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California Department of Food and Agriculture

Agricultural Commissioners' Crop Reports

San Joaquin County

1935-1938

California County Agricultural Commissioners' Reports from the California Department of Food and Agriculture. This collection consists of annual crop and livestock data from each of the 58 California Counties. The collection covers 1915-1981; digitization of the rest of the collection is forthcoming.

This digitization project was funded by the Giannini Foundation of Agricultural Economics, http://giannini.ucop.edu/ .

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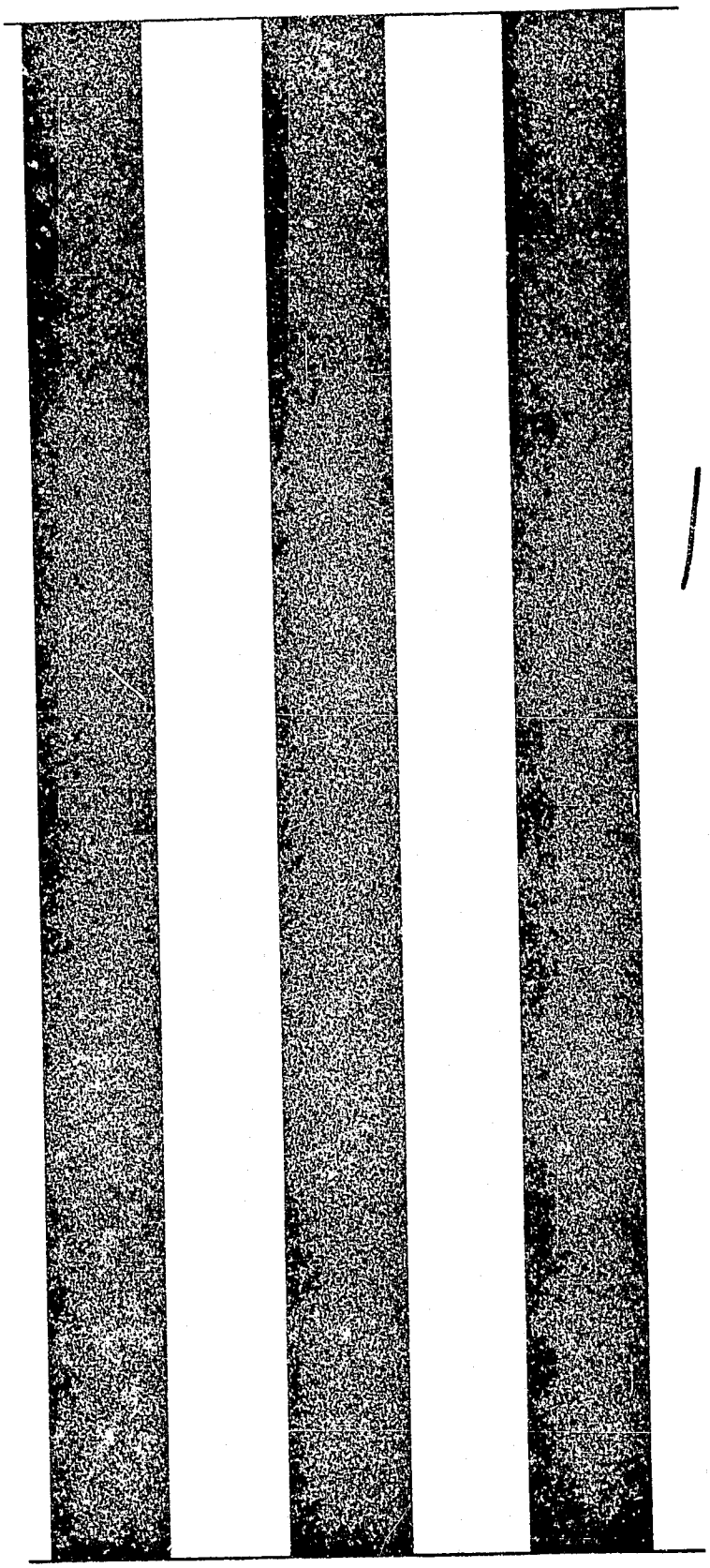
SAN JOAQUIN COUNTY

1935 - 1981



1935

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ANNUAL REPORT

of the

AGRICULTURAL COMMISSIONER

COUNTY OF SAN JOAQUIN

Year 1935

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AUSTIN E. MAHONEY

Agricultural Commissioner

ANNUAL REPORT

SAN JOAQUIN COUNTY AGRICULTURAL COMMISSIONER

YEAR 1935

I N D E X

APIARY

FOR THE YEAR OF 1935 a total of 253 Apiaries were inspected, having a total of 11,886 Colonies. Out of the 11,886 Colonies inspected 584 were found infected with American Foulbrood and 249 Colonies were found infected with European Foulbrood. All Colonies found infected with A.F.B. are destroyed by killing the bees in the hives and burning the diseased colonies, including the bees, combs, frames, honey and wax in a pit, burying the ashes below the surface of the ground and disinfecting by scorching the hives, bodies, bottom boards, covers and supers associated. European Foulbrood colonies are treated by re-queening. In addition to the inspection work, 171 swarms in homes were killed by using Calcium Cyanide.

BIRD DAMAGE AND CONTROL MEASURES

IT IS ESTIMATED that approximately one thousand acres of Baby Lima beans, in the tender seedling stage, were attacked by Horned Larks in this County during 1935. The damage to these plantings ranged from a very small percentage to virtually complete destruction of the entire crop. Perhaps a safe estimate of total crop loss would be well over one hundred acres.

All control measures carried on under our supervision were confined to areas of heavy Horned Lark attack where requests for aid seemed justified, and covered less than four hundred acres treated. In all cases the recommended methods of the U.S. Biological Survey were followed as nearly as practicable.

Damage by English Sparrows and Linnets, as reported to this office, were checked for accuracy and while no doubt some loss was suffered in most instances, depredations from these two species were rarely sufficiently severe and concentrated to warrant action.

FAIRS AND EXHIBITS

DURING THE YEAR 1935 the Agricultural Commissioner planned, designed, constructed and had full charge of the exhibits at four fairs. In addition to these, smaller exhibits were made at flower shows, community fairs and floats were constructed for several parades.

AT THE CALIFORNIA STATE FAIR San Joaquin County was represented by a huge revolving basket filled with large artificial farm products. Surrounding this basket were many smaller baskets containing the various agricultural products. Especially attractive was the vegetable display on a new type of rack which kept the products fresh by a continuous spray of cold water and a draught of air. On each side of the display were pyramids of bottles containing the choicest of San Joaquin County wines and liquors.

At Sacramento the County won a first booth award and a first for new installation and sweepstakes in peaches, grapes, beans, walnuts, melons and squash, apricots and nectarines, root vegetables and almonds; a total of 116 firsts, 87 seconds and 14 third prizes.

AT LOS ANGELES COUNTY FAIR, the County won first booth award and sweepstakes in root vegetables, beans, melons, grain and seeds; a total of 114 firsts and 41 second prizes.

In addition, on the wine display the County won medals for seven first and four seconds at Sacramento and ten firsts, twelve seconds and six thirds at the Los Angeles County Fair.

AT CALIFORNIA PACIFIC INTERNATIONAL EXPOSITION, the County was represented by a large panorama showing the general outline of the County, Port development and other points of interest. During the last week of the Exposition in 1935 the exhibit was transformed into an agricultural display for which the County won second award and $900.00 cash. This was sponsored by the Twenty-second Agricultural District Association.

AT THE SAN JOAQUIN COUNTY FAIR, the Agricultural Commissioner, Superintendent in Charge of the Agricultural Display transformed the entire Agricultural Building at the County Fair Grounds into a characteristic mission. No detail was overlooked in constructing the building to typify a Spanish Mission. Forty arches and pillars of adobe and a spacious patio transformed the interior. Murals over six entrances depicted some era in the days of the Padres. On the arcade walls were panels carrying a continuous design of figures in action representing early California figures and costumes.

FRUIT, NUT AND VEGETABLE STANDARDIZATION

THE AGRICULTURAL COMMISSIONER assists the farmers to build up a reputation for their farm products and protects their markets by instructing them as to the proper grading and packing of their fruit, nuts and vegetables as prescribed by the Agricultural Code. It is not the purpose of this office to arrest or bring undue pressure on those who have violated the provisions of this Code, but sometimes this becomes necessary on frequent offenders and others unwilling to abide by these provisions.

INSPECTION AT POINT OF ORIGIN OR AT TIME OF PACKING. Our records show that a total of 11,715 carloads of produce were inspected or reported on at these points. Included in this total are 6679 carloads of grapes. An accurate account of carload shipments of grapes is kept daily by this office to assist the growers in an orderly marketing of their crop. Also included in this total is the certification of 1195 carloads of sugar beets.

Number of rejections	115
Number of packages destroyed by Court Order or owner	1308
Number of packages re-conditioned or re-marked for sale or to by-products	15848

HIGHWAY STATION INSPECTIONS. Cooperating with the State Department of Agriculture, a station for the stopping and inspecting of trucks hauling fruits, nuts and vegetables has been maintained near Tracy on the State Highway. An accurate account of the number of trucks inspected, rejections and arrests is kept by the Department.

WHOLESALE MARKET OR DESTINATION INSPECTIONS. Many growers sell their products at the San Joaquin Market located in Stockton. During marketing hours an inspector is always on duty to instruct growers in the proper grading and packing of their products and to make rejections when necessary. Approximately 767 carloads were inspected here this year. Three arrests were made. One for the continued selling of off grade cantaloupes. The offender paid a fine of $50.00 and was given sixty days suspended sentence. Another arrest was for selling deceptively packed tomatoes for which the offender was fined $25.00 and given thirty days suspended sentence. The third for selling immature watermelons, fined $25.00 and $50.00 suspended sentence.

Number of rejections	29
Number of packages dumped by Court Order or owner	92
Number of packages reconditioned or remarked for sale or to by-products	903

INSPECTION OF RETAIL STORES, PRODUCE STANDS, AND RETAIL TRUCK DEALERS: Frequent inspections are made at these points. Farm products held any length of time deteriorate and it is necessary to recondition them frequently. One arrest was made for selling off grade potatoes for which a $100.00 fine was imposed.

Number of rejections	16
Number of packages dumped by Court Order or owner	669
Number of packages reconditioned or remarked for sale or to by-products	3342

INSECTS AND MITES

INSECTS AND MITES did not attract as much attention this year as in previous years. Although there were severe attacks in certain fields, it cannot be said there was a general out-break of any one insect which caused severe damage over a wide area such as the Grasshopper, Pacific Mite and Grape Leaf Hopper attack of the previous year.

GRAPE LEAF HOPPER: The Agricultural Commissioner sponsored an SERA project for the control of the Grape Leaf Hopper in the area West of Lodi. Many miles of irrigation ditches and roads were cleaned of weed growth, dry grass, leaves, etc., during the winter months where the leaf hoppers secure protection. The infestation was considerably lighter this year in this section. Some spraying was done throughout the County with oil and pyrethrum, but its use was not as general as the previous year.

WORMS ON TOMATOES: Horn Worm, Corn Ear Worms and Army Worms were present in tomato fields but did not build up to enough to do serious damage. The use of Sodium Fluosilicate seventy per cent and, or Calcium Arsenite mixed with five parts of lime was quite general.

SUNFLOWER PHYCITID: Our attention was directed to this small moth several seasons ago and since then has done considerable damage in localized areas. The larvae mine throughout the heads and destroy and lower the quality of the seeds. No control has been attempted.

ELM LEAF BEETLE: San Joaquin County has been particularly fortunate escaping the attacks of Elm Leaf Beetle in view of the fact it is so prevalent in neighboring counties. One local infestation was eradicated three years ago. However, the annual survey this season showed it to be quite distributed throughout the County, although not serious enough to attract attention. Next season it is expected to build up enough to attract considerable attention.

CODLING MOTH: Codling moth was particularly serious in pears and walnuts. Pear Orchards in which 100 per cent spray programs was not carried out, had fifty per cent wormy fruit. Walnuts of the Payne variety were also heavily attacked in the Linden Section.

PACIFIC MITE: Infestations of Pacific Mite were considerably lighter than the previous year. A good winter rainfall and a cool spring had its effect on cutting down the infestation. The worst infestations showed up in September when ordinarily the Mites start to disappear during this month. This was due to the unusually warm dry weather.

FIELD CRICKETS: Several tomato fields were severely injured by crickets. Recommendations were made for their control, but since it was late in the season nothing was done.

OTHER INSECTS: Plant bugs, canker worms, wireworms, darkling ground beetles, cut worms and other insects attracted the usual amount of attention.

NURSERIES

DURING THE FALL AND WINTER all the nurseries were inspected and found to be free of serious pests. Slight infestations of mealybugs, scale insects and aphids were found which were sprayed.

ORCHARD AND FIELD INSPECTION

AGRICULTURAL INSPECTORS are constantly in touch with the farmers in their districts. Various problems are discussed concerning the planting, care and harvesting of crops.

The inspectors' knowledge of agricultural conditions throughout their districts and their agricultural training make them particularly well qualified in helping to solve these problems.

PLANT DISEASE CONTROL

THE AGRICULTURAL COMMISSIONER is directed by law to keep himself informed regarding infestations or pests in his County, and with measures taken to eradicate or control insects, animal pests and contagious plant diseases. When pests are found in a new area, measures are invoked to prevent their spread and, whenever practical, eradication is undertaken. Practices to reduce or control indigenous diseases are recommended. One phase of pest control deals with plant diseases

Southern Root Rot caused by the fungus, "Sclerotuim rolfsii", was found in this County on six ranches in 1932. This rot compares with root knot nematode in damage to root vegetables and certain field crops in the Southern States where it is established. Quarantine regulations were established affecting the movement of infected crops, and rotations recommended. No new land has been found infected since that time, and this rot did estimable damage on only one of these ranches in 1935.

CHESTNUT BLIGHT, "Endothia parasitica", was found in two orchards in San Joaquin County in 1934. In 1935, five surveys of the infected properties were made. On the ranch where one tree was infected in 1934, no new infections were found. In the other orchard, eleven trees were found infected in 1935, and were burned in place. This disease is wiping out the native chestnuts of the East. With reduction of the amount of infective material in these orchards, and repeated inspections, we are optimistic regarding eradication of this disease in our promising chestnut industry in this County.

THE MAJOR PEACH AREAS of the County were scouted for presence of the peach virus called, "Peach Disease of 1933" or "Texas Mosaic". No infection was found.

ALL CELERY PLANTINGS in the County were inspected and found to be free from the very destructive virus disease called Western Celery Mosaic or "Venice Disease". Calico, an aphis transmitted virus of celery, was reported for the first time in the County. The plants were stunted, reducing yield, but the crop was marketable. Aster yellows was found in all celery plantings, damage varying from nominal in Delta areas to ten per cent in garden plantings near Stockton. Fusarium infection was quite noticeable in some fields. Growers must be careful to use clean seed beds or this disease will become a limiting factor in our celery industry. Late blight was present in some fields again this year, but damage was nominal.

THE OUTSTANDING LOSS from disease in a single crop was due to the Walnut Blight, "Bacterium juglandis". Due to dry spring weather over a period of years previous to 1935, blight had not been worse in unsprayed than in sprayed orchards. This lead to a neglect of control measures in most orchards, and with the relatively wet spring of 1935, which also interfered with the spray program, a general loss from walnut blight resulted.

BROWN ROT OF STONE FRUITS, occurring as blossom and twig blight in the spring, was serious, approaching an epiphytotic in some orchards. A dry summer aided control, but ripening fruit injured by insect punctures or other skin breaks developed brown rot infection due to the abundant spore production from the spring infections. Curly leaf of peaches was general in poorly sprayed orchards. The wet spring delayed spray programs in some orchards. Use of obsolescent spray equipment, or equipment in poor repair, which did not develop sufficient pressure to deliver a mist spray to the tops of the trees, is a condition which has become aggravated during the years of poor returns. Careless spraying is all too common a cause of failure to control the stone fruit diseases.

FOLLOWING THE FROST and early rains in the fall, gray mold rot, "Botrytis", prevented Eastern shipments of table grapes. The usual sulphuring program was necessary for the control of mildew.

Mildew of onions reduced the spring "Upland" crop an estimated twenty per cent.

CORN SMUT was more serious than in 1934, causing a loss of ten per cent. Dry ear rot of corn "Fusarium moniliforme" was remarkedly less than the previous year, although present in most fields.

ROOT KNOT NEMATODE, particularly in the sandy soils of the County, caused usual losses to tomatoes, beans, melons and stone fruits. In the Tracy bean section, which is quite free of nematode, spot infections are being treated with carbon bisulphide.

SOURING OF FIGS was common in the Kadota fig area close to Stockton. Insects which enter the figs carry the spores of rot organisms. Dried fruit beetles and vinegar flies are present in large numbers in this district. The first crop of Kadotas suffered from caprification by blastophaga.

TOMATOES SUFFERED a fifteen per cent loss from the Yellow virus, "Western Yellow Blight". Bacterial canker caused large losses in a few fields, but did nominal damage in the County as a whole. Tobacco mosaic and other viruses were present but did nominal damage.

In reviewing 1935, it can be emphasized that diseases such as walnut blight and brown rot which are indigenous i.e., the disease organism being established and always present in greater or lesser quantity, will cause heavy losses whenever environmental conditions become favorable for the rapid development of the organisms causing the disease. The grower can control this natural increase in disease only by taking preventive steps before infection takes place. Once infection is established in a plant, it can be killed only by destruction of the infected tissues.

Control of plant disease means prevention of infection.

PLANT QUARANTINE

THE PURPOSE of plant quarantine is to prevent the introduction into and spread within the State of pests injurious to the agricultural industry of the State.

INSPECTION OF INTERSTATE SHIPMENTS:

Number of shipments inspected	2565
Number of parcels inspected	624244
Number of shipments rejected	43
Number of parcels rejected	11560

INSPECTION OF INTRASTATE SHIPMENTS OF NURSERY STOCK:

Number of shipments	2101
Number of plants	487444
Number of shipments rejected	118
Number of plants rejected	26738

REASONS FOR REJECTIONS: Shipments were rejected principally for the presence of nematode, crowngall, bacterial gummosis, mealybug and scale insects. A few shipments were rejected where there was reasonable cause to presume they were infested or infected with insect or disease pests. Other shipments rejected were entering the County in violation of specific plant quarantines.

RODENT CONTROL

The following materials were sold and distributed under the supervision of this office:

Straychnined grain	8322 lbs.	106500 acres treated
Thallium grain	10369 lbs.	128806 acres treated
Strychnined corn	625 lbs.	
Carbon Bisulphide	10349 gallons	102044 acres treated
K.R.O.	99 ounces	

Total acres treated 337350

A large amount of the squirrel control work was done with SERA crews from the single men's camp. Crew foremen were of our own selection and were paid $5.00 per day. Arrangements were made with farmers to do their work for them and they paid for the materials used and the foremen's wages. This system worked very satisfactorily although its use was limited to large ranches.

RATS: Island farmers experienced considerable damage from rats which live in the levees and migrate out into the corn fields and eat the tender germinating corn. Very satisfactory control was obtained by soaking corn several days and then treating it with poison.

SEED INSPECTION

THE CALIFORNIA SEED LAW is strictly a labeling provision and gives authority for rejecting seed only when mislabeled. In addition to this the Agricultural Commissioner rejects seed under authority of the Agricultural Code, which provides for the prevention of the spread of pests throughout the State. Any seed offered for sale for planting purposes may be rejected by the Agricultural Commissioner if it is infested with any wee seed, which he feels would be a menace to agriculture in his County.

The inspection of agricultural seed was first started in 1933, and many lots of seed were rejected for the presence of noxious weed seeds. Seed companies now know that any seed sold in this County must be clean. This year eighty-eight lots of seed were sent to the State Seed Laboratory for purity tests, and many lots were examined by this office for the presence of noxious weeds. Only three lots were rejected. These were for the presence of dodder in clover seed. Twenty-seven different kinds of seeds were inspected.

In addition to the inspection of lots of seeds for noxious weeds, twelve samples were submitted to the Seed Laboratory at Sacramento, for official labeling. In most of these cases the labels were present and samples were sent for a re-check on the germination percentage.

WEED CONTROL

AGRICULTURAL INSPECTORS are always bearing in mind the danger of noxious weeds and are persistent in their efforts to have farmers guard against them. Cultivation is still the most practical method of weed control, but other methods have proven very successful on specific problems. This office has done a great deal of weed control work on the County roads.

MUSTARD: A four hundred gallon sprayer was re-constructed for the application of sulfuric acid for the control of mustard in grain fields. Specifications and recommendations of the College of Agriculture were followed. Due to heavy early spring rains and a delay in completing the machine, only one field was treated. The results were satisfactory. Several fields are lined up for spraying in 1936.

MORNING GLORY: A new type of carbon bisulphide injector was designed by a Tracy bean farmer. It consists of a gallon coal oil can, an inverted automobile sediment bowl to regulate the dosage, a three way valve and some pipe tubing with an injector attachment. It works very satisfactorily and through the efforts of the Agricultural Inspectors, many farmers now have one of these injectors and are making good use of them. Twenty-five hundred gallons of carbon bisulphide were used in 1935.

HOARY CRESS: One field of one hundred twenty acres was flooded for a period of four months for the control of hoary cress. It is too soon to make predictions as to the results of this method, but undoubtedly it cannot stand submergence for such a long period. Grain from fields infested with hoary cress was used for export purposes only. Grain harvesters were thoroughly cleaned after working in an infested field.

ANNUAL WEEDS ON DITCH BANKS: Arsenic was applied at the rate of three pounds and four pounds per square rod on a light sandy soil on an irrigation ditch bank. On both plots there was no weed growth.

