't fall down," Cook later recalled. The first layer of bales were piled on their sides so that the least amount of straw per bale was touching the ground. A "Jim" pole and pulley, hooked up to a team of horses, pulled up three bales at a time for stacking. At one time, Cook built 14 shelters. Each shed held 1,440 bales of straw.

Cook was working at Harkelroad Camp in July, 1946 when ranch manager Brad Hellis drove by. Hellis, somewhat of a father figure to Cook, leaned his head out the car window and called to Cook, "We need a foreman down at the bean and grain warehouse, want the job?" Cook, who had always wanted to be a farmer and nothing else, was astounded. He knew nothing about managing a warehouse and needed some time to consider. Hellis told him to take two days. Cook didn't sleep those two days, trying to explore every aspect of the offer to be certain he would make the right decision.

Cook decided to take the job. He spent a few weeks traveling throughout the state, visiting warehouses to find out how they conducted their affairs. Then he went to business school. Some considered managing the "bean shed" the number one job on the ranch, but Bill Cook considered himself nothing more than a man hired by the farmers to handle their products.

Good warehouse managers were hard to come by, and this particular function was exceedingly important, for all the money from the dry crops was funneled through this facility. Cook took over the job from John "Jack" Mitchell, who had done his job well. Mitchell, however, had taken

over from the worst manager in the history of the ranch. This man reportedly embezzled more than \$65,000 by selling first quality beans as "screenings" to a warehouse in Santa Ana, which then sold them as first quality beans. The Irvine Company knew what had to be going on, and the manager was watched. Once Irvine had enough information, he had the gentleman notified to come to his office. That afternoon, the warehouse manager committed suicide. Quite likely Irvine would have done nothing more than reprimand and fire the man, but he clearly was scared to death of Irvine and the consequences.

When Cook moved to the warehouse manager's house next to the railroad track, it was the noise that kept him from sleeping. The steep incline the trains were forced to negotiate from Santa Ana often would be too much, but if the engineer thought there was a chance to make the grade, he would pour on the sand for traction for the slipping, squeaking wheels as he got close to the Irvine train station. Usually it would not be enough, and the unhappy engineer would have to back up the train to the siding by Culver Drive, split the train into two sections and move it in two trips to the siding by the warehouse before hooking the two sections up again and continuing eastward.

While Cook wasn't sleeping, he thought about what it would take to save the dry crop industry on the ranch. He knew that the Navy's appropriation of the fields and the resulting change in the tax base would increase taxes and create a real problem in maintaining a profit. He asked Irvine to consider bulk processing, which would save manpower and make the warehousing, cleaning, and shipping much more efficient. Irvine wouldn't hear of it. There had been a strike at the warehouse for higher wages before the war and the experience had not been a pleasant one for Irvine. It had convinced him that the ranch workers were a force to contend with, and one of the last things he wanted was to introduce the possibility of another strike. Cook realized he didn't know enough about bulk processing to convince Irvine.

*In this photograph (circa 1968) of the new 405 freeway (taken almost directly over Sand Canyon Avenue - Jeffrey Road is the first over-crossing) shows the Harkleroad citrus lease on the right. It was the largest (1400 acres) on the Irvine Ranch. (Photo courtesy of Irvine Historical Society.)*



*Threshing Campaign*

*This 1913 threshing campaign photograph (top) was taken on Walt Cook's lease on Irvine Boulevard, a half-mile east of Central Avenue. Henry Pankey grew the beans and he and Bill Cheney were partners in the threshing operation. The Columbia automobile near the cook house belonged to Pankey, and the Hudson "20" touring car to William Cheney. After William Cheney, Jr. was born, Cheney and Pankey traded cars so Cheney could have a "family car." Bill Cheney, Sr. was a founder of Farmers Insurance Co. (Photo courtesy of Edgar and Elizabeth Pankey.) The 1915 photograph (bottom), taken from the second floor of the General Store, shows bean wagons waiting to be unloaded at the Irvine Warehouse, Ltd. During harvesting season, it could take a full day to unload a wagon. The 1910 train depot and an old adobe house are in background. (Photo courtesy of the late Irene Thomas.)*

## **Dry Crop Harvesting**

The standard harvest operation centered around a stationary thresher. The threshing campaign would include a chuck wagon and full-time cook, equipment operators, a straw boss, and a lot of hired hands. The men would stay in the field with the threshing campaign until the crop was harvested.

