



TAL-WI-WI  
DALE BUMSTEAD



TAL' - WI - WI  
An Arizona Ranch  
Developed by Eva  
and Dale Bumstead



# Tal-wi-wi

*"The Fertile Land The Sun First Shines Upon."*

Emory Kopta the sculptor asked his close friend K'oyal wama, Head Priest of the Hopi Indians, to name and dedicate the Happy Village and productive fields soon to be developed upon the site of the home of his ancestors.

Shown evidence of their life there—and the rich lands facing the rising sun—he said, "I name this land about to be reborn and made to support many happy people—Tal'-wi-wi'".

The Hopis believe that all life comes from—and is supported by—Sun, Water and Earth. They usher in the Spring with an impressive religious ceremony that is held each year at Tal'-wi-wi—the land first touched by a direct ray from the rising sun.

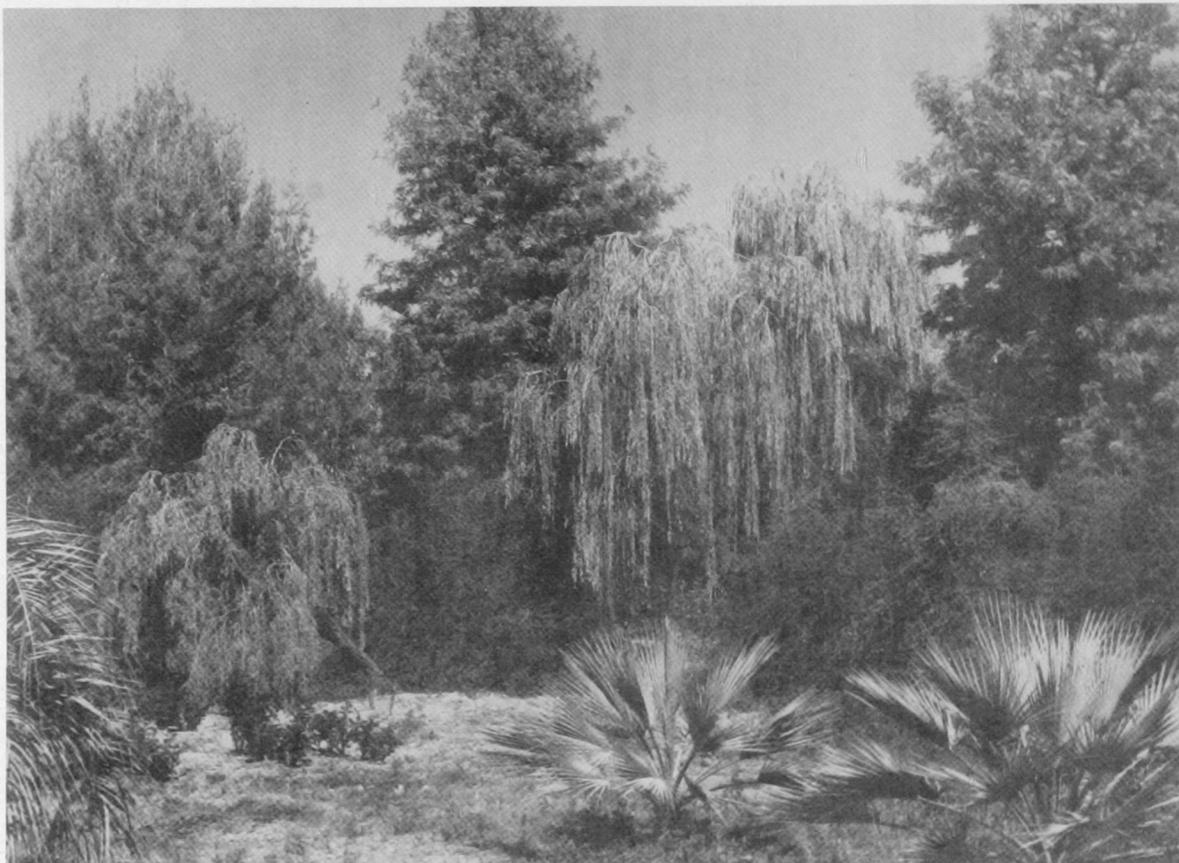
On the evening of the day preceding the first day of Spring all the Priests go down into the underground Kivah, or sacred chamber, and spend the night with prayers and ceremonies. There they ask God to bless the sacred meal used in their ceremonies.