ANNUAL WEEDS ON ROADSIDES: Six thousand nine hundred eighty-one miles traveled by three tractors discing roadsides at a cost of 72¢ per mile. Six hundred seventy miles of roads disced several trips each side at a cost of $7.57 per mile per season.

Four hundred eighty-seven miles of roads disced for fire protection and weed control.

One hundred eighty-three miles of roads disced, weed control in puncture vine district.

Two hundred twenty-four miles of roads disced second time, due to regrowth, for fire protection and weed control.

One hundred fifty-one miles of roads disced second time, due to regrowth, for weed control in puncture vine district.

No fires originated from roadsides which were disced. The conditions of our roadsides has been vastly improved from a highway maintenance viewpoint. Puncture vine infestations have been greatly reduced. The cost comparison shows oiling would cost $75.00 per mile, as against discing at $7.57 per mile.

PUNCTURE VINE: Approximately ten thousand miles were traveled during the summer and fall months patrolling the roads for puncture vine control. Infestations were sprayed with diesel oil and later burned. A total of one thousand nine hundred two gallons of diesel oil was used. Puncture vine germinated later than in most years due to the cool spring and patrol work continued into October, due to the unusually warm September.

SERA and WPA: Cooperating with the SERA and WPA, many miles of roads were cleaned of yellow star thistle, milk thistle, Russian thistle, citron melons and other annual weeds. Destruction of such weeds cuts down the source of infestation to farmers' lands, removes host plants of various insects and diseases, facilitates road grading and improves the country side appearance. Citron melons in the watermelon district cross with watermelons and their elimination improves the watermelon quality.

BERMUDA GRASS: Bermuda Grass has been widely scattered by road graders and in some places has spread to adjoining farms. Approximately one hundred fifty thousand square feet of bermuda grass has been dug and this will be followed by the application of arsenic.

JOHNSON GRASS AND RUSSIAN KNAPWEED: Sodium chlorate was used on County roads and on farms for the control of these weeds in addition to the customary dultivation practices.

STATISTICS

SAN JOAQUIN COUNTY

1935

The following information is a compilation of records made during the year. The data is secured by the staff and compiled by recorders of the W.P.A.

Specific crop reports are made during the year. This information is released through all the County newspapers and concerns the various factors affecting crops during the planting, growing and harvesting season. When harvest is completed a report is made of the acreage, production and valuation of the crop.

During the shipping season of the major commodities a daily record is kept of the shipments from this County which is a direct benefit in helping to maintain orderly marketing of our farm commodities.

CROP SUMMARY

ALMONDS: Brown rot reduced the crop considerably except in orchards well sprayed. Prices were excellent and those who had good crops realized a large profit.

APRICOTS: Brown rot also reduced the apricot crop. Here again growers who produced a good crop had no trouble in disposing of it at a good profit.

CHESTNUTS: Chestnuts are a consistent bearer and not attacked by diseases which reduce their yield. Also, they bloom after frost danger.

CHERRIES: The shipping cherry crop was reduced by brown rot and poor pollination. Continuous rains during the blooming period interfered with proper pollination and increased the severity of brown rot. The canning cherry crop was somewhat of a surprise and showed a slight increase over the previous year.

FIGS: October rains caused a loss of approximately thirty-five per cent of the fig crop.

OLIVES: Rain and frost did considerably damage to the crop just previous to harvest.

PEACHES: Peach growers both cling and free enjoyed a very favorable year. There was a small amount of brown rot but this did not reduce the crop to any great extent. Prices were good and all of the crop was harvested. Early peaches of the Mayflower and Carman variety produced a light crop due to a dropping of the buds for some unknown reason.

PEARS: Pear prices were good but the crop was light. Codling Moth injury was severe and reduced the crop considerably in orchards not thoroughly sprayed.

PLUMS: First indications were for a very light crop of plums due to rains at blooming time, but final harvest showed an average crop of fine quality. Prices were excellent.

PRUNES: Many of the sugar prunes were packed and shipped fresh because of the high prices on plums. Otherwise the prune crop was average both as to production and price.

WALNUTS: The walnut crop was reduced by walnut blight. Continuous rains during the spring made it impossible for growers to carry on spraying operations.

GRAPES, TABLE: The table grape harvest was cut short by an early rainy season which demoralized the market for the balance of the crop to the wineries. Those who had contracted received $12.00 per ton delivered at the winery. Toward the end of the season prices were as low as $1.00 per ton on the vines. Production was considerably above normal and several vineyards reported over 20 tons per acre.

GRAPES, WINE: Most of the wine grapes for Eastern shipment were purchased before harvest season by the buyers. Prices ranged from $8.50 to $18.00 per ton on the vines. Eastern prices were low and the buyers suffered heavy losses. Grapes delivered to the winery brought fair prices except towards the end of the season. Most of the wine grapes were harvested before the slump in winery prices.

CELERY: Prices on celery were good but the production per acre was below normal. There was also quite a large increase in acreage.

CORN: Corn prices showed some reduction over the previous year. Production was somewhat better as ear rot was not as prevalent.

ALFALFA: A cool spring reduced the crop. The first cutting was later than normal.

GRAIN. Production on all grain crops was above normal but not as high as early predictions placedit. Sun-scald and warm dry winds during the maturing period reducedthe crop and lowered the quality.

BEANS: The quality of beans was very poor. Growing conditions were unfavorable and rain during the harvest accounted for this. Prices on colored beans dropped to below the cost of production. Blackeyes and baby limas increased in price due to a light crop and small carryover.

POTATOES: Early potatoes did not bring the cost of production. However, after the killing frost which reduced the crop in other parts of the country, potato prices increased. Production per acre was very low. Years of low prices have made it impossible for growers to carry on a fertilizing program.

SWEET POTATOES: A normal crop and normal prices.

MELONS: Melon growers had a very poor year. Melon production in the San Joaquin Valley came in all at once, flooded the markets and caused a slump in prices.

CARROTS: Production continues throughout the year and prices are seasonal.

ASPARAGUS: Shipments of fresh asparagus were smaller this year due to a late season. A larger amount was delivered to the canneries. Prices were good and growers are optimistic over the future outlook. Many new fields are being planted.

ONIONS: Onion prices have held up pretty well. Early onions were contracted at $2.00 per cwt. Prices later fell off some. Production was good but some reduction was caused by onion mildew.

TOMATOES: Acreage almost doubled last years but the production was not much greater. Planting was delayed by late spring rains and a heavy frost in the first part of November put a finish to harvest. Several fields were a total loss.

PEAS: Production of peas was good in most fields and prices held up through about half the season when competition from other districts caused a slump.

LETTUCE: Lettuce production was about normal.

GRAIN SORGHUM: Production was good due to excellent moisture conditions. Heavy frosts followed by dry weather made for a favorable harvest season.

CLOVER: Ladino clover plantings are on the increase. Heavy soils not particularly suitable for alfalfa are being planted to this crop.

SUNFLOWERS: Prices on sunflowers were stronger this year. Production was about normal.

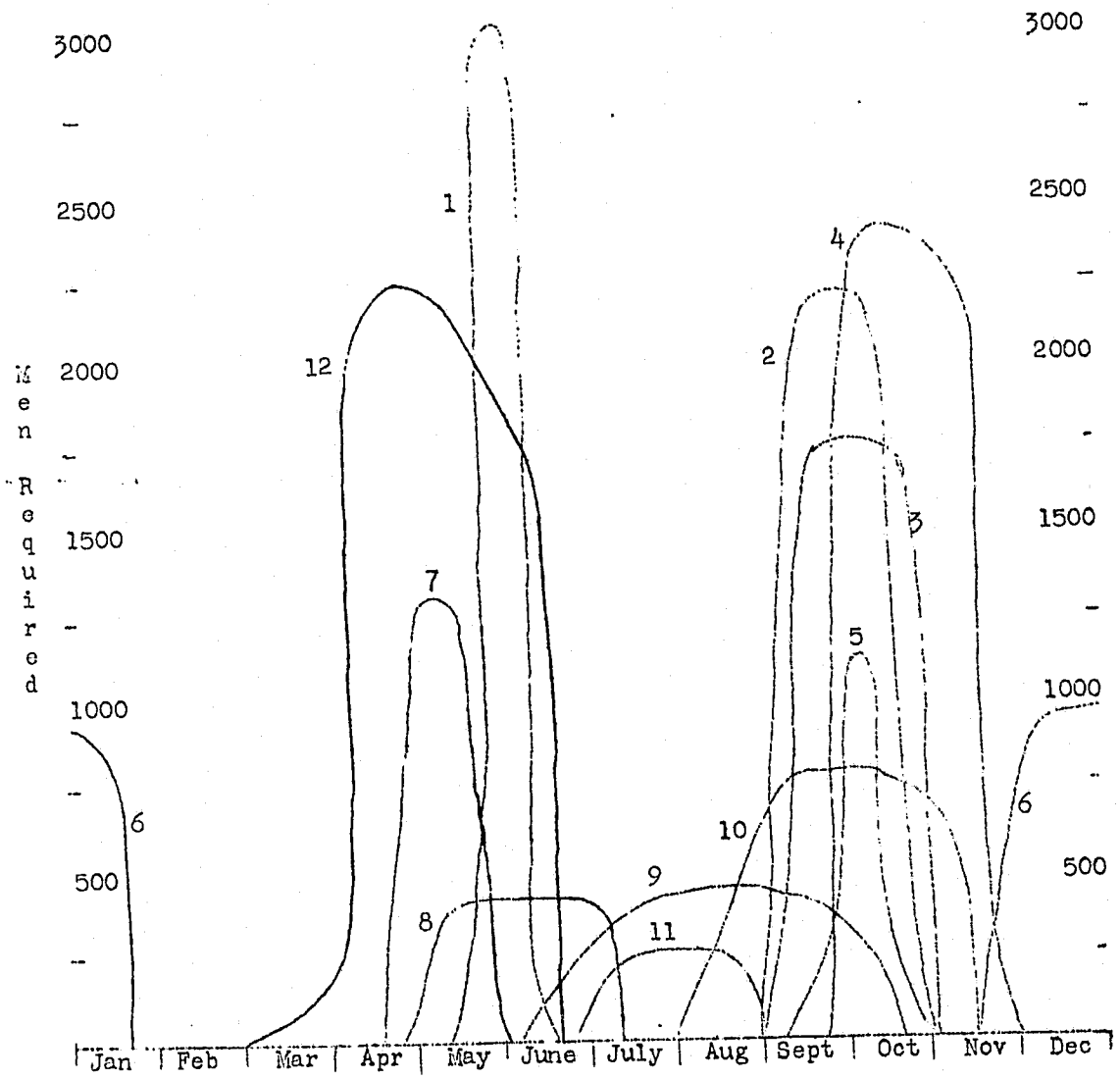
SPINACH: Growers had an unfavorable harvest season due to spring rains. Several fields were flooded and stands were spotted.

SUGAR BEETS: Production per acre showed some increase. A.A.A. regulation keeps the acreage in check.

RICE: Rice growers had an unfavorable year. Production and prices were too low to realize a profit.

GRAPHS SHOWING HARVEST PERIODS AND LABOR DISTRIBUTION
AND REQUIREMENTS OF 10 PRINCIPAL CROPS
REQUIRING SEASONAL LABOR
YEAR 1935

Crop	Total man days
1 - Cherries	66,061
2 - Tokay (Table Grapes)	93,000
3 - Juice Grapes (Shipping)	77,000
4 - Grapes to wineries	112,726
5 - Walnuts	32,580
6 - Celery	55,440
7 - Peas	36,692
8 - Peach Thinning	32,110
9 - Peach Picking	44,000
10- Tomato Picking	65,320
11- Plums	17,960
12- Asparagus	161,000



BEARING, NON-BEARING, DOUBLE PLANTING & TOTAL ACREAGE
OF CROPS IN SAN JOAQUIN COUNTY FOR THE YEAR 1933

CROP	SINGLE ACREAGE	DOUBLE PLANTING (INTER PLANT)	BEARING ACREAGE	NON-BEARING	TOTAL ACREAGE.
FRUIT & NUT CROPS					
Apples	28.75		28.75		28.75
Apricots	1,671.69	60.32	1,732.01	28.35	1,760.36
Cherries	4,177.08	240.55	4,417.73	221.19	4,638.92
Figs	513.16	34.00	547.16	1.25	548.41
Nectarines	115.05	.25	115.30	6.05	121.35
Olives	314.49	4.20	318.69		318.69
Peaches (Cling)	3,088.77	324.30	3,413.07	265.45	3,678.52
Peaches (Free)	2,700.42	102.39	2,802.81	366.77	3,169.58
Pears	663.98	8.50	672.48	10.75	683 23
Persimmons	7		7		7
Plums	2,174.99	251.46	2,426.45	36.15	2,462.60
Prunes	446.42	209.56	655.98	3.50	659.48
Pomegranates	1		1		1
Quince	3.60	.25	3.85		3.85
Oranges				.20	.20
Family Orchards	260.37		260.37		260.37
Grapes (Juice)	33,667.90	264.64	33,932.54	819.61	34,752.15
Grapes (Table)	19,590.67	74.75	19,665.42	456.30	20,121.72
Nurseries	65.18				65.18
Almonds	3,441.92	171.18	3,613.10	544.53	4,157.63
Chestnuts	145.22	48.72	193.94	15.50	209.44
Hazelnuts	.55		.55	2.25	2.80
Pecans	.10		.10		.10
Walnuts	6,894.70	1,923.44	8,818.14	562.19	9,380.33
Berries	145.81	24.95	170.76		170.76

CROP	SINGLE ACREAGE	DOUBLE PLANTING	BEARING ACREAGE	NON-BEARING	TOTAL ACREAGE
FIELD CROPS					
Alfalfa	38,385.46	248.75	38,634.21	243.25	38,877.46
Beans	30,781.	5,535.10			36,316.10
Clover	6,224	6			6,230
Cow Peas	206.50				206.50
Grains (Total)	231,541.02	329			231,870.02
Barley	137,725.18	8			137,733.18
Corn	27,335.97	315			27,650.97
Flax	416.92				416.92
Oats	16,611.40	6			16,616.40
Pop Corn	70				70
Rice	1,640.12				1,640.12
Rye	388.40				388.40
Wheat	47,353.03				47,353.03
Grain Sorghums	11,002.41	830			11,832.41
Hay	28,311.28	10			28,321.28
Hops	64				64
Mints	420				420
Pasture	242,877.73				242,877.73
Peanuts	15.25	90			105.25
Potatoes	11,809.63	30			11,839.63
Potatoes (Sweet)	818.19	2			820.19
Silage	398	54.50			452.50
Sudan	1,885.37	370.50			2,255.87
Sugar Beets	10,245.30				10,245.30
Sunflowers	3,485.84	38			3,523.84
Vetch	8.50				8.50
Watermelons	1,826.35	54			1,870.35
Other Melons	1,082.93	172			1,254.93

CROP	SINGLE ACREAGE	DOUBLE PLANTING	BEARING ACREAGE	NON-BEARING	TOTAL ACREAGE
VEGETABLE CROPS					
Asparagus	15,931.99			4,135.83	20,067.82
Beets		80			80
Cactus	9				9
Carrots	308.15	4			312.15
Celery	6,401.87				6,401.87
Cucumbers	80	70			150
Lettuce	335.66	79.45			415.11
Onions	1,768.81	191.48			1,960.29
Peas	1,463.46	494.54			1,958.00
Pumpkins	263	165			428
Spinach	712.85	943.15			1,656
Squash	163.75	75			238.75
Sweet Corn	36	2			38
Tomatoes	11,231.75	349			11,580.75
Vegetables	2,301.89	64.12			2,366.01
Carrot Seed	387				387
Lettuce Seed	108				108
Onion Seed	390	22			412
Onion Sets	2				2
Parsnip Seed	20.50				20.50
Sugar Beet Seed	61				61
Swiss Chard Seed	40				40
Asparagus seed beds	819.30				819.30

FRUIT & NUT CROPS

SAN JOAQUIN COUNTY - 1935

CROP	ACREAGE	PRODUCTION			FARM VALUE	
		PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
Almonds	3,613	509	1,839,017	Lb.	.15	$ 275,853.00
Apples	28	150	4,200	Bx.	1.00	4,200.00
Apricots	1,732	4.4	7,631	Ton	45.00	343,395.00
Cherries (Fresh)	3,276	89.13	292,000	Camel Lug	1.47	429,240.00
Cherries (Cannery)	1,141	2.22	2,532	Ton	120.00	303,840.00
Figs	547	1	547	Ton	50.00	27,350.00
Grapes (Table) (Fresh)	17,255	140.00	2,415,774	Pkg.	.44	1,062,941.00
Grapes (Wine)		6.11	105,452	Ton	10.40	1,096,700.00
Grapes (Juice) (Shipping)	33,932	1.70	57,638	Ton	11.50	662,837.00
Grapes (Wine)		2.28	77,506	Ton	10.40	806,062.00
Grapes (Raisin)	702	4.27	3,000	Ton	10.40	31,200.00
Other Table (Fresh)	1,707	76.16	130,000	Pkg.	.44	57,200.00
Grapes (Wine)		4	6,828	Ton	10.40	71,011.00
Olives	318	2	636	Ton	45.00	28,620.00
Peaches (Cling)	3,413	6.3	21,502	Ton	28.00	602,056.00
Peaches (Free)	2,802	5.7	15,971	Ton	27.00	431,217.00
Pears	672	3	2,016	Ton	32.00	64,512.00
Plums	2,436	144	350,784	Crate	.70	245,549.00
Walnuts	8,818	.23	2,020	Ton	210.00	424,200.00
Prunes	645	1.25	806	Ton	60.00	48,360.00
Chestnuts	193	1.75	338	Ton	150.00	50,700.00
Nursery	80			Acre	1000.00	80,000.00
Misc'l. Orchards	387			Acre	100.00	38,700.00
				Total Valuation		$7,185,743.00

FIELD CROPS

SAN JOAQUIN COUNTY - 1935

CROP	BEARING ACREAGE	PRODUCTION			FARM VALUE	
		PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
Corn	27,650	1.25	34,562	Ton	$25.00	$ 864,050.00
Wheat	47,353	9.21	436,121	Cwt.	1.31	571,319.00
Oats	16,611	11.54	191,691	Cwt.	.98	187,857.00
Barley	137,725	14.15	1,948,809	Cwt.	.82	1,598,223.00
Rice	1,640	26	42,640	Cwt.	1.25	53,300.00
Flaxseed	416	9.3	3,869	Bu.	1.47½	5,707.00
Grain Sorghum	11,832	1.25	14,790	Ton	23.00	340,170.00
Beans	36,316	14.30	519,319	Cwt.	3.50	1,817,617.00
Potatoes	12,657	155	1,961,835	Cwt.	.80	1,569,468.00
Sweet Potatoes	818	4	3,272	Ton	30.00	98,160.00
Hops	64	1500	96,000	Lb.	.09	8,640.00
Sugar Beets	10,245	17	174,165	Ton	6.25	1,088,531.00
Hay (Grain)	25,493	1.80	45,888	Ton	7.60	348,749.00
Hay (Wild)	2,817	1.35	3,804	Ton	5,90	22,444.00
Alfalfa Hay	38,633	6	231,798	Ton	8.40	1,947,103.00
Sunflowers	3,523	9.71	34,208	Cwt.	3.41	116,649.00
Sudan Grass	2,255			Acre	30.00	67,650.00
Pumpkins	425	13	5,525	Ton	3.50	19,337.00
Pasture	242,916			Acre	.75	182,187.00
Ladino Clover	6,016			Acre	40.00	240,640.00
Misc'l. Field Crops	2,041			Acre	50.00	102,050.00
					Total Valuation	$11,249,851.00