The grain harvest began in late April and was usually completed by the end of July. During the threshing operation, 100-pound sacks of threshed grain were hand sewn shut, then piled next to the thresher in the fields, five stacks high in two separate stacks. One stack was for the farmer; the other was The Irvine Company's share of the crop.

The usual split was three-fourths for the farmer and one-fourth for The Irvine Company, although the company would take less of the crop if the field was not a good producer. As the crop was sacked, the farmer's initials were marked on each sack that went into his pile. The Irvine Company initials were "JI". Before the farmer's crop could be removed from the field, The Irvine Company had a man come out and count the sack piles. He would mark whether or not the count was correct, then took his records into the agricultural headquarters office.

When the crop was finally brought to the warehouses, the company's portion was brought in first. All the produce was weighed on the big scale in front of the warehouse. Random sacks were opened to take samples for the clean-out weight. Each farmer's entire crop was then cleaned and sacked separately from all the other farmers' crops to ensure that proper credit was given.

Bean harvesting season was between August and October, and bean threshing was done in the same manner as the grain. The vines were cut in the field and stacked five rows together. The beans were left to dry in windrows for about three weeks, then were loaded onto wagons. As a mule team pulled the wagons between the rows of beans, workers would scoop up about 40 pounds on a pitchfork and toss it into the net-lined wagon bed. The vines had to be thrown up into the wagon in one motion, otherwise the beans would scatter. After the wagons were filled, they were pulled to the stationary thresher located in the field.

At the threshing machine, the net lining in the wagon bed was attached to a pulley. A team of horses pulled a cable attached to the pulley and the entire wagon load of beans was dumped into the threshing machine. The thresher separated the beans from the vines - the beans would go out one side and the straw out the other. The beans were put into a holding area, where a man controlled the sack-off operation. Approximately 100 pounds of beans were dumped in a burlap sack, which was then sewn shut and stacked in the field.

One requirement of a good bean crop was that the beans stay dry. If a Santa Ana wind was blowing, the workers would work until it died down - often until one or two in the morning. They would sleep on the stacks to guard against theft. The operation would not get started again until the air was dry. If there was a morning dew, the workers had to wait until the sun came out and dried out the crop. Sacks of unthreshed beans exposed to rains or heavy dews would depreciate in quality.



### *Threshing Machines*

*Beans at the warehouse were graded 1, 2, or 3 depending on the quality. The lowest grade was "splits," and how many splits came in depended on the kind of job done by the threshing machine - some machines split more than others. Splits were still edible, but there was no demand locally for broken beans. The stationary thresher (above), put on wheels during World War II, sat atop "Starvation Flats" overlooking the San Diego Freeway for almost 50 years. A modern threshing machine (above right) was photographed harvesting in 1941. During the early days of harvesting on the Irvine Ranch, between 32 and 36 mules were required per combine. This 1941 operation (right) was done mostly by mechanical power; the mules pulled the wagons that brought the beans to the thresher and took the bean straw away.*

Timing was critical to bean harvesting, and once the "campaign" began, the seasonal work crew stayed in the field with the equipment until the harvest was completed, usually about six weeks. They were fed from a cook wagon stationed at the campsite.

The real work came when the beans arrived at the warehouse. The warehouse manager had to make certain that all the grain was in by the time the beans arrived. The screens in the cleaning machines had to be changed to accommodate the beans, and that in itself was quite a job.

The beans were first cleaned by screening. There were different size screens for the limas and the black-eyes. Various methods were used over the years - screens, cylinder cleaners, air-cleaned by suction that picked up the bean and dropped anything lighter, and manual picking.

The cylinder Bushae cleaners were the best and most expensive bean cleaning equipment available. The Bushae had a cylinder with teeth and a brush that worked against it. The brush let the beans come through but not the heavy dirt. There were also "clod pickers," dirt separators that let the beans go through and augered out the dirt.