Before dawn on the First Day all the Priests come up from the Kivah, lead by the High Priest who wears—directly over his heart—where it is held by a thong about his body, a buckskin bag containing the Sacred Corn Meal. All of the tribe follow the priests to Tal'-wi-wi.

Arrived at the sacred spot they group themselves back of the High Priest who stands erect facing toward the East. When the first direct ray of sunlight strikes his forehead he takes meal from the sacred pouch—lifts it reverently to his lips—breathing on it "to give it the breath of life"—then casts it toward the Sun with a fervent prayer to God to send sunshine and water to nourish the earth, and produce the corn and other foods for his people.

On the same day the sacred meal is reverently cast upon the water.





## TAL'-WI-WI *History*

The history of Tal'-wi-wi began with an earnest desire of two persons to live happy, wholesome outdoor lives, coupled with the opportunity for constructive and remunerative work.

It was our belief that idealism, sound business practices, science and research could be brought to bear in such a manner as to attain new heights of achievement from combining the natural resources of sunshine, water and earth.

We were idealists, yes. But it was practical idealism.

All over the Southwest we searched for the spot where we could be most certain of translating our dreams into realities. The problem proved more difficult than we had anticipated.

The site of Tal'-wi-wi was discovered in 1923; but it took four years of investigation and study to prove that it met our rigid specifications.

We had very definite ideas of the factors requisite to success. These were: rich, deep, uniform, virgin soil, free from alkali; an ample supply of sweet water; freedom from serious frosts; good air and water drainage; proximity to good neighbors; opportunity to join with fellow-Americans in work and play.

Throughout those four years we maintained carefully tested recording thermometers over large areas in order to ascertain relative temperatures. Air and water drainage were compared with those of other districts. Numerous pits were dug in order that we might examine the depth and character of the soil. Much time was devoted to study of water supply sources. Many analyses of water and soil were made.



"Take care to learn before, and to observe  
The winds, and changing temper of the air,  
The soil, and native genius of each place,  
What fruits it bears, and what it will refuse."

"Nor can all sorts of land all things produce."  
—Virgil



*Eva Bumstead's  
Garden*

Advice was sought from outstanding scientists and farmers of Arizona and California as well as experts from other states and the U. S. Department of Agriculture. This help was always generously given and proved of great value.

In the late fall of 1926 we acquired the 1120 acres that are now Tal'-wi-wi.

The county road which divides the property into two parts was cleared of brush in order that trucks might reach the ranch.

The first well was brought in; an irrigation system was started; the land was fenced.

On March 15, 1927, the initial plantings of shade trees, citrus trees and grapevines were made. Before the end of that month, the magnificent trees that today shade the miles of avenues intersecting the ranch, were set out as tiny seedlings. There were so small that they had to be protected by pieces of lath.