VEGETABLE CROPS

SAN JOAQUIN COUNTY - 1935

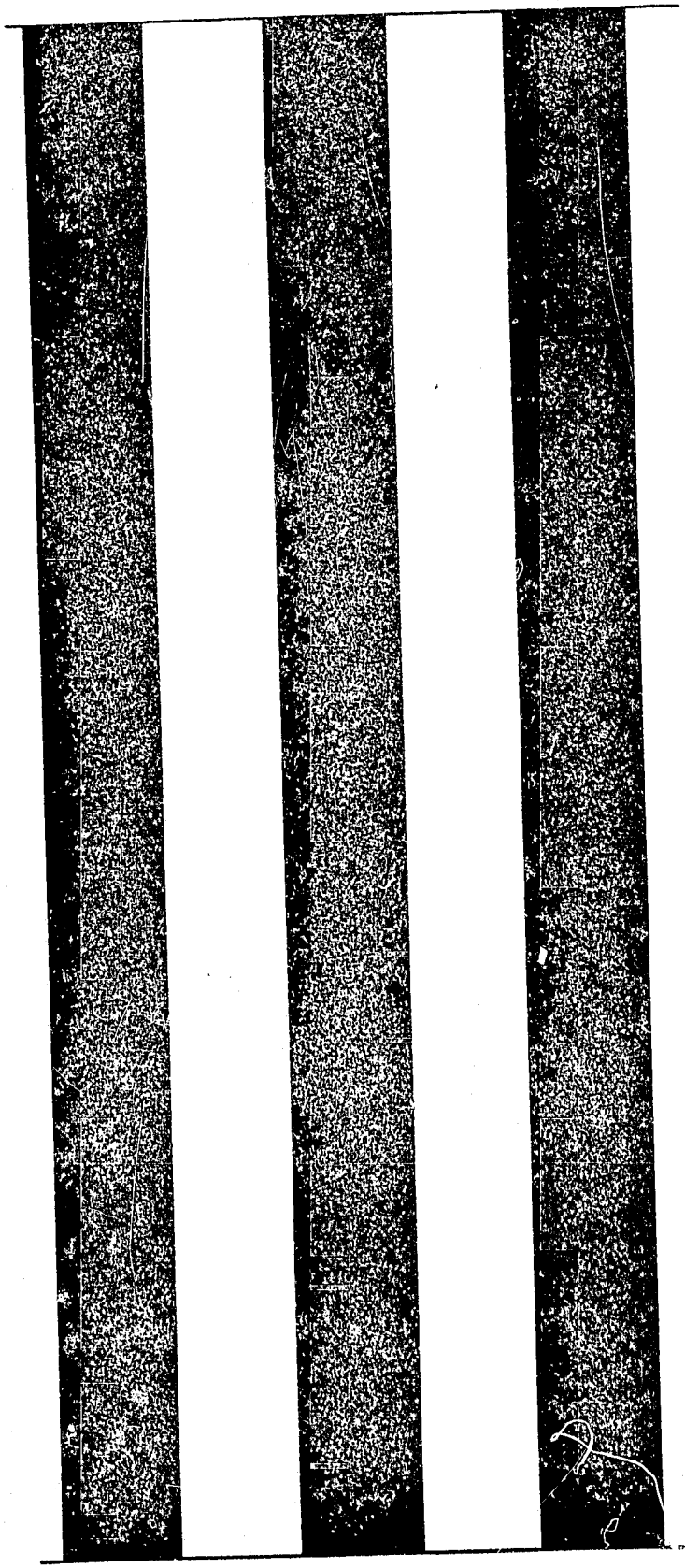
CROP	BEARING ACREAGE	PRODUCTION			FARM VALUE	
		PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
Asparagus (Fresh)	15,952	900	14,338,800	lb.	$ .0375	$ 537,705.00
Asparagus (Cannery)		2100	33,457,200	lb.	.0385	1,288,102.00
Cantaloupes	230	112	25,760	crate	.45	11,592.00
Carrots	308	400	123,260	crate	1.02	125,725.00
Celery	6,401	144	921,744	½ crate	.93	857.222.00
Lettuce	415	130	53,950	crate	1.25	67,437.00
Onions	1,968	200	393,600	cwt.	1.30	511,680.00
Peas (Fresh)	1,958	98.9	193,646	30 lb. hamper	.825	159,758.00
Peas (Cannery)		.32	627	ton	29.50	18,496.00
Spinach (Cannery)	1,656	3.8	6,293	ton	10.50	66,076.00
Strawberries	120	275	33,000	20 basket crate	.75	24,750.00
Tomatoes	11,580	4.6	53,267	ton	12.10	644,543.00
Watermelons	1,850	6	11,100	ton	4.50	49,950.00
Honeydews	220	12	2,640	ton	5.50	14,520.00
Casabas	280	11	3,080	ton	6.50	20,020.00
Persians	320	10	3,200	ton	10.00	32,000.00
Vegetable seed	1,008			acre	100.00	100,800.00
All Other Vegetables	2,923			acre	70.00	204,610.00
				Total Valuation		$ 4,734,986.00

Total Valuation of Fruit & Nut, Vegetable and Field Crops $23,170,580.00

FINANCIAL STATEMENT

YEAR - 1935

Supervision	$ 5,448.00
Plant Quarantine and Nursery Stock Inspection	7,398.90
Standardization	7,548.18
Orchard and Field Inspection	8,481.90
Rodent Control	10,930.12
Weed Control	5,615.29
Apiary	707.84
Statistics	3,500.00
Seed Inspection	550.00
Fairs and Exhibits	1,000.00
Office Help	1,982.50
Equipment, Supplies and Miscellaneous Expense	5,489.21
	$58,651.94



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Agricultural Commissioner

COUNTY OF SAN JOAQUIN

Year 1936

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AUSTIN E. MAHONEY

Agricultural Commissioner

ANNUAL REPORT

SAN JOAQUIN COUNTY AGRICULTURAL COMMISSIONER

YEAR 1936

I N D E X

APIARY

THERE HAS BEEN a marked reduction of bee diseases in San Joaquin County. For several years the bee keepers were without the services of a bee inspector, and these diseases built up at an alarming rate. This is the second season of bee inspection since this service was renewed. The following chart shows conclusively that bee inspection pays.

INSPECTION	1935	1936
Apiaries Inspected	253	351
Colonies Inspected	11,886	9,600
Colonies infected with American Foulbrood	584	208
Colonies infected with European Foulbrood	249	98

In addition to the regular inspection work, there were seventy-five swarms killed in buildings, where they were disagreeable to the occupants.

Permits were issued to the following number of bee-keepers for bees that were moved:

MOTION	APIARIES	COLONIES
Leaving County	22	1,978
Moving within County	116	1,400
Entering County	17	2,363

BIRD DAMAGE AND CONTROL MEASURES

DURING 1936 heavily concentrated attacks by Horned Larks on slightly over eight hundred acres of young seedlings resulted in a known loss of approximately one hundred-fifty acres of beans, one hundred acres of lettuce and twenty acres of peas. At the request of owners, control measures were carried on over this area, using recommended methods of the United States Biological Survey, and in nearly all cases further damage was prevented. Undoubtedly this control work definitely eliminated many larks, which would later have caused similar damage to other plantings.

Linnet and sparrow control by this office was confined to small and generally isolated areas, where the damage was sufficiently severe to justify action, and the results obtained were excellent in each such case.

EGGS

THE ENFORCEMENT of egg standards were turned over to the State Department of Agriculture and County Agricultural Commissioners. Concerted action by these authorities has brought a decided improvement in the quality and marking requirements. Egg inspection was not started in San Joaquin County until June, and since that time there has been a gradual decrease in the number of rejections.

EGG INSPECTION BY MONTHS

MONTH	NUMBER INSPECTIONS	DOZENS INSPECTED	DOZENS REJECTED	UNFIT FOR FOOD	QUALITY MIS-MARKED	WEIGHT MIS-MARKED	REQUIRED MARKINGS LACKING
June	31	1,629	481	257	27	197	
July	156	4,522	491	271	82	122	16
August	211	9,008	283	53	29	91	110
September	148	4,827	163	63		30	70
October	219	7,956	15	15			
November	89	2823	15				15
Totals	854	30,770	1,448	659	138	440	211

FAIRS AND EXHIBITS

SAN JOAQUIN COUNTY, using as the main feature at the California State Fair, and the Los Angeles County Fair a huge revolving top, lived up to its reputation as the "Top County". Around the base of the top were various miniature panoramic scenes typifying important industries and sports of this region. Encircling this were all the products of this County artistically arranged in boxes, jars and baskets, placed upon a raised platform on a background of blue cellophane.

The vegetable displays were again outstanding. Using a special sprinkling system of cold water, the products were kept as fresh as the day they were gathered.

The wine display was placed on two corners of the exhibit, and the bottles pyramided to a height of ten feet. Bottles were also placed among the grapes.

At the California State Fair, the County won sweepstakes in plums, grapes, apricots and nectarines, almonds, grains, field and garden seeds, root vegetables and melons and squash; tied for first sweepstakes in beans; and second sweepstates in peaches, walnuts, dried fruit and plant vegetables. There were a total of 270 ribbons won, 127 of which were first.

On the wine display the County took one gold medal, three silver medals and one bronze medal on dry wine; three gold medals, two silver medals and three bronze medals on sweet wines; one gold medal and one bronze medal on brandy; three gold, two silver and one bronze medal on supplementary wines; and one gold and one silver medal on sparkling wines.

At the Los Angeles County Fair the County won first booth award, and many sweepstakes and awards.

At the San Diego County Fair, a cottage setting was used. The farm products were placed in an artistic arrangement in the garden of the cottage. Here again the County excelled.

At the San Joaquin County Fair, the Agricultural Commissioner, Superintendent in Charge of the Agricultural Display, again used the Spanish Mission Setting of

the previous year. Additional touches were made which added to the attractiveness of the building.

An educational exhibit was used at the Lodi Grape and Wine Festival. Also a float using an immense market basket filled with and surrounded by San Joaquin products was prepared for the parade.

FRUIT, NUT AND VEGETABLE STANDARDIZATION

THE AGRICULTURAL COMMISSIONER assists the farmers to build up a reputation for their farm products and protects their markets by instructing them as to the proper grading and packing of their fruit, nuts and vegetables as prescribed by the Agricultural Code. It is not the purpose of this office to arrest and bring undue pressure on those who have violated the provisions of this Code, but sometimes this becomes necessary on frequent offenders and others unwilling to abide by these provisions.

INSPECTION AT POINT OF ORIGIN AND AT TIME OF PACKING:

Number of inspections	(carloads)	3,676
Number of rejections		198
Number of packages destroyed		64
Number of packages reconditioned or remarked for sale or to by-products		12,644

In addition to the above, 5,740 carloads of grapes were accurately reported on daily during the shipping season to provide information to grape growers. This is of great importance to Tokay Grape growers, as Lodi is the center of production, and most shipments of this variety originate in this district.

Three arrests were made for violations of this act at point of origin. Two arrests were for selling low grade potatoes, each offender paying a fifty dollar fine and given a twenty day suspended sentence. The other offender was apprehended for deceptively packed cherries, for which he was fined seventy-five dollars.

HIGHWAY STATION INSPECTIONS: In cooperation with the State Department of Agriculture a station for the stopping and inspecting of trucks hauling nuts, fruits and vegetables was again maintained near Tracy on the State Highway. An accurate account of the amount of produce inspected, rejections and arrests is kept by the Department.

WHOLESALE MARKET OR DESTINATION INSPECTIONS:

Number of inspections, Carloads	747
Number of rejections	33
Number of packages dumped by Court order or owner	55
Number of packages reconditioned or remarked for sale or to by-products	1,910

INSPECTION OF RETAIL STORES, PRODUCE STANDS AND RETAIL DEALERS: An accurate account is not kept of the total number of inspections at these points, as our inspectors make frequent visits at these places and make general inspections of the produce.

Number of rejections	34
Number of packages dumped by Court Order or owner	33
Number of packages reconditioned or remarked for resale or to by-products	1,194

INSECTS AND MITES

GRASSHOPPERS: An outbreak of grasshoppers occurred along the eastern slope of the County. Grasshoppers, which hatched on pasture lands, moved into the adjoining cultivated crops, and did a noticeable amount of injury before they were checked. The species was identified as the devastating grasshopper (Melanoplus devastator). The principal crops attacked were walnuts, beans, grains, Sudan grass, tomatoes and sugar beets.

The first attack was in the Bellota Section along the Calaveras River. Attempts were made to check their advance by burning. Later, applications of poison bran mash were made. When the seriousness of the invasion was realized, a voluntary assessment of twenty-five cents an acre was made upon those adjoining or within limits of invasion to defray expenses. Sodium Arsenite was furnished by the County.

Later, grasshoppers moved into the cultivated crops along the Mokelumne River near Clements. The same program was used as followed in the Bellota Section. Fifteen tons of bran were shipped into this County by the Federal Government to be used for control. It was not received until most of the control work had been accomplished and only a small portion was used.

GRAPE LEAF HOPPER: There was a noticeable increase of grape leaf hoppers this fall. Practically no control work was done to reduce the spring population.

FIELD CRICKETS: Several asparagus fields were attacked by crickets in February and March, when the crop first started to make its appearance. Young shoots were cut off and damaged at the surface.

DARKLING GROUND BEETLE: A number of tomato fields were attacked soon after the young plants were put out. Considerable amount of replanting was necessary. Calcium arsenate and poison bran were used for control. This office recommended poison bran. Some injury occurred from burning where calcium arsenate was used.

CHERRY SLUGS AND CANKER WORMS: A number of cherry growers used arsenate of lead for control of these pests before the crop was harvested, the use of which was contrary to the recommendations of this office. Officials of the Pure Food and Drug Administration found many lots of fresh cherries having in excess the tolerance of lead and arsenic allowed. Cherries were dipped in a weak hydrochloric acid solution to remove the residue. The State Department of Agriculture set up a laboratory in Stockton for making tests and certifying lots of cherries.

ELM LEAF BEETLE: Several trees in Stockton were found infested with this insect. This was the first infestation found here. Infestations in outlying districts continue to increase and become more severe. Trees

on City and County property are sprayed by the City and County respectively. Introduced parasites from Europe were liberated at several locations by the State Department of Agriculture.

CODLING MOTH IN WALNUTS: Walnuts, particularly of the Payne variety, were attacked, sections of some orchards running as high as twenty per cent wormy nuts. The same general trend of increase, which occurred in orchards in Southern California, appears to be taking place in our walnut section.

CUCUMBER BEETLES: There occurred the heaviest infestation of these insects that hasbeen observed. Their general distribution and feeding habits makes it difficult to estimate the damage done. Potato leaves were riddled, blossoms of apricots and beans were destroyed, and fruit of cherries, early peaches and apricots were punctured. Control practice was limited although some use was made of hydrated lime and sodium fluosilicate.

FALSE CHINCH BUG: Great numbers of these insects were seen throughout the County, particularly on dry grasses. Occassionally some damage was done to green vegetation.

BEET ROOT APHIS: Severe infestations were observed in beet fields in the Delta region. This may account for lower yields than were expected. Growth of sugar beets during the spring and early summer was excellent. Later they appeared to stop growth prematurely. The general conconsus of opinion was that this was caused by hot weather.

PEACH TWIG BORER: Seasonal conditions were favorable for a general increase of these insects. Injury to peaches, plums and apricots was more general this year.

BLACK BEAN APHIS: Some fields of black-eye beans were severely attacked. No control work was done. A build up of natural enemies brought them into check.

PACIFIC MITE: This post occurs every year, particularly in vineyards, over wide areas, although severity was about normal. Attacks are due to a deficiency of moisture, brought about by actual drought, a cutting off of feeder roots by late cultivation, the occurrence of nematode on feeder roots which restricts the flow of plant fluids, or a high water table, which interferes with the proper functioning of the plant, or a combination of these factors. A plow sole favors the first three factors.

NURSERIES

DURING THE FALL AND WINTER: all the nurseries were inspected and found to be free from serious posts. Slight infestations of mealybugs, scale insects and aphids were found, which were properly sprayed.

ORCHARD AND FIELD INSPECTION

CANNY FARM COMMODITIES, particularly root crops, require field inspections to determine their freedom from insect, disease and weed posts. Other states and districts within this state require certification of shipments, stating that the commodity is apparently free from certain posts, as determined by field inspection. Examples are celery, carrots, etc., being shipped to Oregon,

which require a certificate as to their freedom from vegetable weevil and nematode; potato shipments to Shafter, certifying their freedom from nut grass; and early potatoes to Oregon and Washington, certifying their freedom from potato tuber moth.

Inspectors also make general inspections of orchards and fields and discuss various problems with the farmers. Their knowledge of conditions throughout the County make them well qualified in helping to solve these problems.

PLANT DISEASE CONTROL

THIS OFFICE is particularly interested in plant diseases from a quarantine standpoint. The State law directs the agricultural commissioner to acquaint himself with various diseases of plants and to prevent their introduction and spread within the County. Also, to provide for their control or eradication when they become established in the County.

The following discussion of plant diseases does not mention all those which caused an economic loss to crops in this county. It does mention, however, those established in the county, where control, eradication and prevention of spread programs are being carried out. It also mentions diseases causing a high economic loss or attracting unusual attention.

The continuation of the chestnut blight (Endothia parasitica) eradication program was the major plant disease project of this year. A complete resurvey, tree to tree inspection of the 297 known plantings of chestnuts in the County, showed no new infections outside of the two orchards found to have diseased trees in 1934. Thirty-five trees were found to be infected with this fungus, and were burned during the year, bringing the total number of infected trees found in the two orchards up to 89.

Spread in the two orchards can be attributed to infected pruning tools, cultivating implements, and irrigation water. Success of the eradication program depends upon (1) disinfection of pruning tools after pruning each tree, (2) avoidance of injury to the crown by the cultivating tools, and (3) creation of an earth basin around each tree to prevent direct contact of trunk and irrigation water, coupled with (4) inspection to find and destroy infected trees as soon as possible. With time and careful attention to all details, this procedure will result in eradication of the disease.

Members of the staff spent ninety-three and one-half working days on this project during the year.

Due to the Texas Mosaic infection in the peaches in certain Counties of the southern part of the state, a tree to tree inspection of all peach trees shipped into San Joaquin County from Southern California since 1930 was made. In addition, numerous orchards were scouted for the disease. No infection by this virus has been found in the County.

Peach rust was epidemic in the County for the first time since 1929. Marked varietal difference in susceptibility was observed. Homestead, Walton, Halford, Palora and Gaume were most severely attacked.

Peach blight (Coryneum blight) has built up in some orchards, due to an ineffective fall spray program. One planting of Mayflower had a very light bloom despite excellent coverage in a well timed fall spray. In this case cankers on older wood continued to furnish a source of infection.

Again this summer, brown rot attacked the ripening peaches in some orchards. The fungus caused severe loss of wood in these orchards, growing from the fruit into adjacent wood and girdling the twig growth.

Celery fusarium yellows, a disease serious in self blanching varieties, continues to spread throughout the delta. The virus known as Aster Yellows caused nominal loss. Calico or "Delta" mosaic was found, but no commercial loss was noted, being less prevalent than in 1935.

The delta corn crop suffered from both corn smut (Ustelogo zeae) and dry carrot (Fusarium moniliforme)

Southern root rot (Sclerotium rolfsii) caused nominal loss in two fields in the County. No new infestations were found. Quarantine measures, coupled with planting non-host crops on infected ranches are expected to keep this disease checked.

The important tomato crop was freer of disease than in several years. Western Yellow Blight, the virus disease causing curly top in sugar beets, caused a 10% loss in the French Camp District, increasing to 25% in the area along the Stanislaus River. Damage in the rest of the County was normal. Bacterial canker caused a 25% to 100% loss in the new fields where it appeared. Tobacco mosaic virus was general in tomato fields despite warning to growers to avoid smoking when handling plants.

Use of bordeaux and mercury compounds were effective in stopping losses from damping off fungi. The continual rains during February made conditions ideal for the damping off fungi. Phytophora caused loss in beds in the delta.

Verticillium caused loss in three young almond orchards. Tomatoes had been planted the previous year in each cause.

Walnut dieback was severe in the spring of 1936. This is attributed to an excessive drying out of the twigs in the older trees during the hot, dry weather of September and October of 1935, or to the freezing of succulent wood on the young trees which had not gone into dormancy when caught by the killing frost in early November of 1935. Most of the trees recovered as the season advanced.

Nematode (Heterodera marioni) caused losses greater than the previous year due to the warm summer. In particular, tomatoes which were planted for the second or third successive season on infected ground suffered severely. Several thousand plants were condemned in beds due to nematode infection. Due to the increase in tomato acreage, new growers, unaware of the seriousness of nematode, have established their beds on infected soil, or rented infected land, causing severe losses.

The soil inhabiting Oak Root Fungus (Armilleria mellea) continued to cause loss of individual deciduous trees. Dematophora, a similar fungus, has been found infecting a privet hedge.

PLANT QUARANTINE

THE PURPOSE OF PLANT QUARANTINE is to prevent the introduction and spread within the State of pests injurious to the agricultural industry of the State.

INSPECTION OF INTERSTATE SHIPMENTS:

Number of shipments inspected	2,437
Number of parcels inspected	685,820
Number of shipments rejected	11
Number of parcels rejected	36

INSPECTION OF INTRASTATE SHIPMENTS OF NURSERY STOCK:

Number of shipments inspected	2,106
Number of plants inspected	358,888
Number of shipments rejected	190
Number of plants rejected	10,825

REASON FOR REJECTION: Shipments were rejected principally for the presence of nematode, crowngall, bacterial gummosis, mealybug and scale insects. A few shipments were rejected where there was reasonable cause to presume they were infested or infected with insect or disease pests. Other shipments rejected were entering the County in violation of specific plant quarantine.

RODENT CONTROL

THE FOLLOWING MATERIALS were sold and distributed under the supervision of this office.

Strychninod grain	9,550 lbs.
Thallium grain	4,188 lbs.
Strychninod corn	100 lbs.
Thallium corn	50 lbs.
Carbon Bisulphide	6,000 gallons
K. R. O.	119 ounces.

Total acres treated 312,751

Crews from the S. R. A. camp were used on large ranches and irrigation districts for rodent work. The farmers paid for materials used and the foreman's wages.

Rats were again serious in the delta district. These live in the levees and migrate out into the fields destroying the tender germinating corn.

SEED INSPECTION

THE CALIFORNIA SEED LAW is strictly a labeling provision and gives authority for rejecting seed only when mislabeled. In addition to this, the Agricultural Commissioner rejects seed under authority of the Agricultural Code, which provides for the prevention of the spread of pests throughout the State. Any seed offered for planting purposes may be rejected by the Agricultural Commissioner if it is infested with any weed seed, which he feels would be a menace to agriculture in his County.

In September of this year, there was added to the staff of this office a laboratory technician, whose chief duty is to examine seeds for planting purposes and determine their freedom from noxious weeds. Germination tests are also made

when requests come in for this service.

Samples of seeds, up until recently, were taken from seeds transported into the County, and arriving at known destination points. Also samples were taken at the various seed stores. The policy now adopted is not only to take samples at those points, but to also take samples from the farmer. Inspectors traveling through their district can usually determine where new plantings will occur, as several weeks are generally required to prepare the ground, especially for alfalfa and ladino clover.

The following lots of seeds were examined for noxious seeds during 1936.