After the beans were cleaned, they were sacked and stacked to the roof in the storage warehouse. When shipping time arrived, the beans had to be un-stacked and hand-trucked once again to the shipping area. The sacks were stacked to the ceiling in interlocking piles to prevent them from falling. A belt-driven conveyor stacked them into 20-foot or taller piles and a similar piece of equipment tore the piles down. Warehouse manager Bill Cook, describing the labor-intensive early days before the bulk operation, recalled, "The guys would pile the beans that came in from the fields, and as soon as they got them in, we started tearing [the piles] down. They had to be hand-trucked down [to the fumigation area], and if we didn't ship them we had to hand-truck them back up there. Boy!" During harvesting season, the warehouses worked around the clock to get the crops ready for shipping.

After investigating the process, Bill Cook knew he could save The Irvine Company thousands of dollars by switching to bulk processing. He just didn't know how to convince Irvine.

Later, when the ranch switched to bulk operations after the death of James Irvine, a mobile thresher moved quickly back and forth across the bean fields. It cut the vines, spread the straw, threshed the beans, and dumped them into a one-ton tank. A truck pulled up alongside and the tank was dumped into the truck's hopper. The truck then took the beans to the warehouse.

A sample was taken out of every truck load brought to the warehouse and placed in sample boxes on a table near the front office. The samples had lot numbers on them indicating which grower would get credit for those beans.

The samples were used to determine the clean-out, re-clean weight. Three samples were taken from each load: one from the front, one from the back, and one from the middle. Each sample weighed three pounds and was scooped out with a long-handled two-quart pot. One percent was added for overage (moisture adjustment). A lady in the front office ran the beans or grain by hand.

Warehouse manager Bill Cook described the work: "She went through and picked out the split beans - they were one category; the damaged beans - maybe worm eaten, and dirt. She'd keep them all separate and she'd keep track of all that. That's what determined the clean-out [weight]. Growers could have separate lot numbers if one part of the produce was from a bad part of the

farm. Before the bulk method of determining the clean-out weight [during the sack period], every lot was kept separate. They were cleaned separately - how many splits and how much dirt - all separate records. Quite a lot of bookkeeping to do that. The bulk [processing method] eliminated all of that."

The bulk operation abolished hand-trucking. The trucks dumped the beans at the warehouse, the beans moved on belts to the bins where they were stored until shipped. Only the bagging operation remained.

Cook had 48 picking ladies working for him - he jokingly called them "my harem." He gradually cut down on the number of picking ladies needed to sort out the bad beans and dirt, and installed a bank of electric eyes which eliminated practically all of the hand picking. The new equipment sent a stream of beans out one at a time on a narrow belt. As each bean dropped off the belt, the electric eyes would look at it from four directions. If the bean was off-color anywhere, a jet of air would blow it away. After they were working properly, Cook only had need for one picking table.



### *Irvine's Favorite Sport*

*A favorite sport of James Harvey Irvine, Sr. was fishing. He died while fishing at his Flying D Ranch in Montana on August 24, 1947, two months shy of his eightieth birthday.*

## **James Harvey Irvine, Sr. Dies**

On August 24, 1947, James Harvey Irvine, Sr. was in Montana at the Flying D Ranch, doing one of the things he loved best - fishing - when, according to his companions, he had a heart attack and died. Irvine was two months shy of his eightieth birthday.

Irvine's body was taken to San Francisco, and his funeral was held in the family home on Pierce Street. The Irvine Ranch managers and foremen traveled to San Francisco in two Pullman cars supplied by The Irvine Company to pay their respects to "one of the greatest men ever to grace California." Irvine had guided the development of the Irvine Ranch for 55 years.

Myford Irvine, Irvine's only surviving son, took over the presidency of The Irvine Company. Myford knew little about farming, and turned over the complete management of agricultural operations to Brad Hellis.

James Irvine, Sr. had been dead only a few days when changes started taking place in the little town of Irvine. First, the oak trees that had once helped beautify the old alignment of Highway 101 - but since the road realignment in 1929 had "graced" a farmer's field - were cut down. Second, the switch was made to bulk processing.