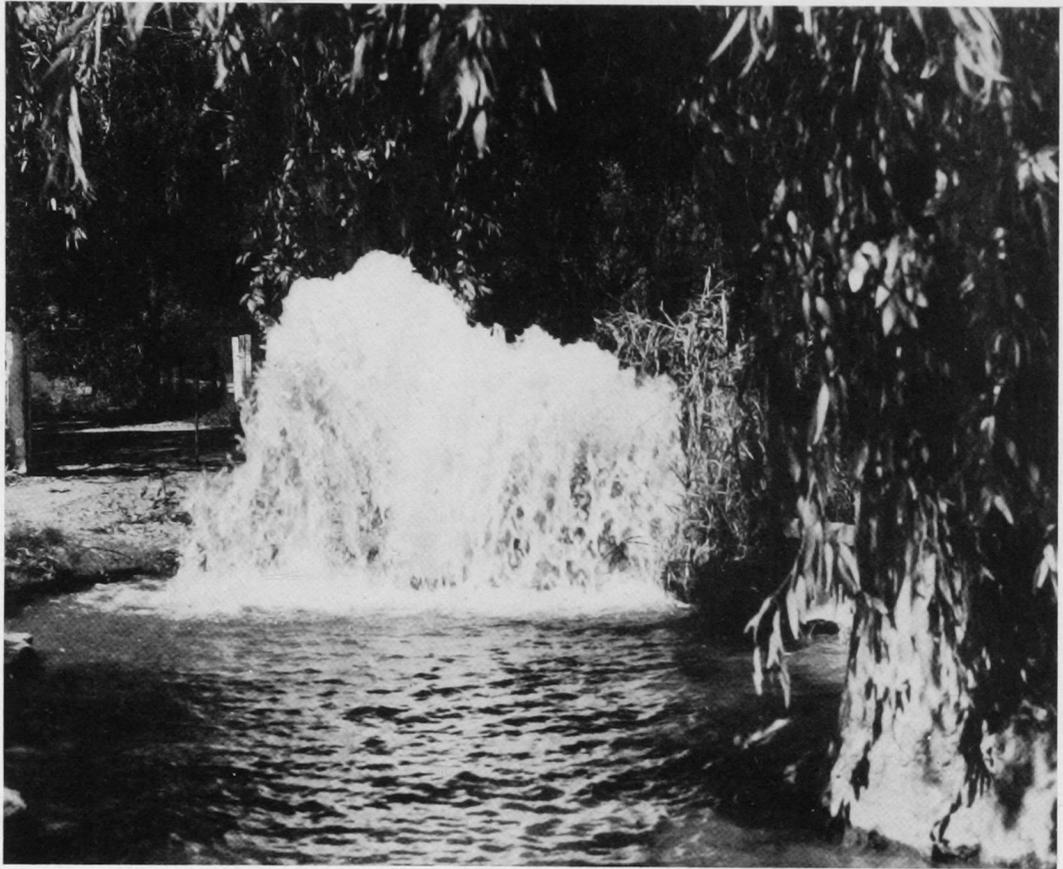
Since then each succeeding year has seen more acres cleared and the plantings extended. Additional wells were drilled, until now there are three which jointly produce 7,000 gallons a minute of crystal-clear water.

Recognizing the large production certain to result from our development, the Santa Fe Railroad built a spur and sidings to serve us.

In recent years, large acreages have been planted to pasture and grain crops. These new fields are stocked with the finest cattle and hogs.

Tal'-wi-wi is young, vigorous, healthy, productive. The yield of citrus fruits, dates and grapes is very large; it is still increasing in volume each year, and also improving in quality. Those products are distributed over much of the world. Improved methods of transportation will enlarge Tal'-wi-wi's field of service.

It is our hope that the work begun will be continued, improved, and extended.



# Sunshine, water, earth

Arizona has three great natural assets, the triumvirate which makes for the super-quality production of present day human foods—sunshine in abundance, water, and a fertile soil.

There is brilliant sunshine almost every day in the year. Little rain falls and the humidity is low. Mean average rainfall at Tal'-wi-wi is about 7.89 inches per annum. The warm, comfortable winters and hot, dry summers permit year-round agricultural operations. The actinic rays of the sun reach the earth in a never-ending, life-giving stream. The important part which these rays play in high-vitamin plant production is well known. While we can synthesize our own vitamin D, we are wholly dependent upon vigorous growing plants to supply us with A and C.

Scientific work indicates that our carrots are higher in carotene, that our cows produce butter-fat higher in vitamin A, and that our citrus fruits are higher in vitamin C. Studies with additional products are showing similar results for A and C as well as for B1, and there is every reason to suppose that this holds for the other vitamins as well.

In Arizona water is "King". It is the limiting factor in plant and animal production and must be supplied artificially. A pure, salt free water supply cannot be over emphasized. Arizona's deep and fertile soils are rich in all the necessary food elements.

The sunshine is here! Sweet water is here! These make the desert bloom into fruitful productiveness.



## TAL'-WI-WI *climate*

Critical analysis of all official records for 48 years discloses no really undesirable features.

Warmth and dryness make possible the production of unusually large crops of agricultural products with high vitamin content and of unusual quality.