KIND OF SEED	*NUMBER OF EXAMINATIONS	LOTS PASSED	LOTS REJECTED	REASONS FOR REJECTIONS
Alfalfa	61	52	9	Russian Thistle, dodder, creeping mallow, Johnson Grass.
Barley	4	3	1	Morning Glory.
Bermuda Grass	2	2	0	
Bent Grass	3	3	0	
Clover, Burr	4	3	1	Tocaloto
Clover, Trifolium repens	28	22	6	Nut grass, dodder, Canadian thistle, Russian thistle.
Clover, Sweet	14	10	4	Russian Thistle, Canadian Thistle, Poverty weed.
Clover, Red	1	1	0	
Canary grass	1	1	0	
Harding grass	1	1	0	
Kentucky Blue Grass	8	8	0	
Mustard	1	1	0	
Oats	2	2	0	
Orchard grass	1	1	0	
Poa Trivialis	1	1	0	
Radish	5	5	0	
Rutabaga	1	1	0	
Rye Grass	5	5	0	
Spinach	10	10	0	
Timothy Grass	5	5	0	
Sunflower	2	2	0	
Sugar Beet	2	2	0	
Swiss Chard	1	1	0	
Turnip	4	4	0	
Vetch, Common	1	1	0	
Vetch, Purple	2	2	0	
Wheat	2	2	0	
Total	172	151	21	

* Seventy-two lots were examined by the State Seed Laboratory at Sacramento. In addition to the above examinations, five lots of seeds were held for official labeling by the State Seed Laboratory. Two of the lots were labeled, but the germination percentage as expressed on the label was found to be incorrect.

WEED CONTROL

FARMERS ARE BECOMING more weed-minded. Their attention has been frequently directed by this office, the State Department of Agriculture, and other authorities, to the seriousness of weeds. They realize that there is a gradual encroachment of weeds upon their land, where no effort is made to bring them into check.

The weed committee of the San Joaquin County Farm Bureau felt that weed control was important enough to require the full time of one man in this County to investigate and carry on a concerted weed control and eradication program. The Board of Supervisors appropriated funds and directed the Agricultural Commissioner to appoint a weed expert.

MUSTARD: Over one thousand acres of grain crops were sprayed this season with a ten to fifteen per cent sulfuric acid solution for the control of mustard and wild radish. Most of the spraying was done in the Delta, where these weeds are especially serious. Three fields were sprayed by this office as demonstration plots. Increased yields and quality were outstanding. Yields showed an average twenty-five per cent increase. Quality was improved by the increased weight per bushel, cleaner and less stain. Cost of harvesting was reduced because of the cleaner fields.

MORNING GLORY: One farmer in the Tracy district used sixty-six drums of activated carbon bisulphide for the control of morning glory. A tractor-drawn injector designed by the Stauffer Chemical Company was used. Results were very satisfactory. Other farmers in the Tracy District used smaller amounts of carbon bisulphide for spotted infestations, applying the material with a hand injector.

HOARY CRESS: The most practical method of control is flooding the areas where this pest is most common. This was demonstrated last year where good results were obtained in an one hundred twenty acre field. Chemical control has not proved very satisfactory. Grain fields are carefully watched during harvest periods to see that harvesters are thoroughly cleaned, and that infested grain is properly disposed of.

PUNCTURE VINE: All the roads in the County are continually patrolled during the summer and fall months. Infestations are sprayed with diesel oil, and later, burned. There has been a noticeable reduction of roadside infestations.

YELLOW STAR THISTLE: Infestations vary throughout the County. Some districts are heavily infested and it is difficult to have control work practiced. Other districts, where slight infestations occur, cooperation is easily secured in control work, which consists of cultivation, hoeing and burning.

W. P. A. A continuation of roadside weed control work in cooperation with the Works Progress Administration of the Federal Government was carried on this year. Many miles of roadsides, which were not disced, were cleaned of weeds.

JOHNSON GRASS: This is a serious noxious weed. Spotted infestations occur throughout the County. Various factors enter into the proper procedure of control, a knowledge of which is required. Because of these factors, enforced work is not practiced. However, when the appointment of a weed man is made, this procedure will be followed. The same is true of other perennial noxious weeds. Inspectors continually work with farmers on these problems of control, and in many cases, have done excellent work.

ROADSIDE DISCING: A decided decrease in weeds, insect and disease pests, and fires has been brought about by roadside weed control. Eight hundred miles of county roadsides maintained by the County Highway Department and Supervisors, and under the direction of this office, were kept free from weeds by the use of tractors and discs. The general appearance of the agricultural districts has been improved. The cost of this work is exceedingly low, as compared to oil and burning.

Particularly noticeable is the reduction of noxious weeds. Puncture vine infestations are easily seen and destroyed on roadsides, which are free from other weeds. Patrol crews cover many miles of roads each day, and oiling and burning of this weed pest is greatly facilitated. Russian Thistle at one time was a common occurrence on all the roads in the southern part of the County. Only an occassional plant is now seen, particularly on those roadsides bordering cultivated land. Citron melon, which crosses with watermelon and makes the meat unpalatable, is becoming less widely distributed. Bermuda grass, fog weed, lamb quarters, yellow star thistle, and other weeds have been reduced.

Insect and disease pests have been noticeably lessened. Red Spider, which at one time attacked and defoliated five thousand acres of grapes in the Manteca District, is gradually losing its foothold. Grape leaf hopper, another grape pest, is not as serious, particularly in those vineyards bordering roadsides, where farmers have cooperated in removing fences. Beet leaf hoppers, which feed on Russian Thistle, Atriplexes, and other favorite host plants, now find their food supply less abundant. Consequently a reduction of tomato yellows, curly top of sugar beets, melon blight, and other diseased crops is seen. The beet leaf hopper is a carrier of the serious virus disease, which causes this sickness of plants.

Since roadside weed control was started in 1931, no fires have originated from roadsides which were disced. Instances have been cited where fires have started on the few weeds growing close to the roadside, but were unable to jump the gap. One farmer stated that he was away over the week-end and when he came home noted where a fire had started, but was unable to jump the cultivated area. His home and ranch were thus saved from what might have been a serious conflagration.

The general appearance of the countryside has been improved. Many miles of fence line have been removed where they were of no benefit, and the land is now kept clean to the edge of the road. Where fences are required many farmers keep their fence lines free of weeds. Old broken down automobiles and their parts, tin cans and other junk along the roads, are removed to facilitate roadside discing.

The cost of roadside discing is not comparable to oiling and burning. One fire strip on each side of the road, using oil and later burning, costs approximately $75.00 a mile. Roadside discing this season cost $10.00 a mile and included from fenceline to road shoulder on each side of the road. Some roads

were disced four times and most roads were disced at least twice. The cost of $10.00 a mile was calculated on the basis of a full season and not on one treatment.

CAMEL'S THORN: A small infestation of camel's thorn was found in the County. This is an exceptionally serious perennial weed spreading from long underground roots which send up suckers very much as elm trees sucker. This infestation was treated by using a weak solution of arsenic in jars and inserting the growing parts into the jar. This is known as the jar method of weed control and works satisfactorily on some weeds.

MATERIALS USED: The following is the amount of materials handled by the Agricultural Commissioner for chemical weed control throughout the County for the year 1936:

Diesel Oil	4515 gallons
Sodium Chlorate	4000 pounds
Carbon Bisulphide	4660 gallons
Arsenic Trioxide	50 pounds
Sulfuric Acid	16,500 pounds

In addition to the above, approximately 200,000 pounds of sulfuric acid, 70,000 gallons of diesel oil and 30,000 pounds of Atlacide were used by other agencies.

STATISTICS

The following annual report is the third one issued by this office in cooperation with Federal Projects. Prior to this time annual statistical reports were not accurate. Acreages and valuations were estimated.

The annual statistical reports of 1934, 1935 and 1936 are very accurate. Farm to farm surveys are made by the inspectors each year to secure acreages and valuations of crops. This information is compiled by government workers on relief to whom much credit must be given for their accuracy.

CROP SUMMARY

San Joaquin County farmers have just finished the best year they have had for several seasons. Crops have been better than average and prices have materially advanced with a few exceptions.

Weather conditions on the average have been satisfactory. Spring frosts were not severe enough in this County to do a large amount of damage. Rains, which flooded out and interfered with proper pollination of some crops, were of more benefit than harm in supplying soil moisture. High summer and fall temperatures, although injurious to some crops, provided a satisfactory harvest season for the harvesting of most crops.

Outbreaks of insect and disease pests were generally local. Grasshoppers were abundant in some areas and required considerable amounts of poison to bring them into check. Brown rot was prevalent in some orchards where adequate spray practices were not carried out. An outbreak of peach rust occurred, but was not general and did not reduce the total crop to any noticeable extent. Walnut codling moth showed some increase in certain orchards. Other insects and diseases attracted the usual attention.

CROPS

ALMONDS The yield of early blossoming varieties, particularly Nonpariels and IXL's, was reduced to a great extent by rains which interfered with proper pollination. The Texas variety, which blooms later, had in most cases a good crop. Prices to growers were excellent on all varieties.

APRICOTS: Production was considerably below normal. Brown rot was serious in most districts particularly in those orchards where good spray practices were not carried out. Frost damage also occurred in some orchards. Prices to growers were somewhat lower than last year.

CHESTNUTS: Yields on chestnuts were considerably lighter this year due to heavy production for the past two years. Size and quality was good.

CHERRIES: Production was above normal. Heavy shipments resulted in low prices, although total valuation for the crop was much higher than last year's light crop. A large tonnage of Black Republican and Bing cherries were barrelled for the first time.

FIGS: Production and prices show a good improvement over past years.

OLIVES: A greater demand for olives this year resulted in the harvest of all the crop, including roadside trees.

PEACHES: Growers had a very favorable year. Yields were above normal and prices were good. An outbreak of peach rust in some of the cling peach orchards resulted in a higher percentage of culls in those orchards than would otherwise have occurred.

PEARS: A large percentage of San Joaquin County pears are shipped to the Eastern Auction Markets. Auction prices were very low and pear growers are very much discouraged.

PLUMS: Spring rains and heavy winds following thinning caused a reduction in yield of the early varieties. Otherwise, the crop was normal. Harvest progressed at a normal rate with prices somewhat spotted.

PRUNES: Prune production was normal.

WALNUTS: Early season indications were for a bumper walnut crop of fine quality. Unusually hot weather during the late summer and fall had a decided effect on both yield and quality. There was a very high percentage of culls, running as high as 25% in some cases.

GRAPES-TABLE: Tokay grape growers had one of the finest seasons they have had for years. Harvesting of a light crop started early and continued at a normal rate with no interruptions from rain, market conditions or other causes. A very high percentage was shipped for fresh consumption. The balance of the drop, consisting principally of grapes remaining on the vines after the choicest had been picked for fresh consumption, were sent to the wineries.

GRAPES-WINE: Most of the wine grapes for Eastern shipment were purchased on the vine. Growers averaged about $15.00 a ton on the vines. The market this year, in contrast to last year, was a seller's market and grape buyers recovered the losses of last year. Prices paid by wineries strengthened as the season progressed due to a light crop. Production was about 75% of normal.

CELERY: Harvest is still in progress. A large increase in acreage and normal yields has held prices within narrow limits.

CORN: Favorable planting and growing weather gave indications of a very good yield of corn, but corn ear rot caused a high reduction of the crop. Prices were excellent, brought about by the drought in the Middle West, and strike conditions which tied up the importation of corn.

ALFALFA: Growers had an excellent year. Growing conditions were very favorable brought about by a long warm season without rain. Some fields produced seven cuttings. The demand for hay was strong throughout the whole season. At the close of the season growers received $14.00 a ton for loose hay in the field.

GRAIN: Yields were below normal due to heavy winter rains and infrequency of spring rains. Prices on grains have continued to advance since harvest. Those who sold immediately following harvest did not receive the benefits of the increased prices following the Mid-Western drought.

BEANS: Yields were below normal on all varieties except Baby Limas. Continued warm weather during the maturing period reduced the crop and quality. Prices have continued to advance since harvest due to a short crop in the other principal bean growing districts in the United States.

POTATOES: It has been many years since growers have had such a favorable year. Production was normal, but prices were above normal and continued high throughout the full season.

SWEET POTATOES: Prices have not materially advanced as was expected. There probably was a limited substitution of sweet potatoes for the Irish potato, but increased yields offset this enough so that there was not a distinct increase in prices. Returns per acre will be greater due to increased yields. Favorable planting and growing weather accounted for the increased yields.

MELONS: Growers had a good year and managed to recuperate some of their losses sustained from last year's poor prices.

CARROTS: This County consistently produces good crops of carrots. Besides supplying the local market, heavy shipments are made to other states, particularly Oregon and Washington during their off season.

ASPARAGUS: Warm weather in the early spring at the time asparagus starts to make its appearance resulted in a very heavy yield of shipping asparagus. Prices also were very good. The balance of the crop went to the cannery on which the yield and price were good.

ONIONS: Yields were very good, but the returns were below the cost of production.

TOMATOES: Acreage has continued to increase the past few years and tomatoes are now over a million dollar crop. Production varies greatly in different fields due to soil types, various methods of culture, diseases and other causes. Most of the tomatoes produced are cannery varieties.

PEAS: Early peas in the Tracy district brought excellent prices due to frost injury in other districts. Prices gradually decreased until the latter part of the season when some growers discontinued harvesting operations. (Production figures are based on the crop harvested and are not a criterion of the total production).

SORGHUM: The crop was better than normal. The planting, growing and harvesting season was excellent. Prices have also advanced in sympathy with other grains.

LADINO CLOVER: Additional acreage is being planted each year to this crop. Clay soils not suitable to other crops, where water is frequently available, grow excellent clover crops. However, plantings are not limited to this type of soil as some of our finest soils are planted to Ladino Clover.

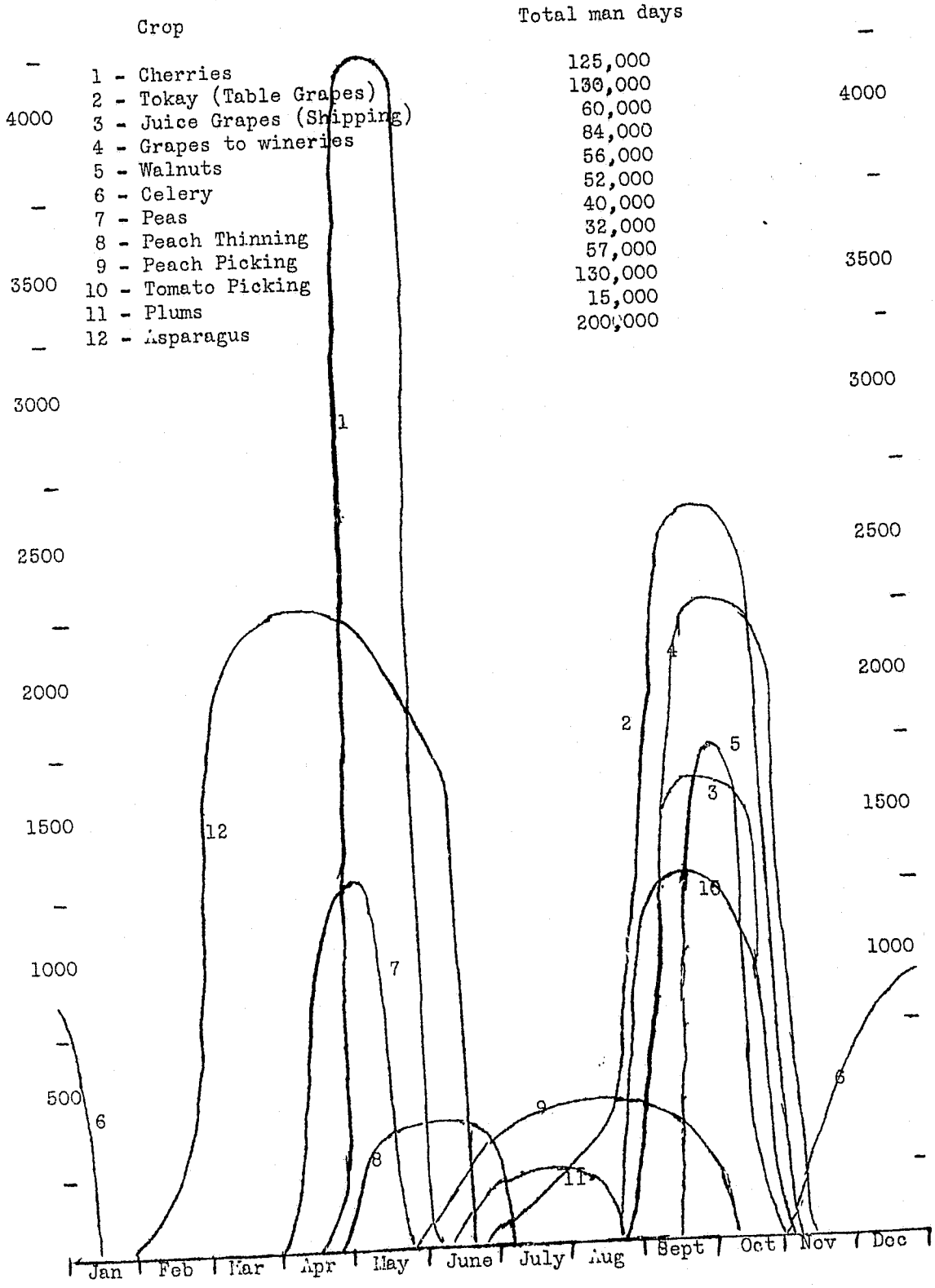
SUNFLOWERS: Yields were normal, but prices advanced materially.

SPINACH: Heavy winter rains flooded out many fields of spinach. Production per acre was very low.

SUGAR BEETS: Early season indications were for an excellent yield of beets, but growers report that extremely high temperatures during the late summer reduced the crop prospects.

RICE: Yields and a satisfactory harvest season were good. Prices, however, have been dropping to very low points.

GRAPHS SHOWING HARVEST PERIODS AND LABOR DISTRIBUTION
AND REQUIREMENTS OF 10 PRINCIPAL CROPS
REQUIRING SEASONAL LABOR
YEAR 1936



BEARING, NON-BEARING, DOUBLE PLANTING & TOTAL ACREAGE
OF CROPS IN SAN JOAQUIN COUNTY FOR THE YEAR 1936

CROP	SINGLE ACREAGE	INTER PLANT	BEARING ACREAGE	NON BEARING	TOTAL ACREAGE
FRUIT & NUT CROPS					
Almonds	3,428.13	239.37	3,667.50	994.11	4,661.61
Apples	32.15		32.15	1.40	33.55
Apricots	1,658.00	135.95	1,793.95	73.35	1,867.30
Cherries	4,191.85	242.05	4,433.90	226.48	4,660.38
Chestnuts	115.73	108.25	223.98	76.29	300.27
Figs	536.24	1.33	537.57	2.25	539.82
Grapes, Juice	33,553.10	377.18	33,930.28	1,221.72	35,152.00
Grapes, Table	19,736.74	71.05	19,807.79	591.42	20,400.21
Nectarines	113.43	1.00	114.43	35.46	149.89
Olives	314.14	50.46	364.60		364.60
Peaches, Free	2,727.67	125.20	2,852.87	1,397.00	4,249.87
Peaches, Cling	3,134.88	348.58	3,483.46	577.33	4,060.79
Pears	594.48	8.50	602.98	11.90	614.88
Persimmons	5.33	2.00	7.33		7.33
Plums	1,322.02		1,322.02	44.32	1,366.34
Prunes	1,115.59	316.38	1,431.97	31.85	1,463.82
Pomegranates	.50		.50		.50
Quince	4.10	.35	4.45	3.50	7.95
Walnuts	6,722.21	2,339.49	9,061.70	907.47	9,969.17
Hazelnuts	.50		.50	1.25	1.75
Misc. Orchards	414.12		414.12		414.12
Berries	121.01	18.50	139.51		139.51
Nurseries	44.33		44.33		44.33

CROP	SINGLE ACREAGE	INTER PLANT	BEARING ACREAGE	NON BEARING	TOTAL ACREAGE
FIELD CROPS					
Alfalfa	39,139.98	142.00	39,281.98		39,281.98
Beans	26,426.54	8,481.43	34,907.97		34,907.97
Clover	7,921.23	126.00	8,047.23		8,047.23
Cow Peas	242.00		242.00		242.00
Grains					
Barley	104,381.03	115.00	104,496.03		104,496.03
Corn	29,327.97	240.50	29,568.47		29,568.47
Flax	321.29		321.29		321.29
Oats	16,901.68	5.00	16,906.68		16,906.68
Rice	2,565.33		2,565.33		2,565.33
Rye	462.00		462.00		462.00
Wheat	45,546.17		45,546.17		45,546.17
Grain Sorghums	11,710.82	559.04	12,269.86		12,269.86
Hay	37,307.34	10.50	37,317.84		37,317.84
Mints	454.00		454.00		454.00
Pasture	252,298.47		252,298.47		252,298.47
Potatoes	10,388.52		10,388.52		10,388.52
Potatoes(Sweet)	1,151.89		1,151.89		1,151.89
Silage	279.90	235.00	514.90		514.90
Sudan	3,062.29	589.50	3,651.79		3,651.79
Sugar Beets	12,113.44		12,113.44		12,113.44
Sunflowers	5,763.46	187.00	5,950.46		5,950.46
Vetch	29.85		29.85		29.85
Melons	2,031.86		2,031.86		2,031.86
Peanuts	3.00		3.00		3.00