Bill Cook traveled the southwest to see how other areas handled bulk operations, noting the good and the bad. One trip was to Oxnard, where the California lima bean headquarters was located. Cook liked the Pleasant Valley bulk silo warehouse that Oxnard had built in 1947, and decided to build a similar unit, but with certain alterations.

The Irvine bulk facility was to be a 53-member farmer's co-op, known as the Irvine Bean and Grain Grower's Association. All members would share expenses and profits based on the amount of produce they delivered. Cook organized the co-op and became secretary/manager of the operation.

Cook hired Moffatt and Nichol of Long Beach, the same architects who designed the Pleasant Valley warehouse, and worked with them for more than a year designing the new bulk silo warehouse. It was to be the largest and finest facility in the southwest. The contract to construct the warehouse went to Gridley Construction Company, the same company that built the Oxnard warehouse. After Gridley built the Irvine warehouse, he went broke.

The old 350-foot-long wooden warehouse built in 1890, was emptied and removed, and a 16-foot-deep hole running the length of the new building - 200 feet - was dug. The most dense river bottom sand that could be found was trucked to the warehouse site to line the bottom six feet of the hole. This was to protect the building from the vibrations of the trains that rumbled by within feet of the building. Then the actual construction began.

The superintendent was very exacting. If he didn't think a worker was doing a good job, the superintendent would show him the construction shack, where he would be issued a final check on the spot. Cook had to approve the rate of pay and the number of workers on the site at all times. There were usually 60 men working at one time.

The pillars for the silos were built in sections on a nearby vacant lot. Steel reinforcing rods were liberally placed and the concrete column sections were poured into forms and left to cure. A crane moved the sections to the construction site as needed.

There were eleven silos, or bins, set three across in a honeycomb pattern. The building was squared off on the end, which made a half bin. That half bin was used to hold cleaning machinery. The produce to be cleaned was carried through by the conveyor.

The contractor, who had no knowledge about the time for harvesting dry crops, started construction in January, and the silos were still under construction when the grain began arriving the second week of June. Cook had the grain stacked in big piles outside the west end of the construction area, close to Central Avenue. He advised the construction superintendent that the lima beans would begin arriving within two months and could not be piled like the barley. Additional workers were hired, and the construction pace increased to prepare for the arrival of the beans. The silos were completed, but the cement was still damp when the warehouse workers began loading beans in the bins. Cook later recalled, "We tested the heck out of the transfer system to try to keep the beans moving so they wouldn't mold."



*Bulk Silo Warehouse ,*

*Moffat and Nichol were the architects of the 1949 bulk silo warehouse. Built by the Gridley Construction Company, the building was the finest bulk storage facility in the southwestern United States.*

Cook was in awe of the steel workers, who worked at heights up to 65 feet. Looking down on the silos below would have been enough to make most people queazy, but the steel workers didn't seem to notice. "They had a grace of their own," Cook recalled. "Those guys would walk across on girders without taking hold of anything. And if one of them got hurt a little bit - smashed thumb or something like that - the rest of them would just make fun of him for days and days."

The design and construction costs of the bulk silo building was \$250,000. An additional \$50,000 was spent for the machinery to clean and move the produce within the building. The Irvine Company, the largest member of the co-op, advanced the money for the construction of the building. The operation was so profitable that the farmers were able to pay their debt to The Irvine Company in six years. Rent for the three and one-half acre site where the warehouses were situated was \$200 per month.

The Irvine Ranch was the second major farm in Orange County to use bulk processing. Only the Greenville warehouse owned by the Segerstrom family in Costa Mesa continued to operate locally in a sack mode. Bulk processing was part of the valiant effort being made to offset the losses of the increased taxes; a Herculean effort was required.

The 32 silos in the new warehouse could hold 16 million pounds of beans and barley. Each silo was 35 feet high and capable of holding one-half million pounds of produce.

The bulk storage operation was first class. Trucks would back up to one of two platforms at the west end of the building, each outfitted with a hydraulic lift. The lift would tilt up the front of the truck to dump the load of produce into the large hopper directly behind it inside the building. Each bin could hold one truckful of beans or barley.