This is the zone of maximum sunshine and minimum relative humidity. The sun shines 84% of the daylight hours. Rainfall averages 7.89 inches per annum, and there is a measurable amount of precipitation on only 38 days during an average year.

Farming operations are rarely interrupted by rain; and planting, cultivating and harvesting may be done at any desirable time. As a matter of fact harvesting is done every day of the year, and some land produces two or more crops during the same season.

The old saying, "one cannot find all the good things in one place" is not true, so far as the factors necessary to agricultural production are concerned.

Maximum sunshine, and an ample supply of rain and snow in our Arizona mountains are always available to serve the rich, warm lands of the valley.

There is an absence of high winds, the average velocity being about six miles per hour. Winds of relatively high velocity are very rare and of short duration.

These climatic factors are of great value as they affect the lives and activities of those so fortunate as to call this "Land of the Sun" their home.

*View in Garden*



## *The Desert*

The irrigated areas of Arizona are confined largely to intermountain valleys and these valley floors have been built up by eroded material from the surrounding mountains. Naturally then they are rich soils but possess much of the soluble minerals in the form of alkali. In the low spots in these valleys the alkali accumulates and becomes harmful. The land comprising Tal'-wi-wi is situated high enough to have escaped the alkali menace.

To maintain irrigated land free from alkali the quality of the irrigation water is a determining factor. The water supply at Tal'-wi-wi is low in total soluble salts, 361 parts per million, and has a favorable lime-soda ratio. This practically assures Tal'-wi-wi freedom from any progressive accumulation of alkalinity in the soil such as often follows continuous irrigation.



## *The Desert* RECLAIMED

The soils comprising the valley floors of Arizona's intermountain areas possess large reserves of all mineral plant foods except nitrogen. Lime and potash are in forms which are readily available to crops and the reserve is sufficient to last many years. The phosphate is less available and so it is often necessary to use soluble phosphates for field crops—less often for tree crops. Nitrogen deficiency is a characteristic of all desert soils and so the use of nitrogenous fertilizer or manure is an important part of the fertility program at Tal'-wi-wi. Because of the calcareous nature of these soils some crops have difficulty in utilizing such plant food elements as iron, manganese, and zinc. The crop may be helped in its utilization of these elements by sulphur additions to the soil and so the use of sulphur is also an important part in the fertility program.



# Grapefruit

At Tal'-wi-wi are 115 acres of grapefruit trees grown from buds taken from parents with outstanding records for quality, uniformity, and productivity.

A well-known scientist, working steadily through many years, observed closely and recorded carefully the performances of many thousands of grapefruit trees. He took buds from the best in each generation, to establish the next planting. This operation was continued thru many generations.

The success which crowned this study and selection is one of the most important contributions made to citriculture in all history. For the buds and fruit from those proved and improved trees have been shipped to many countries.

Our grapefruit is marketed from October in the year of bloom to July of the following year. It is known in most world markets.



Tal'-wi-wi's orange groves are small in comparison with its grapefruit. But the quality is good. Most of the trees are navels, propagated from buds taken from parent stock rigidly selected for high yields of the finest fruit.

There is also a considerable planting of the recently developed Robertson Navel, a variety of excellent quality that seems ideally suited to our growing conditions.

There is also a planting of the newly discovered seedless orange, "The Rico", that is very promising.

Our oranges find a distinct and unique place in the market. They mature in late fall and early winter, before many oranges from other districts are ripe. Therefore we benefit from a "bare" market, as well as from superior quality. First shipments are usually made in October and all the navels are gone by March—usually much sooner.

## *Oranges*



## Grapes

The 100 acres of grapes at Tal'-wi-wi have demonstrated the wisdom of this great agricultural leader. Our vineyards have been very productive and have also afforded us great pleasure. Again to quote Columella: "But though these things yield great delight, never-the-less the advantage is greater than the pleasure."

No crop requires greater care. All vines are trellised. If these trellises were placed end to end, they would stretch fully 90 miles. Into their construction went 40,000 wooden posts and 270 miles of heavy wire.

After years of experimentation with many varieties, we decided to concentrate on the one which proved best suited to our soil and climate—the Thompson Seedless. So, today, all our vines are Thompsons.