CROP	SINGLE ACREAGE	INTER PLANT	BEARING ACREAGE	NON BEARING	TOTAL ACREAGE
VEGETABLE CROPS					
Asparagus	17,624.38		17,624.38	5,617.77	23,242.15
Beets	30.00		30.00		30.00
Carrots	320.00	3.00	323.00		323.00
Celery	7,890.07	60.00	7,950.07		7,950.07
Cucumbers	108.00		108.00		108.00
Lettuce	195.00	11.75	206.75		206.75
Onions	1,577.66	72.75	1,650.41		1,650.41
Peas	2,132.98	111.22	2,244.20		2,244.20
Pumpkins	267.70	75.50	343.20		343.20
Spinach	540.49	122.25	662.74		662.74
Squash	344.26	110.30	454.56		454.56
Sweet Corn	68.35		68.35		68.35
Tomatoes	13,747.97	626.65	14,374.62		14,374.62
Vegetables	3,211.95	90.50	3,302.45		3,302.45
Artichokes	.25		.25		.25
Garlic	1.50		1.50		1.50
Swiss Chard	5.00		5.00		5.00

CROP	SINGLE ACREAGE	INTER PLANT	BEARING ACREAGE	NON BEARING	TOTAL ACREAGE
SEEDS					
Alfalfa	44.50	120.00	164.50		164.50
Beets	39.00		39.00		39.00
Bird Seed	517.53		517.53		517.53
Carrot	255.00		255.00		255.00
Lettuce	116.77		116.77		116.77
Onion Seed	512.86	16.00	528.86		528.86
" Sets	48.00		48.00		48.00
Parsnip	10.00		10.00		10.00
Pea	400.39		400.39		400.39
Radish	5.00		5.00		5.00
Swiss Chard	4.00		4.00		4.00
Asparagus Roots	786.67		786.67		786.67
Celery Bed	13.50		13.50		13.50

FRUIT & NUT CROPS
SAN JOAQUIN COUNTY - 1936

CROP	BEARING ACREAGE	PRODUCTION PER ACRE	PRODUCTION TOTAL	PRODUCTION UNIT	* FARM VALUE PER UNIT	* FARM VALUE TOTAL
Almonds	3,667	891	3,267,297	lb.	.19	$620,786.00
Apples	32	150	4,800	boxes	1.00	4,800.00
Apricots (Dried)	1,196	1,672	1,999,712	lb.	.10	199,971.00
(Canning)	598	3.4	2,033	Ton	25.00	50,825.00
Cherries (Fresh)	3,269	1.38	4,543	Ton	107.00	486.101.00
(Cannery)		.17	566	Ton	80.00	45,280.00
Cherries (Royal Ann)	1,165	3.28	3,832	Ton	80.00	306,560.00
Figs (Dried)		707	380,366	lb.	.05	19,018.00
(Fresh)	538	1,061	570,618	lb.	.03	17,125.00
(Cannery)		1,061	570,818	lb.	.027	15,412.00
Tokay (Fresh)	17,338	202	3,517,010	Pkg.	.67	2,359,397.00
Grapes (Wine)		3.96	68,817	Ton	15.75	1,083,868.00
Juice (Shipping)	33,930	1.32	44,783	Ton	17.50	783,703.00
Grapes (Wine)		1.94	66,086	Ton	15.75	1,040,854.00
Thompson (Shipping)	700	8	5,850	Pkg.	.70	4,095.00
Seedless (Wine)		4	2,800	Ton	15.75	44,100.00
Other Table (Fresh)	1,770	56	99,450	Pkg.	.68	67,626.00
Grapes (Wine)		4	7,080	Ton	15.75	111,510.00
Olives	365	1.50	548	Ton	65.40	35,839.00
Peaches (Cling)	3,483	8.4	29,257	Ton	27.00	789,939.00
(Free)	2,853	6.9	19,686	Ton	26.00	511,836.00
Pears	603	4	2,412	Ton	25.00	60,300.00
Plums	1,322	171	226,062	Crate	.69	155,983.00
Walnuts	9,062	.38	3,508	Ton	195.00	684,060.00
Prunes (Fresh)	234	171	40,014	Pkg.	.69	27,610.00
(Dried)	1,198	1.25	1,498	Ton	80.00	119,840.00
Chestnuts	224	.75	168	Ton	150.00	25,200.00
Nursery	80			Acre	1000.00	80,000.00
Misc'l. Orchards	537			Acre	100.00	53,700.00
				Total Valuation		$9,805,338.00

* Farm value is calculated on the basis of a farm commodity ready for sale F.O.B. ranch, local packing house or drier. Freight, handling and commission charges are not included except where delivery is made to a local processing plant, drier or cleaner. It does include cost of harvesting, packing and container.

VEGETABLE CROPS
SAN JOAQUIN COUNTY - 1936

CROP	BEARING ACREAGE	PRODUCTION PER ACRE	PRODUCTION TOTAL	PRODUCTION UNIT	FARM VALUE PER UNIT	FARM VALUE TOTAL
Asparagus (Fresh)	17,625	900	15,862,500	lb.	.05½ ¢	872,439.00
Asparagus (Cannery)		2,600	45,825,000	lb.	.04	1,833,000.00
Cantaloupes	275	485	133,375	Crate	.69	92,029.00
Carrots	320	300	96,000	Crate	.85	81,600.00
Celery '36-'37 Season	7,950*	110	874,500	½ Crate	.98	857,010.00
Lettuce	207	130	26,910	Crate	1.90	51,129.00
Onions	1,651	250	412,750	Cwt.	.40	165,100.00
Peas (Fresh)	2,244	138	309,672	30 lb. Hamper	.89	275,608.00
Spinach (Cannery)	663	2.34	1,551	Ton	10.50	16,286.00
Strawberries	96	275	26,400	20 Basket Crate	.75	19,800.00
Tomatoes	14,375	7.3	104,937	Ton	13.00	1,364,181.00
Watermelons	1,099	15.5	17,035	Ton	9.00	153,315.00
Honeydews	275	8.7	2,393	Ton	18.50	44,271.00
Casabas	275	8	2,200	Ton	10.00	22,000.00
Persians	275	7	1,925	Ton	12.00	23,100.00
Seed Crops and Asparagus and Celery Beds	2,939			Acre	100.00	293,900.00
All Other Vegetables	3,860			Acre	80.00	308,800.00
				Total Valuation		$6,473,568.00

* 2500 acres frozen

FIELD CROPS
SAN JOAQUIN COUNTY - 1936

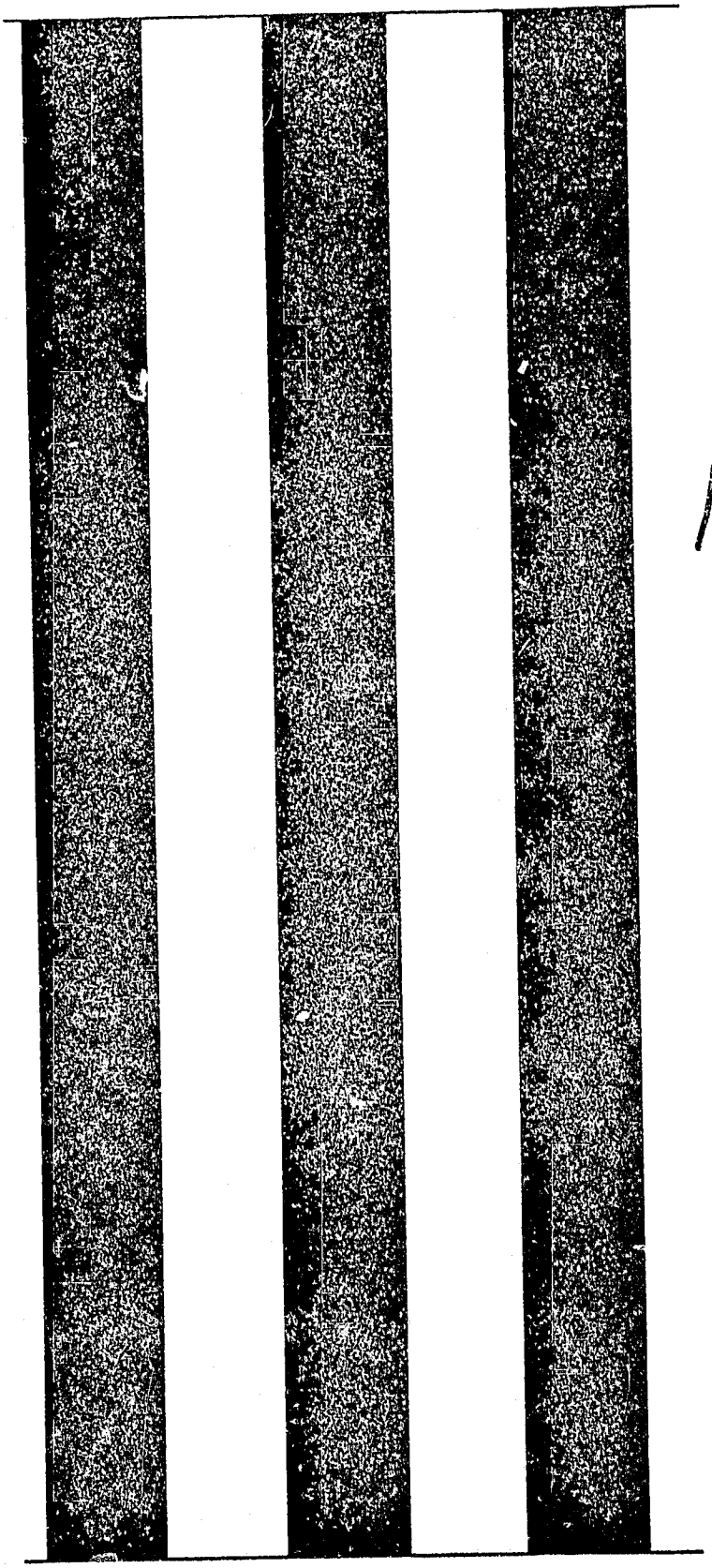
CROP	BEARING ACREAGE	PRODUCTION PER ACRE	PRODUCTION TOTAL	PRODUCTION UNIT	FARM VALUE PER UNIT	FARM VALUE TOTAL
Corn	29,568	1.00	29,568	Ton	$35.00	$1,034,880.00
Wheat	45,546	9.40	428,132	Cwt.	1.45	620,791.00
Oats	16,907	10.00	169,070	Cwt.	1.02	172,451.00
Barley	104,496	11.50	1,201,704	Cwt.	1.12	1,345,908.00
Rice	2,565	30.00	76,950	Cwt.	1.50	115,425.00
Flaxseed	321	14.00	4,494	Bu.	2.05	9,213.00
Grain Sorghum	12,270	1.25	15,337	Ton	32.00	490,784.00
Beans	34,907	14.00	488,698	Cwt.	5.00	2,443,490.00
Potatoes	10,389	160.00	1,662,240	Cwt.	1.60	2,659,584.00
Sweet Potatoes	1,152	5.50	6,336	Ton	32.25	204,336.00
Rye	462			Acre	15.00	6,930.00
Sugar Beets	12,113	18.00	218,034	Ton	5.45	1,188,285.00
Hay (Grain)	36,693	1.45	53,205	Ton	9.30	494,807.00
Hay (Wild)	615	1.15	707	Ton	6.30	4,454.00
Alfalfa Hay	39,282	6.50	255,333	Ton	12.00	3,063,996.00
Sunflowers	5,950	9.54	56,763	Cwt.	4.30	244,081.00
Sudan Grass	3,652			Acre	30.00	109,560.00
Pumpkins	343	13	4,459	Ton	3.50	15,607.00
Pasture	252,298			Acre	.75	189,223.00
Ladino Clover	8,047			Acre	45.00	372,115.00
Misc'l. Field Crops	1,009			Acre	50.00	50,450.00
					Total Valuation	$14,836,370.00

Total Valuation of Fruit, Nut Vegetable and Field Crops $31,115,276.00

FINANCIAL STATEMENT

YEAR - 1936

Supervision	$ 6,048.00
Plant Quarantine & Nursery Stock Inspection	7,490.00
Standardization	7,556.18
Orchard & Field Inspection	8,371.90
Rodent Control	10,878.53
Weed Control	5,910.21
Apiary	746.98
Egg Inspection	420.30
Statistics	3,300.20
Seed Inspection	700.00
Fairs & Exhibits	1,000.00
Office Help	1,630.00
Equipment, Supplies & Miscellaneous Expense	5,489.21
Total	$59,354.65



1937

California Agricultural Statistics

GIANNINI FOUNDATION OF AGRICULTURAL ECONOMICS LIBRARY

ANNUAL REPORT

of the

Department of Agriculture

COUNTY OF SAN JOAQUIN

Year 1937

AUSTIN E. MAHONEY

Agricultural Commissioner

ANNUAL REPORT
of the
DEPARTMENT OF AGRICULTURE
SAN JOAQUIN COUNTY

YEAR 1937

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APIARY

The purpose of bee inspection is to prevent the introduction and spread within the County of diseases injurious to bees. Colonies infected with American Foulbrood, a very infectious bee disease, are fumigated and then burned to destroy the disease. Colonies infected with European Foulbrood and Sacbrood are requeened. The following chart shows the number inspected and infected and also the movement of colonies.

	APIARIES	COLONIES
Inspected	355	8,414
Infected - American Foulbrood	60	116
Infected - European Foulbrood	47	126
Infected - Sacbrood	81	231
Paralysis	6	8
Entered County	20	1,800
Left County	27	1,757
Moved within County	45	2,198

There has been a notable reduction in the number of colonies infected with American Foulbrood. In 1935 there were 584 infected colonies and in 1936, 208 infected colonies as compared to 116 in 1937.

In addition to the regular inspection work, there were 162 swarms killed in buildings where they were disagreeable to the occupants.

BIRD DAMAGE AND CONTROL

The 1937 crop losses from birds were held at a minimum due to prompt action wherever such damage could be anticipated. The only specie which caused serious concern was the Horned Lark which began its usual depredation on the tender seedlings of beans and other crops as these appeared above ground. Control measures, as recommended by the U. S. Biological Survey, were necessary on 1300 acres and gave satisfactory results which held actual losses on the area treated to approximately 40 acres of beans and 30 acres of spinach. Most of these losses had already occurred when control measures were requested.

Linnets and sparrows gave little trouble during the year with the exception of two small areas where English Sparrows were sufficiently concentrated to justify attention.

EGGS

The enforcement of egg standards requires constant vigilance on the part of the County Inspectors due to the large number of handlers involved and the nature of the commodity. Wholesalers, dealers and retailers become careless unless they are continually warned. Sometimes warnings are not sufficient and it is necessary to bring violators into court. Six cases were tried in the courts of this County and in each case the offender was found guilty. Four were fined $25.00 and two $10.00.

EGG INSPECTION BY MONTHS

MONTH	NUMBER INSPECTIONS	DOZENS INSPECTED	DOZENS REJECTED	UNFIT FOR FOOD	QUALITY MISMARKED	WEIGHT MISMARKED	REQUIRED MARKINGS LACKING	STORAGE EGGS SOLD AS FRESH
January	18	1,569	186	93			93	
February	27	2,116	907	907				
March	82	3,579	867	164	575	128		
April	73	2,085	438	13	62		363	
May	51	1,279	63	43	11	9		
June	74	2,630	127	26	4		97	
July	148	4,476	186	19	68	99		
August	15	473	17	17				
September	157	7,169	238	95	41	60	42	
October	174	7,882	328	159	27	64	18	60
November	121	6,601	341	60	196	70	15	
December	131	8,454	175	122	33	20		
Totals	1,121	48,313	3,873	1,718	1,017	450	628	60

FAIRS AND EXHIBITS

San Joaquin County, using as the main feature a revolving exhibit at the California State Fair and the Los Angeles County Fair, again surpassed all other counties in quality and variety of farm products.

At the California State Fair, the County won a first award on the booth, and first sweepstakes on plums, grapes, apricots and nectarines, grains, beans, field and garden seeds, root vegetables, top vegetables and melons and second sweepstakes on peaches, walnuts and almonds. On wines the County won 10 first, 7 second, 8 third, 3 fourth, 6 fifth and 2 sixth awards. There was a total of 10 silver cups, 121 blue ribbons, 96 red ribbons, 37 white ribbons, 7 gold medals, 7 silver medals and 8 bronze medals won.

At the Los Angeles Fair the County won first award on the booth and first sweepstakes on peaches, plums, grains, beans, walnuts, field and garden seeds and vegetables. On wines the County won 16 firsts, 9 seconds, and 9 thirds. There was a total of 8 cups, 175 blue ribbons, 58 red ribbons, 16 gold medals, 9 silver medals and 9 bronze medals.

The County also exhibited at the San Diego County Fair and won first booth award, 148 blue ribbons and 23 red ribbons.

The Agricultural Commissioner, superintendent in charge of the agricultural display at the County Fair, used a Holland setting as the main theme in the building. All the exhibitors cooperated in carrying out this theme and making the building very picturesque. The office exhibit was a miniature replica of the Muiderslot Castle in Holland, flanked by a hedge made of Mullein.

At the Lodi Grape Festival, the Department cooperated with the Lodi District Chamber of Commerce in featuring a grape variety display.

FRUIT, NUT AND VEGETABLE STANDARDIZATION

The County Department of Agriculture assists the farmers to build up a reputation for their farm products and protects their markets by instructing them as to the proper grading and packing of their fruit, nut and vegetables as prescribed by the Agricultural Code. It is not the policy of this office to arrest and bring undue pressure on those who have violated the provisions of this Code, but sometimes this becomes necessary on frequent offenders and others unwilling to abide by these provisions.

INSPECTION AT POINT OF ORIGIN AND AT TIME OF PACKING:

Lots or carloads inspected	875
Number of packages rejected	7,609
Number of packages destroyed	665
Number of packages reconditioned or remarked for sale or by-products	6,945

In addition to the above, 7,439 carloads of grapes were accurately reported on daily during the shipping season to provide information to grape growers.

Two arrests were made for violations of this act at point of origin. Both were for selling low grade potatoes. One offender was fined $50.00 and 20 days suspended sentence. The other was given a thirty day suspended sentence.

HIGHWAY STATION INSPECTION: In cooperation with the State Department of Agriculture, a station for the stopping and inspecting of trucks hauling fruits, nuts and vegetables was again maintained near Tracy on the State Highway. An accurate account of the amount of produce inspected, rejections and arrests is kept by the Department.

POINT OF DESTINATION INSPECTION:

Number of carloads inspected	603
Number of packages rejected	5,548
Number of packages dumped by Court Order or owner	404
Number of packages reconditioned or remarked for sale or to by-products	5,144

One arrest was made for selling frozen oranges. The offender paid a fine of $25.00.

BY-PRODUCT PERMITS AND AFFIDAVITS: A number of permits were issued during the year to those hauling fruits, nuts or vegetables for by-product purposes. In addition, the Agricultural Commissioner requires of those hauling off-grade potatoes to secure an affidavit from this office on each load. A total of 210 affidavits were issued.

INSECTS AND MITES

CORN EAR WORM: Tomato growers suffered a large loss due to this insect. Many tomatoes were thrown away in the fields. Also at the cannery, growers were docked quite heavily due to the presence of worms. Many fields were dusted with poisonous dusts, the material being applied generally by aeroplane.

DARKLING GROUND BEETLE: Young tomato plants were attacked soon after they were put out. The use of poison bran and poison dusts aided in checking them.

GRAPE LEAF HOPPER: Several hundred acres of grapes were treated again this year with oil pyrethrum fog spray in the Lodi District.

SAN JOSE SCALE: The general use of Bordeaux Mixture as a spray in cherry orchards without alternating with lime sulfur has accounted for a build up of San Jose scale. Trees severely affected have been killed. Generally individual limbs die. The presence is indicated by a gumming and falling of leaves on infested trees.

ELM LEAF BEETLE: As predicted, elm leaf beetle attracted more attention this year. Trees in Stockton, Lodi and outlaying districts were defoliated. Spraying was quite general, but in many cases it was not done until after the trees were completely defoliated.

CODLING MOTH: Many walnut orchards were sprayed to control this worm. There now seems to be a build up on peaches particularly in some orchards in the Linden-Bellota District.

ALFALFA CATERPILLAR: The last cutting of alfalfa was badly riddled by this insect in some parts of the County.

PACIFIC MITE: Every year this mite causes concern to a great many farmers. Walnuts, beans and grapes are especially attacked. In the Lodi District there is an increasing amount of damage to grapes each year. The writer believes this build up is due to the fact that there have been several wet springs and farmers have puddled their soil by working it too wet and have maintained a very favorable condition in the top six or seven inches of soil for feeder root development. When this top soil dried out the vines are attacked by the mites, as the plant is unable to secure moisture fast enough through the limited supply of feeder roots in the subsoil.

BEAN THRIPS: This insect passes the winter on prickly lettuce and sow thistle. In the baby lima bean district of the County a committee was appointed from amongst the bean growers to cause a clean up of these weeds. All of the County roads and irrigation canals in the Santa-Fe bona Irrigation District were cleaned and cultivated in the early spring. Fair results were obtained, but more cooperation is needed of all agencies to make this a complete success.

GRASSHOPPERS: Several tons of poison bran were scattered in the Neglee-Burke District. This was used as a precautionary measure to kill the grasshoppers before there occurred any material damage. Surveys conducted this fall indicate very few egg deposits with slight prospects for any damage from grasshoppers next year.

NURSERIES

During the fall and winter all the nurseries were inspected and found free of serious pests. Slight infestations of mealybugs, scale insects and aphids were found, which were properly sprayed.

ORCHARD AND FIELD INSPECTION

Many farm commodities, particularly root crops, require field inspections to determine their freedom from insect, disease and weed pests. Other states and districts within this State require certification of shipments stating that the commodity is apparently free from certain pests, as determined by field inspection.