The grain shakers vibrated the chaff and dirt from both barley and oats. The major dirt was removed from the beans before they were put into the bins. Large Cyclone dust collectors were located in the front and side of the building.

After the initial cleaning, the produce was moved to the bins via an open belt conveyor. The conveyor belt was 18 inches wide and could be reversed as needed. Big buckets, each capable of holding 35 pounds of beans, raised the produce from the bottom conveyor belt to the conveyor belt at the catwalk level above the silos. Bins were loaded one after another from the front to the back. When loading beans, the silos used bean ladders, consisting of a series of baffles that slowed the flow of beans down so they wouldn't be crushed by the time they hit the bottom.

Three silos had loading chutes; these silos were kept full at all times so trucks could be loaded quickly. The angle of the exterior loading chutes was changed for grain, which needed a steeper loading angle than the beans. An adjustable "angle of repose" was designed into the construction. Using this method, a 20-ton truck could be loaded in five minutes, and a railroad car in ten. Until 1957, only grain was shipped bulk.

Produce was emptied out of the silos onto the lower conveyor belt by opening the clam-shell gate at the bottom of the silo. The clam-shell gate was geared so that it could be opened any amount from very small to very large.

A catwalk was built in the headhouse of the silo building, above the silos. In order to get to the catwalk, a trip on the man lift was required. A major inconvenience surfaced after the construction was complete: there was no way for the men to go directly from the silo building to the old 1895 sack storage warehouse. They had to go back to the west end of the silo warehouse, down the man lift, and walk more than 200 feet back to the old sack storage warehouse.

Cook wasted little time in correcting this situation. He took measurements, and he and his foreman built a bridge to go between the two buildings. A crane lifted the bridge in place and it was bolted to the buildings for security. The bridge was a major time-saver, and provided an added benefit as well. According to Cook, it made a great place to watch the El Toro air shows.

The beans continued to be shipped by sack on the railroad for eight years after the bulk warehouse opened. Rail cars had not been designed to hold bulk produce, though the ever-resourceful Cook devised a way to load the box cars in as much a bulk manner as possible. In 1957, the first cars actually designed for bulk loading were leased to the California Lima Bean Growers out of Ventura. Their agent, in turn, leased cars for the Irvine Bean & Grain Grower's exclusive use.

The General Store changed hands once again in 1950. The new owners were William and Lodema Cook (no relation to the warehouse manager). William's father was George O. Cook who, in partnership with Joseph Callens, was once responsible for the 17,000-acre bean field lease that had been James Irvine's pride. After the Navy built its base in the middle of the property, the Cook house had been moved to town. Bill and Lodema lived in the old Cook family home, across the street and a block north of the store.

There was a bumper crop of barley in 1953. The new bulk warehouse had a difficult time handling the expanded barley crop and the bean crop at the same time. The silo warehouse had a 160,000-sack capacity, and that year 260,000 sacks were brought in. The barley crop filled the silos over the top, and Bill Cook had to put in planks to separate the grain from the beans. The grain was hauled to the terminal in Long Beach for storage.

To ensure there would never be another problem with produce storage capacity, the Irvine Bean and Grain Grower's Board of Directors voted to build another warehouse to store barley. In 1954, a steel Butler Building was installed parallel to the silo warehouse, built on a special "V" shaped foundation. The bottom of the V was 12 feet below the ground level. The steep sides enabled the building to function as a single bin. The barley was loaded from the original bulk silo building by a reversible screw conveyor, which meant it could be returned to the main silo building (for shipping purposes) when there was room.

The Butler Building was quite large. It could hold approximately 14 million pounds of barley.

After the Butler Building was installed, seed bins were built at the east end of the silo warehouse. There were ten bins, each capable of holding a thousand sacks. These bins kept the various kinds of seed separate, accommodating the farmers' preferences for one kind of seed over another.

Both barley and oats were rolled for animal fodder at the warehouse. Cook began manufacturing a brand of horse and cattle feed known as "Irvine Triple A." It was a blend of barley, oats and cracked bean screenings, with salts and minerals added. Many of the ingredients would have sold for much less separately.