From the time the first leaves appear in March until after the harvest, the vineyards are beautiful almost beyond belief.

The market period is very short, from June 20 to July 20. At this time there is very little fresh fruit in the market and our grapes meet little competition. Generally sold in carload lots at auction, they have frequently "topped the market."

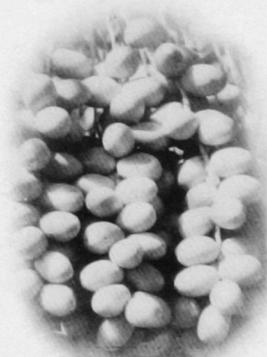
"There is nothing of greater advantage, and more expedient for husbandmen, than to cultivate vineyards."

—L. Junius Moderatus Columella





In battle Arabs say "The winds of Heaven are blowing." Their battle cry, "There is but one God—God," may be heard in the rustling of the palm fronds.



## Dates

Tal'-wi-wi has about 35 acres of rare palms bearing large, luscious, soft dates.

Through countless ages every offshoot springing from the base of each palm has been exactly like its parent. Males produce only male children, while females produce fruit and female children, each of which then goes on to bear dates like its mother. So far as we know, they are the only living things that have come to us unchanged through all recorded times. They are earth's real aristocrats.

There can be but little doubt that at Tal'-wi-wi are direct descendants from palms that grew in the garden of Tutankhamen's mother. Another kind, our Maktum, is said to have been the favorite of King Solomon and his family. Dates identical with those at Tal'-wi-wi were served at all the feasts of the Pharaohs.

Date palms are said to live and bear fruit for more than a thousand years.

Palms bear considerable fruit the fifth year. Thereafter, production increases rapidly for 20 years or more. In the early stages the increase from one season to another is often more than 50%.



## *Grain and Forage . .*

Yields of feed are obtainable here that would be unthinkable in less favored climes. Two grain crops may be grown on the same land in the same year. Alfalfa may be cut for hay from five to seven times a year, a ton or more to the cutting. The usual practice, however, is to pasture it part of the time.

Planting of grain is possible in all months except July and August. Our grain sorghum planting for 1944 was concluded in June. Tal-wi-wi will then have 130 acres in grain, not counting barley and oats interplanted with alfalfa.



## Cattle

"Therefore, as the ancient Romans commanded, I myself also am of the opinion that we should thoroughly understand the management of cattle, as well as the culture of lands."

—Columella

There is well-founded and growing-belief in balanced agriculture—in the intimate relation between plant and animal life; in the production of both on the same land. Again to quote Columella: "The earth neither grows old, nor wears out, if it be dunged."

Superior sun, water and earth produce not only better and larger crops of fruit, vegetables and forage, but also of livestock; and all eventually provide food for man—not merely food, but the very best food, rich in all the elements necessary to health. Therefore, at Tal-wi-wi, we have balanced our agriculture by building up herds of cattle and hogs.

Our herd of registered Herefords has been selected with great care from justly famous herds. To better the quality of our purebreds is our constant aim.

We also raise and purchase good grade cattle which are fattened and sold. The grade herd will be steadily improved by introduction of blood from the registered herd.

Our ranch can carry more than 500 cattle.



## Hogs

So large a ranch has a distinct need of hogs in order to make valuable products from certain desirable animal foods that would otherwise be wasted—such as edible weeds, legumes and grasses grown between the trees and vines where they could not otherwise be harvested. They also consume cull fruit. They are “finished” on grain and alfalfa.

They do not feed upon the roots of dates, grapes or citrus—nor do they eat citrus foliage.

When a field has been harvested the hogs are moved in. As the season progresses they go from field to field through grapes, dates and citrus and soon find themselves fat enough for the finishing pens.