Inspectors also make general inspections of orchards and fields and discuss various problems with the farmers. Their knowledge of conditions throughout the County make them well qualified in helping to solve these problems.

PEST CONTROL OPERATORS

Section 150 of the Agricultural Code provides for the examination and certification of pest control operators in the business for hire. It also sets up certain regulations governing their operation. Several new certificates were issued this year.

Aeroplane operators and other operators who apply materials known to be poisonous to bees are required to notify the Agricultural Commissioner at least 36 hours in advance of the time of application. Operators were very careful to follow this regulation. In several cases bees were removed from properties adjacent to where poison dusts were applied. Several thousand acres of tomatoes were treated with poisonous dust and no loss of bees or other life was reported to this office.

PLANT DISEASES

CHESTNUT BLIGHT: The chestnut blight (Endothia parasitica) eradication program was continued. Tree by tree inspections made in May and in October in the two orchards resulted in the finding of 35 infected trees, which were destroyed by burning. The total number of infected trees since discovery of the blight in the two orchards is 124.

Members of the staff spent sixty-three working days on this project during 1937. Members of the State Department of Agriculture staff and of the Bureau of Forest Pathology, U.S.D.A., visited the project during the year. At a conference of pathologists and the Agricultural Commissioner it was decided to continue the present program, with the objective of eradicating the disease without destruction of the entire orchards, although it may prove necessary to remove blocks of trees. It is expected that a considerable number of diseased trees will be found and destroyed before eradication is obtained.

PEACH MOSAIC: Of major importance to San Joaquin County and her valuable deciduous fruit industry is the presence in parts of Southern California of Peach Mosaic, a destructive virus disease of peaches, almonds, nectarines, and plums. At the request of the State Department of Agriculture, one member of our staff was given a three months' leave of absence so that he could join their field organization for the spring survey and eradication work. Four other members of the County staff were sent to the infected area for a few days so that they might become acquainted with the symptoms of this disease.

A scouting survey of all commercial plantings of peaches in San Joaquin County and of numerous dooryard trees was made by State and County inspectors. No peach mosaic has been found in the County.

BACTERIAL CANKER OF TOMATOES: Bacterial canker of Tomatoes (Aplanobacter michiganense) caused an estimated damage to the 1937 crop of 15 per cent. This is a bacterial disease of recurring severity. Despite the accumulation of knowledge of the behaviour of this bactoria, effective control under field conditions has not been obtained.

A survey of 100 tomato fields was made, particular attention being paid to seed or plant source, seed bed site, method of handling plants and the infection in the field in relation to the above. The results of this survey indicate that a small percent of infected plants are present in most lots of plants. Several times plants from the same source showed a trace of infection in one field and as high as 50% infection in another field. Careless handling, such as placing plants in infected field boxes, placing plants in buckets of water for transportation from bed to field, results in spread of infection to clean plants. To stop this loss, we must learn that we are dealing with an infectious disease, and handle the plants accordingly.

The fermentation process of seed preparation, worked out by the University of Utah and the University of California, has reduced seed borne infection. Work done in Germany indicates that the lengthening of fermentation to a period of one week will give complete sterilization of seed borne infection.

WESTERN YELLOW BLIGHT IN TOMATOES AND CURLY TOP OF SUGAR BEETS: A virus disease carried by the sugar beet leafhopper, caused only nominal damage.

CALICO OR DELTA MOSAIC: A virus disease of celery, attracted attention in the Terminous area. It is marked by a yellow spotting of the outer leaves, without noticeable stunting of the plant, and does not cause much damage. Evidence indicates that infection took place in the bed before transplanting to the field.

DAMPING OFF: The wet spring furnished ideal conditions for development of damping off fungi. Where mercury compounds were used soon enough, control was obtained.

PEACH BLIGHT (CORYNEUM BEIJERINCKII): was unusually severe in some peach orchards, the leaves having the shot-hole type of infection such as usually appears on almonds and apricots. Buds and twigs are infected after long periods of rain during wet weather, such as experienced this spring, and in turn infect the leaves. The fall spray is therefore important in control of blight. A bordeaux spray in the pink bud stage, as required for brown rot control, will also help to prevent the spring blight infections.

PEACH RUST (TRANZSCHELIA PUNCTATA): did not cause commercial damage during 1937, in contrast to the severe damage on certain midsummer varieties the previous year.

PLANT QUARANTINE

The purpose of plant quarantine is to prevent the introduction and spread within the State of pests injurious to the agricultural industry of the State.

INSPECTION OF INTERSTATE SHIPMENTS:

Number of shipments inspected	2,589
Number of parcels inspected	769,492
Number of shipments rejected	27
Number of parcels rejected	2,964

INSPECTION OF INTRASTATE SHIPMENTS OF NURSERY STOCK:

Number of shipments inspected	3,026
Number of plants inspected	472,723
Number of shipments rejected	259
Number of plants rejected	2,889

REASON FOR REJECTION: Shipments were rejected principally for the presence of nematode, crowngall, mealy bug and scale insects. A few shipments were rejected where there was reasonable cause to presume they were infested or infected with insect or disease pests. Other shipments rejected were entering the County in violation of specific plant quarantines. One interstate shipment of privet was infested with citrus white fly.

RODENT CONTROL

The following materials were sold and distributed under the supervision of this office:

Strychninod grain	3,465 pounds
Thallium barley	7,283 pounds
Thallium oats	1,104 pounds
Carbon Bisulphide	9,314 gallons
K. R. O.	85 ounces

Approximately 75,000 acres were treated for ground squirrels using S.R.A. crews from the Single Men's camp. Work was limited to large acreages and irrigation districts' canals. Many fields were reworked a second time in order to secure as near as possible 100 percent results. A total of 23,986 man hours of work was done. The farmers paid for materials used and the foreman's wages.

All of the County roads were treated for squirrels. The foreman's time totalled 406 hours and the SRA men 1200 hours.

SEED INSPECTION AND ANALYSIS

The California Seed Law is strictly a labeling provision and gives authority for rejecting seed only when mislabeled. In addition to this, the Agricultural Commissioner rejects seed under authority of the Agricultural Code, which provides for the prevention of the spread of pests throughout the State. Any seed offered for planting purposes may be rejected by the Agricultural Commissioner if it is infested with any weed seeds which would be a menace to agriculture in this County.

Authorities on weed control make the statement that there are more weeds planted each year than there are eradicated. This statement would be true in any locality where there is no regulation on the purity of seed sold for planting purposes. In San Joaquin County seed used for planting purposes must be free of any noxious weed seeds. During the year 1937, 403 lots of seeds were examined and 28 lots comprising 433 bags were rejected.

The following seeds were examined for noxious weed seeds during the year 1937:

KIND OF SEED	NUMBER OF LOTS
Alfalfa	161
Ladino Clover	35
Barley	28
Ryegrass	17
Sudan Grass	17
Melilotus indica	17
Kentucky blue grass	16
Flax Seed	14
White Clover	10
Purple Vetch	9
Wheat	8
Oats	6
Others	65
Total	403

Germination tests were made on 30 lots.

The following weed seeds were present in lots rejected:

SEED	NO. LOTS
Watergrass	12
Creeping Mallow	7
Yellow Star Thistle	7
Russian Thistle	4
Morning Glory	3
Canada Thistle	2
Dodder	2
Sandbur	1

A much higher percentage of noxious weed seeds would be present in seed were it not for the fact that seed dealers know that it is necessary to sell clean seed in this County.

WEED CONTROL

The following report covers the work done by crew foreman, tractor drivers, State Relief Administration Camp men and Local Relief men under the supervision of the County Department of Agriculture.

	FOREMEN OR DRIVERS MAN HOURS	S.R.A. DAMP MEN MAN HOURS	S.R.A. LOCAL MAN HOURS
Roadside Discing	6,293		
Roadside Cleanup (All kinds debris)	532		
Puncture Vine (Roadside)	3,241		1,326
Yellow Star Thistle (Roadside)	560		5,424
Johnson Grass Digging (Private Property)	532	8,058	
Removing Dead trees (Roadsides)	434	2,232	
General Weed Cleanup (Roadsides)	1,456	5,988	9,864
TOTAL	13,048	16,278	16,614

ROADSIDE DISCING: This is the seventh year of roadside discing for the purpose of weed control and fire prevention. Seven hundred and fifty-six miles of roadsides were disced. In addition three hundred and ninety miles of roadsides were disced a second time and thirty-six miles a third time. The cost averaged $6.48 a mile for each time worked and includes from road shoulder to fence line on both sides of the road.

ROADSIDE CLEANUP: In order to facilitate discing, roadsides are cleaned once every two or three years of all kinds of debris. Many truck-loads of junk are removed, including old automobile parts, tin cans, wire fencing, etc.

PUNCTURE VINE: Roads are patrolled continually throughout the growing season of puncture vine and plants sprayed with diesel oil and later burned.

YELLOW STAR THISTLE: Infestations on roadsides are hoed before the seed matures.

JOHNSON GRASS: Relief crews were used on private property where small infestations occurred and the property owner was attempting to control it. It was found that a large majority of the roots are in the topsoil above the plow pan. Very good results were obtained. The property owner paid for the crew foreman.

REMOVING DEAD TREES FROM ROADSIDES: Dead trees are a constant source of danger to traffic and interfere with wood work on the roadsides. Wood from these trees helps supply the Camp with fuel.

GENERAL WEED CLEANUP ON ROADSIDES: Roadsides, on which it is not possible to do discing, are cleaned of weeds and brush. Russian thistle, fog weed, tumble wood and other summer annuals are hoe and burned before the seed scatters. Willows and other trees along the island roads are cleared to provide for better vision and facilitate road maintenance.

MUSTARD: Sulfuric acid for control of the mustard, radish, and other annuals in grain fields is gaining in popularity. This past year about 2500 acres were treated. A much larger acreage would have been treated had it not been for the wet season preventing machines from travelling over the fields.

MORNING GLORY: A total of 4000 acres was spot treated with carbon bisulphide for the control of morning glory. Sixty drums of material used. Application on the larger patches of morning glory was made with a large applicator belonging to the Stauffer Chemical Company. Small patches were treated using a hand applicator. Some growers carried the application on the cultivator and made applications on individual plants at that time.

MATERIALS USED: The following is the amount of materials handled by the Agricultural Commissioner for chemical weed control throughout the County for the year 1937:

Diesel Oil	7,436 gallons
Sodium Chlorate	12,000 pounds
Carbon Bisulphide	3,000 gallons

In addition to the above approximately 350,000 pounds of sulfuric acid, 70,000 gallons of diesel oil, 20,000 pounds of atlacide and 500 gallons of acid-arsenical were used by other agencies.

WINERIES - SUGAR TESTS

This office has been supervising the sugar testing of grapes at some of the wineries for the third season. This added service was given to the wineries at their request. The uniform testing of grapes has provided for a much better understanding between the growers and wine men.

The men appointed to make these sugar tests are in no way connected with the wineries. They are under our direct supervision. A report is made on each load of grapes taken to the crusher; one copy of the report is given to the winery, one to the grower and one to the Agricultural Commissioner.

STATISTICS

For three years this report has been made in cooperation with Federal Relief Agencies. By proper organization of our work it has been possible this year to make a complete statistical report without their cooperation.

CROP SUMMARY

San Joaquin County farmers have experienced a fairly satisfactory season. There have been some crops which did not bring good prices, but most of the losses have been due to climatical conditions. The heavy freeze in January retarded the grain and pea crops, cool weather in the early spring held back the development of fresh asparagus, rainy damp weather prevented the pollination of shipping cherries, untimely rains and damp weather in the fall interferred and in some cases prevented the harvest of beans, rice and grain sorghum.

No serious outbreaks of any insect or disease pest occurred. Peach blight, brown rot and cruly leaf were of common occurrence but in most cases were satisfactorily controlled. Walnut codling moth was held in check by spraying although there appears to be a build up of the codling moth in some peach orchards. Darkling ground beetle and bacterial canker were quite serious on tomatoes. Corn ear worm necessitated heavy culling of tomatoes at the canneries. Many fields were dusted by aeroplane. Alfalfa caterpillars were very abundant in some sections of the County towards the end of the season. Red spider is causing an increasing amount of damage each year on grapes in the Lodi District.

CROPS

ALMONDS: The yield of all varieties of almonds was higher than it has been for several years. Growers are taking better care of their orchards and spraying for brown rot and other pests is more general. Prices held up well even though production was much greater.

APRICOTS: Production was good. Spraying to check brown rot was carried on extensively. Early contracted fruit brought some growers as high as $55.00 per ton. Later in the season prices dropped down much lower.

CHESTNUTS: Yields were about normal. Growers had difficulty in disposing of their crop.

CHERRIES: The crop was very light, particularly of the shipping varieties. Continued damp, rainy weather during the blossoming period prevented pollination. In some orchards along the Calaveras River there were not enough cherries on the trees to pay for picking. Royal Ann production held up well.

FIGS: Production and prices showed improvement over previous years.

OLIVES: The olive crop was lighter this year.

PEACHES: Growers had another favorable year. Cling peaches brought a very good price. Due to the cool weather during the early summer split pits were unusually common. The cull out on cannery peaches was 23 percent.

PEARS: Our pear acreage has dropped to a point where it is no longer of great importance to the agricultural industry in this County. Low prices and blight have accounted for this change.

PLUMS: Production and prices were normal.

PRUNES: Normal production and low prices.

WALNUTS: New acreage coming into bearing and a crop larger than normal accounted for the largest crop in the history of the County. Prices are lower but total valuation is higher.

GRAPES - TABLE: Early in the season buyers paid high prices for Tokay crops on the vine with the expectation that prices in the Eastern Markets would be good. However, this was not the case and many growers benefitted through the buyers speculation. Most growers limited their sales of fresh Tokays and delivered a large tonnage to the wineries thereby keeping down their expenses and making a fair profit.

GRAPES - WINE: A large percentage of the wine grapes were purchased on the vine. Much to the surprise of the grape men, wine grapes brought exceptionally good prices in the Eastern markets until along towards the end of the season when the market became glutted. Good prices in the East held up the local prices to the wineries. Production of grapes was slightly above normal in this County although production for the State was considerably above normal.

CELERY: The acreage is lower than last year. Total production is about doubled.. Prices have ranged within narrow limits.

CORN: Production is about normal. Prices are considerably under last year's high prices.

ALFALFA: Growers had another good year. Production was normal, but prices were excellent. Some damage occurred to the last cutting due to untimely rains.

GRAIN: Yields varied considerably throughout different sections of the County. Abundance of moisture throughout the early spring flooded out portions of fields on the lowlands and on the heavier types of soil. Soils having good drainage and run off benefitted by the rains. During the January freeze grain was set back and stands thinned out. This is particularly true of oats. Production for the County as a whole was above normal.

BEANS: Lima bean growers increased their acreage. Production per acre was good. Total production for the County was above normal. Acreage and production of other beans remained close to normal. Due to increased acreage and good yields throughout the Nation prices on most varieties of beans are lower than they have been for several years. About 3500 acres of mature beans were rain damaged and about one-half of this acreage was not harvested due to continued rainy, damp weather.

POTATOES: Potato acreage and production was normal but increased acreage throughout other parts of the United States resulted in low prices.

SWEET POTATOES: Production and prices remained normal.

MELONS: Watermelons had an unfavorable growing season which delayed harvest. Due to the late season and low prices many melons were unharvested.

ASPARAGUS: Cool, damp weather during the early spring held back the production of asparagus. Early asparagus goes for fresh shipment and growers generally receive good prices. Any curtailment of this early production means lower income. However, growers received good prices for that delivered to the canneries.

ONIONS: Yields were good, but prices were low.

TOMATOES: A large acreage of this crop was again planted this year. Most of the growers contracted their acreage at a fair price per ton. Due to various causes growers had considerable grief. Bacterial canker and other tomato diseases were prevalent. Later in the season corn ear worm was prevalent. Due to a carry-over and an above normal yield throughout the United States canners were not as lenient with their grading as in past years. Most growers are not optimistic over future planting.

PEAS: This crop suffered from the big freeze in January. Stands were thinned out and the harvest period delayed. Most of our peas are grown in the Tracy District. Harvest is generally earlier in this district, but this year the harvest date of peas coincided with other districts so that prices were very low.

SORGHUM, GRAIN: About one-half of this crop was unharvested before rainy, damp weather set in. Grain sorghum can be harvested when it contains a high moisture content, but it is necessary to run it through a drier. This added cost of harvesting and dockage for stained grain at time of selling has resulted in low net returns to growers.

LADINO CLOVER: This relatively new forage crop is still gaining in popularity.

SUNFLOWERS: There were normal yields but very low prices.

SUGAR BEETS: Acreage and production was normal.

RICE: Yields were satisfactory, but growers have experienced the same difficulties as the grain sorghum men in harvest.

THE TREND OF PERMANENT CROPS IN SAN JOAQUIN COUNTY
YEAR - 1937

Outstanding in the trend of permanent crops during the past year is the increased planting of almonds, apricots, table grapes, cling peaches and freestone peaches; and the large removal of pears. Other crops are remaining at about a stationary level, although there is a large acreage of walnuts planted in previous years which are not yet of bearing age. Juice grapes show a slight increase in acreage, but new plantings are on good land capable of high production while removals are on marginal land of low production. Increased plantings of table grapes are almost all of the Tokay variety. The following chart shows the trend:

CROP	REMOVALS 1937	NEW PLANTINGS 1937	NON-BEARING ACREAGE	BEARING ACREAGE
Almonds	10.50	307.59	1201.95	3759.20
Apples	None	3.73	5.13	32.15
Apricots	20.50	54.33	125.18	1775.95
Chestnuts	None	None	76.29	223.98
Cherries (Shipping)	37.25	48.34	169.89	3319.98
Cherries (Royal Ann)	11.63	18.68	36.53	1164.41
Family Orchard	None	None	None	414.62
Figs	12.45	None	1.35	523.79
Grapes, Juice	420.75	551.04	1066.68	34,166.80
Grapes, Table	40.00	312.33	632.18	20,243.05
Nectarines	None	23.61	58.02	115.48
Olives	None	None	None	364.60
Peaches (Cling)	32.50	279.45	748.61	3549.13
Peaches (Free)	103.67	214.67	897.80	2852.01
Persimmons	None	None	None	5.00
Plums and Prunes	92.50	24.91	75.73	3063.76
Pears	199.18	None	11.90	398.80
Prickley Pear	None	None	None	5.00
Quince	None	None	None	4.45
Walnuts	76.70	55.99	786.35	9162.03

FRUIT AND NUT CROPS
SAN JOAQUIN COUNTY - 1937

CROP	BEARING ACREAGE	PRODUCTION PER ACRE	PRODUCTION TOTAL	UNIT	*VALUE PER UNIT	*VALUE TOTAL
Almonds	3,760	.50	1,880	Ton	$ 275.00	$ 517,000.00
Apples	32	150.00	4,800	Box	1.00	4,800.00
Apricots (Dried)	1,184	1.00	1,184	Ton	200.00	236,800.00
(Canning)	592	5.00	2,960	Ton	36.00	106,560.00
Cherries (Royal Ann)	1,165	1.64	1,910	Ton	160.00	305,600.00
(Other)	3,320	.65	2,158	Ton	200.00	431,600.00
Chestnuts	224	.75	168	Ton	100.00	16,800.00
Figs (Dried)	524	.25	131	Ton	70.00	9,170.00
(Fresh)		.50	262	Ton	70.00	18,340.00
(Cannery)		.50	262	Ton	70.00	18,340.00
Juice Grapes (Shipping)	34,167	1.69	57,742	Ton	18.50	1,068,227.00
(Wine)		3.00	102,501	Ton	18.50	1,896,268.00
Thompson Seedless (Wine)	715	5.00	3,575	Ton	18.50	66,137.00
Tokay Grapes (Fresh)	17,474	200.00	3,494,800	Pkg.	.52	1,817,296.00
(Wine)		5.38	94,010	Ton	18.50	1,739,185.00
Other Table Grapes (Fresh)	2,024	34.00	68,816	Pkg.	.52	35,784.00
(Wine)		4.5	9,108	Ton	18.50	168,498.00
Olives	365	.75	274	Ton	75.00	20,550.00
Peaches (Free)	2,852	6.00	17,112	Ton	26.00	444,912.00
(Cling)	3,549	6.50	23,068	Ton	42.00	968,856.00
Pears	399	5.00	1,995	Ton	25.00	49,875.00
Plums	1,655	90.00	148,950	Crate	1.00	148,950.00
Prunes (Fresh)	1,372	54.00	74,088	Crate	1.00	74,088.00
(Dried)		.90	1,234	Ton	57.00	70,338.00
Walnuts (English)	8,580	.46	3,947	Ton	175.00	690,725.00
(Black)	582	1.2	698	Cwt.	.75	523.00
Misc'l. Orchards	540			Acre	100.00	54,000.00
					Total	$10,979,222.00

* Value represents the gross return to the farmer and does not indicate the net profit. It is calculated on the basis of a farm commodity ready for sale F.O.B. ranch, local packing house, cannery or drier depending largely on the common method of handling the specific product. Freight, handling and commission charges are not included except local hauling costs.

FIELD CROPS
SAN JOAQUIN COUNTY - 1937

CROP	ACREAGE	PRODUCTION PER ACRE	PRODUCTION TOTAL	PRODUCTION UNIT	*VALUE PER UNIT	*VALUE TOTAL
Alfalfa Hay	39,324	6.00	235,944	Ton	$14.00	$3,303,216.00
Barley	101,913	13.50	1,375,825	Cwt.	1.40	1,926,155.00
Beans	37,562	15.00	563,430	Cwt.	3.15	1,774,804.00
Bean Straw	20,000	.75	15,000	Ton	6.00	90,000.00
Corn	20,395	.90	18,355	Ton	27.00	495,585.00
Corn Husks			200	Ton	320.00	64,000.00
Cotton	51	553.00	28,203	lb.	.09	2,538.00
Flaxseed	4,281	20.00	85,620	Bu.	2.08	178,089.00
Grain Sorghum	16,208	1.10	17,829	Ton	25.00	445,725.00
Hay (Grain)	27,465	1.40	38,451	Ton	12.50	480,637.00
Hay (Wild)	11,014	1.00	11,014	Ton	8.10	89,213.00
Ladino Clover	9,241.			Acre	45.00	415,845.00
Oats	10,090	10.00	100,900	Cwt.	1.40	141,260.00
Pasture	210,120			Acre	1.00	210,120.00
Potatoes	10,962	165.00	1,808,730	Cwt.	.60	1,085,238.00
Pumpkins	448	13.00	5,824	Ton		20,384.00
Rice	3,377	30.00	101,310	Cwt.	1.42	143,860.00
Rye	74			Acre	15.00	1,110.00
Silage	2,277	12.00	27,324	Ton	5.00	136,620.00
Spearmint & Peppermint	575			Acre	75.00	43,125.00
Stubble	223,000			Acre	1.15	256,450.00
Sudan Grass	3,974			Acre	30.00	119,220.00
Sugar Beets	12,161	17.50	212,817	Ton	⁄ 5.60	1,191,775.00
Sunflowers	5,861	12.40	72,676	Cwt.	2.12	154,073.00
Sweet Potatoes	1,287	5.00	6,435	Ton	32.00	205,920.00
Wheat	48,020	12.50	600,250	Cwt.	1.60	960,400.00
Misc'l. Field Crops	504			Acre	50.00	25,200.00
					Total	$13,960,562.00

* See Footnote Page 15
⁄ Preliminary

VEGETABLE CROPS
SAN JOAQUIN COUNTY - 1937

CROP	BEARING ACRES	PRODUCTION PER ACRE	PRODUCTION TOTAL	PRODUCTION UNIT	* VALUE PER UNIT	* VALUE TOTAL
Asparagus (Fresh)	24,478/	408.00	9,987,024	lb.	.055	$ 549,286.00
(Cannery)		1,434.00	35,101,452	lb.	.045	1,579,565.00
Cantaloupes	200	300.00	60,000	Crate	.60	36,000.00
Carrots	302	300.00	90,600	Crate	.85	77,010.00
Casabas	547	15.00	8,205	Ton	9.00	73,845.00
Celery ('37-'38 Season)	6,233	239.00	1,489,687	½ Crate	1.15	1,713,140.00
Honeydews	226	11.00	2,486	Ton	8.00	19,888.00
Onions (Early)	559	250.00	139,750	Cwt.	.45	62,887.00
(Late)	587	175.00	102,725	Cwt.	1.20	123,270.00
Peas	1,972	131.00	258,332	30 lb. Hamper	.85	219,582.00
Persians	143	9.00	1,287	Ton	8.00	10,296.00
Spinach	1,067	4.5	4,801	Ton	14.00	67,214.00
Strawberries	89	250.00	22,250	20 basket drate	.75	16,687.00
Tomatoes (Pear)	5,895	7.00	41,265	Ton	16.00	660,240.00
(Round)	5,032	7.00	35,224	Ton	13.00	457,912.00
Truck Garden	3,277			Acre	80.00	262,160.00
Watermelons	1,516	15.00	22,740	Ton	6.00	136,440.00
					Total	$6,065,422.00

/ additional 4174 acres planted 1937

SEED CROPS AND NURSERY

Alfalfa Seed	336	375.00	126,000	lb.	.18	$ 22,680.00
Asparagus Roots	380			Acre	200.00	76,000.00
Canary Grass Seed	432	30.00	12,960	Cwt.	2.50	32,400.00
Carrot Seed	85	672.00	57,120	lb.	.13½	7,711.00
Celery Beds	78				200.00	15,600.00
Fenugreek Seed	75	1,200.00	90,000	lb.	.085	7,650.00
Onion Seed	227	425.00	96,475	lb.	.32	30,872.00
Deciduous & Ornamental	80			Acre	1,000.00	80,000.00
					Total	$ 272,913.00

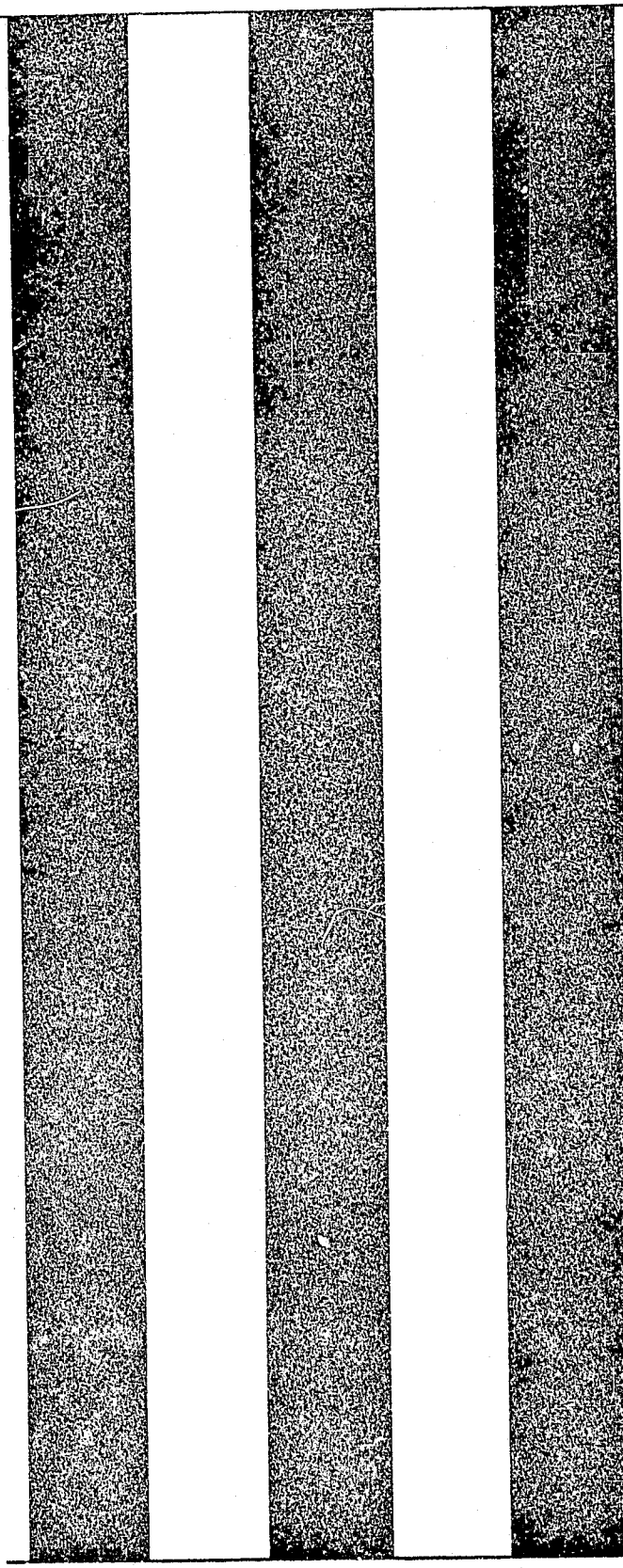
* See Footnote Page 15

Total valuation of Fruit, Nut, Vegetable, Seed, Nursery, and Field Crops $31,278,119.00

FINANCIAL STATEMENT

YEAR 1937

Supervision	$ 6,910.00
Plant Quarantine and Nursery Stock Inspection	7,273.23
Standardization	7,636.40
Orchard and Field Inspection	7,276.38
Rodent Control	9,789.40
Weed Control	5,180.23
Apiary	1,191.06
Egg Inspection	709.79
Statistics	3,720.00
Seed Inspection	1,209.21
Fairs and Exhibits	1,721.00
Office Help	2,680.00
Equipment, Supplies and Miscellaneous Expense	5,621.37
Total	$60,918.07



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of the

Department of Agriculture

County of San Joaquin

Year 1938

AUSTIN E. MAHONEY

Agricultural commissioner

ANNUAL REPORT
of the
DEPARTMENT OF AGRICULTURE
SAN JOAQUIN COUNTY

YEAR 1938

COMPILED BY PERCY F. WRIGHT

T A B L E O F C O N T E N T S

OFFICE DIRECTORY

OFFICE	ADDRESS	PHONE
Stockton	Hazelton & B Streets, P. O. Box 1809	Stockton 6-6806
Lodi	Lodi City Hall	Lodi 261
Manteca	Manteca City Hall	Manteca 44
Tracy	48 W. 11th Street	Tracy 193
Escalon	3rd Street	Escalon 28
Lindon	Waterloo Road	Stockton 2-3938

STAFF OF THE SAN JOAQUIN COUNTY DEPARTMENT OF AGRICULTURE

Austin E. Mahoney	Agricultural Commissioner.
Percy F. Wright	Supervising Agricultural Inspector.
Kenneth H. Durand	Deputy in charge of Weed Control.
Wallace H. Street	Deputy in charge of Lodi Office and Thornton, Woodbridge District.
L. R. Tugel	Deputy in charge of Tracy Office and Tracy, Bethany District.

AGRICULTURAL INSPECTORS

Lester F. Ashley	Calaveras District
Val Braghetta	In charge of Nursery Stock Inspection and Fair Exhibits
Floyd Brooks	Roberts-Union Island District
Amos R. Brumbaugh	In charge of Plant Quarantine and Fruit, Nut and Vegetable Standardization, City of Stockton
Lester R. Brumbaugh	In charge of Bee, Honey, and Egg Inspection.
Jack Conklin	French Camp and Farmington District
Reese Eltringham	Vernalis, Banta-Carbona and Pescadero District
Theo Heurlin	Escalon District
M. A. Huberty	City of Lodi
William K. Richaud	Delta District
Hubert E. Minahen	Lindon-Bellota District
C. W. Thompson	Kettleman-Terminous District
F. I. Veregge	Manteca and River-Junction Farms District
Allen P. Wakefield	Victor-Lockeford-Clements District
N. J. Wolter	Ripon-Atlanta District

****

Flora Frandy	Secretary
Louise Hanson	Seed Analyist and Office Clerk
J. V. Widney	Warehouse Clerk

APIARY

The purpose of bee inspection is to prevent the introduction and spread within the county of diseases injurious to bees. Colonies infected with American Foulbrood, a very infectious bee disease, are fumigated and then burned to destroy the disease. Colonies which are infected with European Foulbrood and Sacbrood are requeened. The following chart shows the number inspected and infected and also the movement of colonies:

	APIARIES	COLONIES
Inspected	174	4,787
Infected - American Foulbrood	20	44
Burned - American Foulbrood	20	44
Infected - European Foulbrood	28	198
Entered County	48	4,805
Left County	31	1,589
Moved Within County	22	1,300

There has been a notable reduction in the number of colonies infected with American Foulbrood. In 1935 there were 584 infected colonies; 1936, 208 infected colonies and 1937, 116 infected colonies as compared with 44 colonies in 1938.

BIRD CONTROL

The controlling of certain bird species such as Horned Larks, Linnets and Sparrows is now an established necessary practice in many farming districts. While the need for this type of pest control varies with the seasons there is no present indication that it can be discontinued without risking serious losses to beans, peas, lettuce and other crops in the tender seedling stage.

With the exception of the Linnet, English Sparrow and Blue Jay all birds involved in crop losses are protected by Federal and State Laws. Killing of these may be done only when justified as a protection to crops and methods used must be those recommended by the United States Bureau of Biological Survey.

Fortunately Horned Larks caused little concern during the 1938 season and only 120 acres of beans required protection. No further damage occurred after treatment and total loss was very slight.

An unusually heavy concentration of English and White Crowned Sparrows were satisfactorily controlled in wooded areas adjoining new plantings of alfalfa and Ladino clover. A few acres were, however, sufficiently damaged before treatment to require the planting of additional seed.

EGGS

After three years of enforcement work on egg standards dealers find that it has been a boom to the industry. Consumer purchases have increased, and along with this a better spirit of friendliness to the inspector. The number of rejections have dropped, but not enough to let up any on inspection work. Many local grocers, who handle eggs direct from the farmer, become careless if not repeatedly warned. Only one case was tried in court in this County. The offender was found guilty and given a five day suspended sentence.

EGG INSPECTION BY MONTHS

MONTH	NUMBER INSPECTIONS	DOZENS INSPECTED	DOZENS REJECTED	UNFIT FOR FOOD	QUALITY MIS-MARKED	WEIGHT MIS-MARKED	REQUIRED MARKINGS LACKING
January							
February	10	1171	75		75		
March	2	30					
April	53	3284	190	49	41	25	75
May	73	3886	278		32		246
June	118	4714	415	125	103		187
July	6	335	30				30
August	9	969					
September	59	5970	93	93			
October	120	5320	132	30		12	90
November	101	7547	690	120	78		492
December	99	5852	252	213	39		
Totals	650	39,078	2,155	630	368	37	1,120

FAIRS AND EXHIBITS

In the past San Joaquin County has used the same setting at the California State Fair and Los Angeles County Fair. There are only four days of elapsed time between the two fairs which has always resulted in a last minute rush working night and day in order to be ready for the opening of the Los Angeles Fair. This year a different setting was used at each fair.

AT THE CALIFORNIA STATE FAIR a replica of a large ocean liner was used with the name Port Stockton. The ship, silver tinted, with golden divats and flaming red stack rode on the crests of waves. In the troughs of the sea, in small picturesque sailing boats, were placed the products, including walnuts, almonds, seeds, beans and grains.

Only non-perishable commodities were entered for competition at the California State Fair because of a ruling by the State Fair Board that no exhibitor could win more than three sweepstakes. First sweepstakes were won on grains and field and garden seeds, second sweepstakes on beans and walnuts and third sweepstakes on almonds. On the wine exhibit the County won six first awards, five second awards and one third award sweepstake. Special County Award was won on the exhibit.

AT THE LOS ANGELES COUNTY FAIR, the Story of Cinderella was typified by showing Cinderella entering a pumpkin coach which was drawn by six mice with various mice attendants and coachmen personified.

First award was won on the booth and first sweepstakes on grains, beans, vegetables, melons, peaches in crates, walnuts and peaches, plums, pears and grapes in crates, and second sweepstakes on grapes in crates. Other firsts were won on almonds and chestnuts, on which there was no sweepstake prize.

SAN JOAQUIN COUNTY FAIR Increased interest was shown by the various exhibitors at the San Joaquin County Fair. Communities started work many months in advance on both their settings and collection of agricultural commodities. Unquestionably, the communities of this county surpassed anything which has ever been shown at a county fair in the United States, both in the variety and quality of products shown and in the setting of their exhibits.

The Agricultural Commissioner, a San Joaquin County Fair Director, is superintendent in charge of the agricultural exhibits at the county fair. Under his supervision, the building was transformed into a veritable fairyland. This was typified by murals, cut-outs, cellophane butterflies and moths, toadstools, frogs and many other subjects and characters of a fairyland nature. The community exhibits used some fairyland rhyme as a basis for their exhibits. Lodi represented Aladin and His Lamp; Escalon, Little Red Riding Hood; Manteca, Cinderella; Tracy, the Gnomes and The Grist Mill; Clements, Humpty Dumpty and the Cat and Fiddle; French Camp, Snow White and the Seven Dwarfs; Ripon, Little Boy Blue; Roberts Union, The Old Woman Who Lived in a Shoe and Linden, Jack and the Bean Stalk.

FRUIT, NUT AND VEGETABLE STANDARDIZATION

The San Joaquin County Department of Agriculture assists the farmers to build up a reputation for their farm products and protects their markets by instructing them as to the proper grading and packing of their fruit, nut and vegetables as prescribed by the Agricultural Code. It is not the policy of ~~their~~ the office to arrest and bring undue pressure on those who have violated the provisions of this code, but sometimes this becomes necessary on frequent offenders and others who are unwilling to abide by those provisions.

INSPECTION AT POINT OF ORIGIN AND AT TIME OF PACKING:

	Packages	Tons
Number of rejections	12,098	112
Destroyed or dumped	68	
Reconditioned or remarked for sale or by-products	12,030	112

Four arrests and convictions were made, two receiving a $50.00 fine with $25.00 suspended, one a $50.00 fine and a 60 day suspended sentence and one a $25.00 fine and a 30 day sentence.

HIGHWAY STATION INSPECTION: In cooperation with the State Department of Agriculture, a station for the stopping and inspection of trucks hauling fruits, nuts and vegetables was again maintained near Tracy on the State Highway. An accurate account of the amount of produce inspected, rejections and arrests is kept by the State Department.

POINT OF DESTINATION INSPECTION:

	Packages	Tons
Number of rejections	3,087	2
Destroyed or dumped	406	
Reconditioned or remarked for sale or by-product	2,681	2

Three arrests were made all paying a $100.00 fine.

INSECTS AND MITES

GRASSHOPPERS: Farmers in this county used 13,560 pounds of bran in making up poison mash for grasshopper control. Of this amount 9,960 pounds were furnished by the Federal Government and 3,600 pounds by the farmers. The crops protected by this control program were 1,320 acres of alfalfa, 350 acres of beans, 40 acres of sunflowers, 40 acres of vineyard, 100 acres of asparagus, 10 acres of grain and 20 acres of walnuts. In addition to poison mash, 180 acres were burned and 80 acres treated by a hopper-dozer. The results from the use of poison were excellent in nearly every case, the few exceptions being those growers who disregarded recommended methods. Infestations of grasshoppers occurred mostly in the Tracy area on the West Side of the San Joaquin Valley, and to a lesser extent on the East Side where grasshoppers were numerous on the pasture lands but not to such a great extent as to migrate into the crop lands.

FALL CANKER WORMS ON CHERRIES: The adult female moth of this pest is wingless. In the fall of the year they crawl up the tree and deposit eggs on fruiting spurs and other rough places on the bark. They hatch in the spring as soon as the fruit starts to size and do serious damage where control measures are not carried out. Excellent results have been obtained by spraying with pyrethrum insecticides. Infestations are sporadic through the county. This past spring cherry orchards in various parts of the county were attacked, but little damage occurred as growers were very alert in applying control measures.

CASE BEARER ON CHERRIES: It is interesting to note that this pest had not been noticed since 1926 at which time it did considerable damage to maturing cherries. This season it was observed in a number of orchards, but did little damage.

FLEA BEETLES: This pest was unusually abundant on early planted tomatoes. Damage was limited as growers generally applied control measures before serious damage occurred.

APHIS: Due to a long damp spring aphis were unusually abundant on crops during the months of April and May. Sugar beets and potatoes in the delta were severely attacked, but soon recovered as the weather became warmer and natural enemies became active.

WALNUT CODLING MOTH: Spraying for control of this pest is now a common practice throughout the Linden walnut orchards. The standard formula is four pounds of basic arsenate of lead and four ounces of casein spreader. The flight was heavier this past year than it had ever been in previous years. Proper timing of spray applications held it in check effectively except in some orchards where no spraying was done in which case walnuts at the packing house showed infestations as high as 16 and 17 percent.

PACIFIC MITE: Less damage occurred this season than has occurred in many seasons, primarily due to an abundance of rainfall throughout the winter and spring and below normal summer temperatures.

SAY'S PLANT BUG ON ASPARAGUS: Due to the damp spring, asparagus growers were unable to cultivate their fields as early and thoroughly as usual. Consequently, pests were able to build up on the weeds. Particularly noticeable was Say's Plant Bug which worked on the tender ferns after harvest. Some fields appeared as though they were scorched by fire.

ALFALFA CATERPILLAR: As yet, no practical method has been found for controlling this pest other than early mowing. Dorris dust was used on one field with no results. Production was reduced as much as one half on the fourth and fifth cuttings in some fields.

TOMATO INSECTS: Tomato fields were exceptionally free of damage caused by corn ear worm and army worms.

NURSERIES

During the fall and winter all the nurseries were inspected and found free of serious pests. Slight infestations of mealybugs, scale insects and aphids were found, which were properly sprayed.

ORCHARD AND FIELD INSPECTION

Many farm commodities, particularly root crops, require field inspections to determine their freedom from insect, disease and weed pests. Other states and districts within the State require certification of shipments stating that the commodity is apparently free from certain pests, as determined by field inspection.

Inspectors also make general inspections of orchards and fields and discuss various problems with the farmers. Their knowledge of conditions throughout the County make them well qualified in helping to solve these problems.

PEST CONTROL OPERATORS

Section 150 of the Agricultural Code provides for the examination and certification of pest control operators in the business for hire. Also, certain regulations are set up governing their operations.

Most of the certificates issued for ground machines are to farmers who do work for their neighbors. Aeroplane operators are also issued certificates. Particular stress is based upon their knowledge of working conditions and regulations governing their operation.

This past season a much smaller acreage was treated by aeroplane due principally to a lighter infestation of insects generally treated by plane.

PLANT DISEASES

The year 1938 has been marked by the addition of western celery mosaic and sugar beet nematode to the list of plant diseases attacking important crops in San Joaquin County.

SUGAR BEET NEMATODE was found on one or more camps on three delta islands. This nematode spreads rapidly through infested soil adhering to tools, tare dirt, or similar means unless stringent sanitary practices are observed. Growing of sugar beets is restricted to a rotation of one year in six on infested soil. It is expected that the industry will work out a program of sanitary handling of equipment and removal of infested areas from production so that the spread will be arrested.