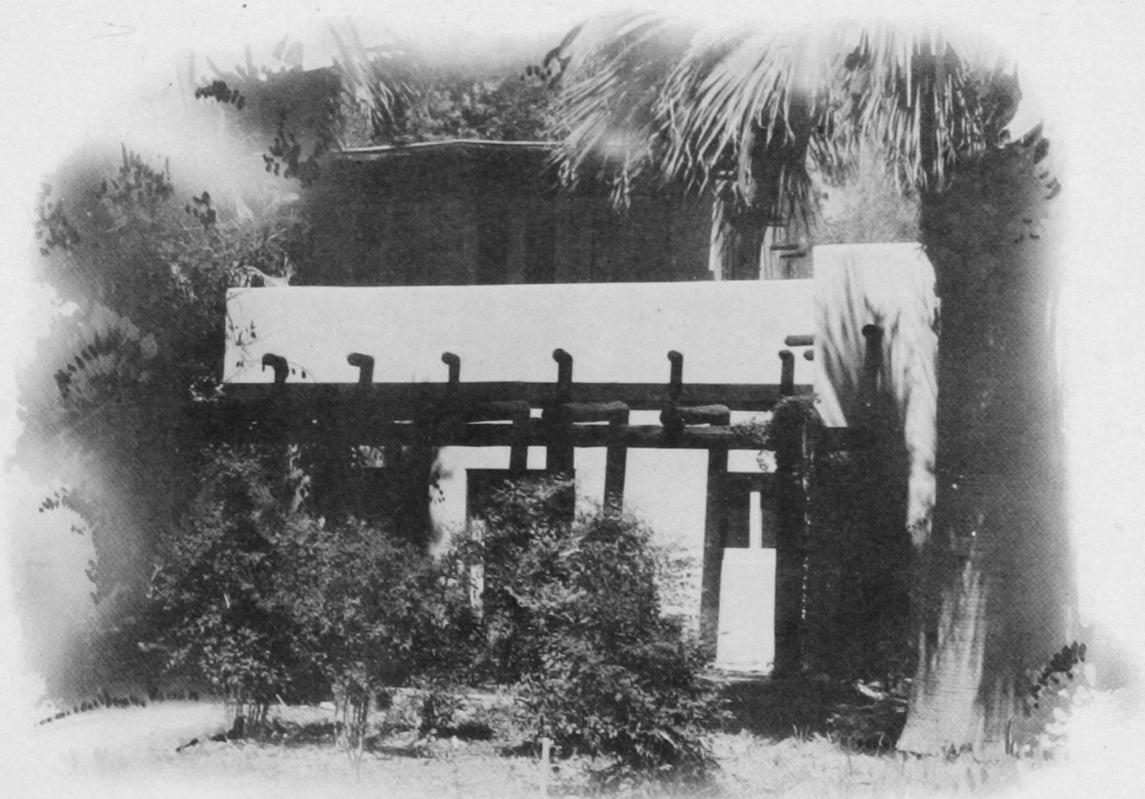
We raise Hampshires and Durocs, with small herds of very fine registered animals to improve the quality and productivity.

Sold at auction they bring premium prices.

The production of manure is important.



*Administration  
and  
Packing*



*Manager's Home*



*North  
Village*



*Central  
Village*



*Superintendent's Residence*



*East  
Village*

Shipping Station  
Bumstead, Arizona  
A. T. & S. F. Railway

Address for mail  
Tal'-wi-wi, Route 1  
Peoria, Arizona  
Address for telegrams  
Glendale, Arizona

TAL'-WI-WI RANCH

Dale Bumstead  
Dale Bumstead, Jr.  
Owners

☆

J. C. Watt, Mgr.  
Harry Starr, Supt.  
Frances Starr, Sec'y

☆

Producers, Packers and Shippers of

Grapefruit, Oranges, Dates, Grapes,  
Cattle, Grain, Hay

Breeders of

Registered Hereford Cattle

Total Acres 1120

Grapefruit	- - - -	115 Acres
Oranges	- - - -	20 Acres
Dates	- - - -	35 Acres
Grapes	- - - -	100 Acres
Alfalfa	- - - -	350 Acres
Grain	- - - -	130 Acres
Irrigated Pasture	- -	160 Acres
Pasture	- - - -	200 Acres
Buildings	- - - -	10 Acres

3 Electrically operated wells.

5 miles underground Cement Irrigation Mains.

23 miles fencing.

Office—2 Packing Houses—Granary—Mill—Feed Pens—Farrowing Buildings—Loading Shed.

15 Residences.

Water and Electricity for power and domestic purposes over all of the ranch.