WESTERN CELERY MOSAIC, a virus disease, was found to be well established in certain fields of celery, and present in small amounts in most fields. The crop loss was nominal this year. Mosaic was a major cause of loss in the Venice area of Southern California until control measures were taken. This disease is carried from plant to plant by aphis. Control steps will consist of a celery free period, between end of harvest and the planting of seed for the next crop, during which time all plants of celery are destroyed. Such a celery free period may be established for Central California by the State Director of Agriculture. This department recommends that all celery fields be plowed immediately after harvest.

CHESTNUT BLIGHT: A complete survey of chestnut trees in the County, involving an inspection of each tree on 307 properties, was made following the addition of another orchard to the list of two known to be infected with chestnut blight. This new infection was probably established through infected grafting tools prior to 1934, when the disease was first found in the county. On the two original properties, 11 infected trees have been found and destroyed this year, as compared with 35 trees in 1937. All of this work has to be carried on under aseptic conditions with disinfection of hands and tools between each tree.

SOUTHERN ROOT ROT occurred in only one field during the year. Planting to resistant crops or summer fallowing has checked this disease in five other fields where it has occurred during previous years.

BROWN ROT: Successful control of this plant disease is generally obtained by following the recommended control practices. This past season almonds and apricots were severely attacked, due to a prolonged period of damp, rainy weather. In one case an apricot grower sprayed his orchards five times with only partial results. Other orchards suffered to the same extent. In the Tracy apricot orchards brown rot had not been a factor in production until this year when it caused a marked reduction in yields.

SOUR SAP did not cause as much damage in this county as occurred in some other parts of the State. Most of our orchards are planted on upland soils with good drainage.

BACTERIAL CANKER OF TOMATOES was the lightest infection of several years estimated at less than one percent.

PLANT QUARANTINE

The purpose of plant quarantine is to prevent the introduction and spread within the state of pests injurious to the agricultural industry of the state.

INSPECTION OF INTERSTATE SHIPMENTS:

Number of shipments inspected	3,266
Number of parcels inspected	874,582
Number of shipments rejected	18
Number of parcels rejected	2,588

REASON FOR REJECTION: Five shipments were rejected for violation of the Oriental Fruit Moth quarantine, one for violation of the Peach Disease quarantine, one for violation of the Nut Tree Insects quarantine and one for violation of Section 118 of the "Agricultural Code" pertaining to fruit flies.

INSPECTION OF INTRASTATE SHIPMENTS OF NURSERY STOCK:

Kind of Stock	Shipments		Plants	
	Inspected	Rejected	Inspected	Rejected
Fruit Trees	439	133	97,685	858
Deciduous Nut Trees	375	97	57,169	604
Citrus & Subtropical Trees	52		1,330	
Grapevines	91	1	338,107	1
Berry Plants			22,478	
Strawberry	46		8,716	59
Others	111	4	23,519	
Vegetable Plants	38			
Seedlings			1	
Citrus	1		4,629	
Deciduous	14		46,965	65
Ornamentals	757	10	125,784	
Bulbs	928		5,760	
Bedding Plants	263			
Totals	3,115	245	810,443	1,587

Shipments were rejected principally for the presence of nematode, crowngall, mealybug and scale insects. A few shipments were rejected where there was reasonable cause to presume they were infested or infected with a pest.

RODENT CONTROL

The following materials were sold and distributed under the supervision of this office:

Strychnined grain	1,602 pounds
Thallium grain	8,449 pounds
Carbon Bisulphide	5,696 gallons

Approximately 50,000 acres were treated for ground squirrels using S.R.A. crews from the Single Men's Camp. Work was limited to large acreages and irrigation district canals. Many fields were worked a second time in order to secure as near as possible 100% results. A total of 11,878 man hours of labor were furnished by camp men. Foremen's time amounted to 1,448 man hours paid for by the property owner at the rate of $5.00 a day.

All of the county roads were treated for squirrels. The foremen's time totalled 455 hours and S.R.A. men 711 hours.

SEED INSPECTION AND ANALYSIS

The California Seed Law is strictly a labeling provision and gives authority for rejecting seed only when mislabeled. In addition to this, the Agricultural Commissioner rejects seed under authority of the Agricultural Code, which provides for the prevention of the spread of pests throughout the State. Any seed offered for planting purposes may be rejected by the Agricultural Commissioner if it is infested with any weed seeds which would be a menace to agriculture in this County.

Authorities on weed control make the statement that there are more weeds planted each year than there are eradicated. This statement would be true in any locality where there is no regulation on the purity of seed sold for planting purposes. In San Joaquin County seed used for planting purposes must be free of any noxious weed seeds.

The following seeds were examined for noxious weed seeds during the year 1938:

Kind of Seed	Number of Lots
Alfalfa	123
Sudan Grass	50
Ladino Clover	35
Barley	31
Melilotus indica	21
Kentucky Blue Grass	17
Flax	15
White Dutch Clover	14
Ryegrass	13
Oats	13
Clover sp.	10
Lawn Grass mixture	9
Vetch	9
Purple Vetch	7
Fenugreek	7
Wheat	5
Screenings	5
Bur Clover	4
Orchard Grass	4
Bermuda Grass	2
Celery	2
Spinach	2
Sorghum	2
Honey Dew	2
Millet	2
Rice	1
Dallis Grass	1
Canary Grass	1
Carrot	1
Bird Seed	1
Soy Beans	1
Milo	1
Beet	1
Beans	1
Total	414

The following weed seeds were present in lots rejected:

Seeds Returned to Shipper

Seed	Number of Lot
Water Grass	8
Creeping Mallow	6
Morning Glory	5
Bermuda Grass	5
Yellow Star Thistle	4
Sand Bur	3
Dodder	2
Russian Thistle	2
Puncture Vine	1
Hoary Cress	1

Seeds Held For Proper Labeling

Sudan Grass	2
Alfalfa	1
Kentucky Blue Grass	1

Twenty-eight lots of seed were rejected comprising 462 bags.
Twenty-one germination tests were made.

WEED CONTROL

MAN HOURS OF WORK done by crew foreman, tractor drivers, and labor from the State Relief Administration under the supervision of the County Department of Agriculture:

Operation	County Roads		Private Property	
	Foreman and Drivers	S.R.A.	Foreman and Drivers	S.R.A.
Roadside Discing	7,371			
Puncture Vine	1,850	1,134	82	188
Yellow Star Thistle	232	696	471	4,866
Milk Thistle			220	3,534
Johnson Grass	42	576	989	21,638
General Roadside Weeds	2,762	17,250		
Total	12,257	19,656	1,762	30,226

ROADSIDE DISCING: Eight hundred miles of roadsides were disced for wood control and fire prevention this year at a total cost of $11.30 per mile for the season. Five hundred and forty miles of roadside were disced a second time and forty miles disced a third time. The cost of one time over cost $6.55 a mile.

PUNCTURE VINE: A great deal of expense is incurred each year by the county patrolling the roadsides for puncture vine control which has been held within bounds since its first introduction. Infestations on private property in most cases have been very satisfactorily taken care of. Exceptions occur on unfarmed crop lands where the growers have not used concerted enough efforts when the pest was first noticed and have allowed it to get widely scattered over their property. This season several notices were served and abatement proceedings carried out on such properties.

YELLOW STAR THISTLE: This pest is not widely scattered over the county and efforts are being made to confine or eliminate infestations. County roadsides are cultivated and hoed to prevent any plants from going to seed. On private property fields are cultivated or summer-fallowed to eliminate growing plants. In some cases where it is impossible to cultivate the ground, such as ditchbanks, S.R.A. crews are used and the weeds hoed out. The State Highway Department gave excellent cooperation carrying on a program for yellow star thistle and other noxious weeds.

MILK THISTLE: The elimination of this pest on county roadsides has been very successful and efforts are now being directed to eradication on private properties. Many of the infestations are found along ditchbanks and other places where it is necessary to resort to hoeing.

JOHNSON GRASS: The above chart shows that many hours of work have been done on Johnson grass control. Most of the roots are found in the top soil above the plow pan and can be dug out. This has proved very successful especially in vineyards and orchards where spotted infestations occur.

GENERAL WEED CLEANUP ON ROADSIDES: Roadsides, on which it is not possible to do discing, are cleaned of weeds and bush. Russian Thistle and many other summer annuals are hoed and burned before the seed scatters.

MUSTARD: The wet season interferred with the application of sulfuric acid. A much larger acreage would have been treated under normal weather conditions. Approximately 2000 acres of grain were sprayed.

BROAD LEAF ANNUALS: In cooperation with the University of California and Crop Protection Institute many different annual plants were plotted and treated with a selective weed killer. It is a yellow dye organic substance and shows very promising results. Of special interest, it was found that Amsinckia, a common pest in flex fields, is intolerant while the flex is tolerant. It is also non-caustic so that it will not be necessary to use especially designed machinery for its application. Other weeds intolerant of the material are mustard, wild radish and yellow star thistle. Grains are tolerant.

BINDWEED: Tracy bean farmers are planting alfalfa on some of their fields heavily infested with morning glory where it is not practical to treat with carbon bisulphide. Checks are very carefully made with low borders and seeded with fifty pounds of seed per acre are sowed. From the appearance of the fine stands of alfalfa there is not much doubt but what the morning glory will be crowded out. Carbon bisulphide was used on spot infestations.

CAMEL THORN: Treatment of the one infestation in the county was continued during the year, using sodium arsenite in jars. The infestation has been reduced 90 percent since the first treatment in 1936.

KLAMATH WEED: Two small spots of Klamath Weed were found during the year. These and the two previously of record were treated with sodium chlorate.

RUSSIAN KNAPWEED AND HOARY CRESS: Cultivation to prevent seed formation and use of sodium chlorate to eradicate small spots were practices followed during the year.

MATERIALS USED: The following is the amount of materials handled by the Agricultural Commissioner for chemical weed control throughout the county for the year 1938.

Diesel Oil	5,448 gallons
Sodium Chlorate	11,700 pounds
Carbon Bisulphide	825 gallons

WINERIES - SUGAR TESTS

This office has been supervising the sugar testing of grapes at some of the wineries for the fourth season. This added service was given to the wineries at their request. The uniform testing of grapes has provided for a much better understanding between the growers and the wineries.

The men appointed to make these sugar tests are in no way connected with the wineries. They are under our direct supervision. A report is made on each load of grapes taken to the crusher; one copy of the report is given to the winery, one to the grower and one to the Agricultural Commissioner.

STATISTICS

The following report is made as accurately as possible. The acreage of the various crops is obtained by a farm to farm survey made by the agricultural inspectors of the various districts. Records of removal and new plantings are made by keeping an accurate account of inspections of nursery stock which are made by this office, and following up each to determine whether it is used for replacement or new plantings.

Yields and prices are obtained in a number of different ways. In the case of cherries, grapes, plums, celery, and tomatoes the total production is obtained by keeping an accurate record of shipments by carloads and deliveries to packing houses, local canneries, or processing plants. Other production records are estimates based upon records obtained from various farmers. Prices are obtained in much the same manner. In a few cases the figures of the California Cooperative Crop Reporting Service are used where it is felt they apply to this county.

The price per unit is one which has caused a great deal of discussion. It represents the gross return to the farmer and does not indicate the net profit. Gross income is calculated on the basis of a farm commodity ready for sale, F.O.B. ranch, local packing house, cannery or drier, depending largely on the common method of handling the specific product. Freight, handling and commission charges are not included, except local hauling costs. To estimate net profit, cost of container, picking, packing, cleaning, pruning, plowing, taxes and other farm costs should be deducted from gross income.

Requests have been made that the price per unit be based on the net return to the farmer or on the price of the naked fruit or product excluding costs of packing and package. Since these costs are so variable from farm to farm, it would entail a great deal of detail bookkeeping to arrive at such a figure. Moreover, farmers, dealers, brokers and others deal in terms of the commodity prepared and packed for sale. Preparing and packing is an operation performed by the farmer and should be included in calculating gross income.

CROP SUMMARY FOR SAN JOAQUIN COUNTY

Farmers of this County suffered unusually heavy losses to their crops this past winter and spring. Heavy rains throughout the San Joaquin Valley in February and March created an excessive runoff. The San Joaquin River was above flood stage for a long period and levees gave away in seven different tracts of land, flooding 18,564 acres of agricultural land of which 7,215 acres were planted to crops having an estimated value of $264,000.00 at harvest time. These crops were a total loss. Most of this land was not drained in time to plant any crops this season which represents a huge loss to the agricultural industry of this county.

Other agricultural areas of the county were temporarily flooded by streams overflowing their banks, particularly along Little John, Duck, Lone Tree and Bear Creeks and the Stanislaus and Mokelumne Rivers and the Diverting Canal. Most of the overflowed areas were planted to grain crops which ordinarily produce a good crop when flooded for a short period. This year repeated flooding of the land severely injured the crops.

Grain on the adobe soils and not subjected to overflow water was also seriously injured by the recurrence of heavy rains which kept the soil in a saturated condition and prevented the root system from functioning properly.

A freak windstorm in early February caused considerable damage to orchards especially olives and almonds blowing down many trees.

CROPS

ALMONDS: The crop was fifty percent of normal due to poor pollination, a light set, brown rot and shot hole fungus.

APRICOTS: This crop also was fifty percent of normal due to a poor set and brown rot.

CHESTNUTS: The crop was good and growers had no difficulty in disposing of it.

CHERRIES: The cherry crop was above normal. An accurate record over the past six years indicates that the total income from this crop is constant each year regardless of the size of crop. Short crop years growers receive higher prices and large crop years growers receive low prices.

FIGS: Production and prices were normal.

OLIVES: Production was normal. Prices lower than last year.

PLUMS: There was no control on plum shipments this year, and growers shipped twice as much fruit as last year for which they received less money.

PEACHES: Cling peach growers had a disastrous season due to a large carryover of canned goods. Some peaches sold as low as $5.00 a ton. However, there were very few not harvested. Many were shipped fresh to local markets. Freestone peach growers fared better. Elberta peaches for canning brought $22.50 a ton, peaches for fresh shipment consistently sold for fair prices, and the demand for dried peaches is good.

PRUNES: Heavy production and low prices.

WALNUTS: Growers had a good year. The crop was above normal and of good quality.

GRAPES, TABLE: The 1938 season was about the reverse of the 1937 season. A great deal of skeptism was prevalent concerning the outlook for Tokay grapes in the early season. Prices opened low but consistently held throughout the season. The quality was the finest in years.

GRAPES, WINE: Wine grapes for fresh shipment were below normal and prices were low. Production for the state was above normal and deliveries to wineries were subject to the provisions of the California Prorate Law. Farmers received lower prices than they have received for several seasons.

ALFALFA: Due to the high prices in the last two years there is an increase in alfalfa acreage. Prices have dropped due principally to a high production of wild and tame hay, and excellent feed conditions on the ranges.

BEANS: The acreage dropped as a result of low prices. Production per acre was above normal. In the Tracy baby lima bean district the average production per acre was 19-3/4 sacks per acre, an exceptionally high yield.

CORN AND GRAIN SORGHUM: The acreage of these two crops showed a high reduction for the county due principally to a replacement by other crops.

FLAX: This is relatively a new crop for San Joaquin County, grown on the West Side near Tracy. Yields have been normal.

POTATOES: The acreage planted to potatoes is lower than it has been for many years. Low prices, competition from other potato growing districts and replacement by more profitable crops account for this reduction.

SUGAR BEETS: The acreage shows a large increase over past years. The crop was better than earlier expectations. Planting was delayed by wet soil conditions.

SUNFLOWERS: Low prices caused a marked reduction in the acreage planted to sunflowers.

SWEET POTATOES: Acreage about doubled this past season. Sales have consistently held at fair prices.

GRAIN: Even though grain crops planted on adobe soils and on land subject to overflow were reduced in yields, other fields planted on land having good drainage had exceptionally high yields. This brought the average production per acre for the county above normal on barley and a normal production of oats. Wheat production was below normal as a large acreage is planted on the heavier soils subject to overflow and poor drainage.

ASPARAGUS: Harvesting of asparagus for fresh shipment was delayed by wet soil conditions. Many thousands of acres are of comparatively recent production. Production will continue to increase for the next few years.

CELERY: Yields per acre were below normal due to a number of factors. Unfavorable climatic conditions during the month of November was the principal cause for low yields. As stated before Western celery mosaic was a contributing factor in low yields.

ONIONS: Production per acre was normal. Prices on early onions showed considerable improvement over last year's prices.

PEAS: Pea production and prices were below normal.

TOMATOES: Growers had a good year. Fields were exceptionally free of insects and diseases. Yields were above normal.

MELONS: The melon market was sparadic. Some early melons brought fair prices and as the season advanced dropped to below the cost of harvesting. Watermelons were of poor quality with a great deal of white heart present.

THE TREND OF PERMANENT CROPS IN SAN JOAQUIN COUNTY
YEAR - 1938

Outstanding in the trend of permanent crops in San Joaquin County during the past year is the increased plantings of almonds, apricots, tokay grapes, cling peaches and freestone peaches. New plantings of almonds, largely of the Nonpareil and Texas varieties, are being made along the Stanislaus River between Ripon and Escalon. Almond orchards in the Lodi area are being replaced by vineyards. Apricot orchards are on the increase in the Tracy district. Yields on producing orchards in this area have been exceptionally high. Tokay grape vineyards have shown a gradual increase the past several years. New plantings are being made on land where orchards are removed. Increased plantings of cling peaches are mostly of the Palora, Gaume and Halford varieties. Plantings of freestone peaches are of assorted varieties. There is a large removal of Muir peaches.

Other crops have remained at about a stationary level; that is new plantings have about offset the removals with the exceptions of pears, plums and prunes. There has been a large removal of pears up until this past year. No new plantings have been made to offset the removals. There has been a gradual decrease in the plum and prune acreage the past five years. The following chart shows the trend:

CROP	REMOVALS 1938	NEW PLANTINGS 1938	NON-BEARING ACREAGE	BEARING ACREAGE
Almonds	58	320	1,262	3,957
Apples	None	None	5	32
Apricots	47	139	247	1,746
Chestnuts	None	None	49	251
Cherries (Shipping)	27	2	117	3,348
Cherries (Royal Ann)	8	None	30	1,163
Family Orchard	-	-	-	415
Figs	None	None	1	524
Grapes, Juice	310	330	1,201	34,063
Grapes, Tokay	11	114	555	17,565
Grapes, Other Table	5	4	6	1,622
Grapes, Raisin	14	None	52	921
Nectarines	None	1	52	122
Olives	None	None	None	365
Peaches, Cling	55	450	1,185	3,508
Peaches, Freestone	191	107	925	2,740
Persimmons	None	None	None	5
Plums & Prunes	56	16	80	3,017
Pears	4	None	10	396
Prickley Pear	None	None	None	5
Quince	None	None	None	4
Walnuts	40	26	635	9,300

FRUIT AND NUT CROPS
SAN JOAQUIN COUNTY - 1938

CROP	BEARING ACREAGE	PRODUCTION PER ACRE	PRODUCTION TOTAL	UNIT	*VALUE PER UNIT	*VALUE TOTAL
Almonds	3,957	.30	1,187	Ton	$ 275.00	$ 326,425.00
Apples	32	150.00	4,800	Box	1.00	4,800.00
Apricots (Dried)	1,142	.55	28	Ton	220.00	138,160.00
(Canning)	570	2.27	1,294	Ton	20.00	25,880.00
Cherries (Royal Ann)	1,163	3.46	4,024	Ton	57.00	229,368.00
Other (Fresh)	3,348	1.60	5,356	Ton	90.00	482,040.00
(Processed)			110	Ton	57.00	6,270.00
Chestnuts	251	1.00	251	Ton	100.00	25,100.00
Figs (Dried)		.25	131	Ton	65.00	8,515.00
(Fresh)	524	.55	28,820	Crate	.60	17,292.00
(Cannery)		.50		Ton	63.00	16,506.00
Grapes (Shipping)	34,063	1.30	44,282	Ton	12.50	553,525.00
Grapes (Wine)		2.90	98,783	Ton	10.50	1,037,221.00
Thompson Seedless	734	6.20	4,550	Ton	10.50	47,775.00
Tokay (Fresh)	17,565	220.00	3,864,300	Pkgs.	.625	2,415,187.00
Grapes (Wine)		4.94	86,771	Ton	10.50	911,095.00
Other Table (Fresh)	1,809	64.00	115,776	Pkgs.	.625	72,360.00
Grapes (Wine)		4.00	7,236	Ton	10.50	75,978.00
Olives	365	2.00	730	Ton	37.00	27,010.00
Peaches (Free)	2,740	6.00	16,440	Ton	19.00	312,360.00
(Cling)	3,508	6.50	22,802	Ton	9.75	222,319.00
Pears	396	5.00	1,980	Ton	14.50	28,710.00
Plums	1,699	185.00	314,315	Pkgs.	.60	188,589.00
Prunes (Fresh)	1,320	66.00	87,120	Pkgs.	.60	52,272.00
(Dried)		2.00	2,640	Ton	45.00	118,800.00
Walnuts (English)	8,580	.58	4,976	Ton	200.00	995,200.00
(Black)	387		3,000	Cwt.	.75	2,250.00
Misc'l. Orchards	540			Acre	80.00	43,200.00
					Total	$8,384,207.00

* Gross income for basis of valuation see page 12.

FIELD CROPS
SAN JOAQUIN COUNTY - 1938

CROP	ACREAGE	PRODUCTION PER ACRE	PRODUCTION TOTAL	UNIT	*VALUE PER UNIT	*VALUE TOTAL
Alfalfa Hay	41,031	6.00	246,186	Ton	9.00	$ 2,215,674.00
Barley	104,734	15.00	1,571,010	Cwt.	1.00	1,571,010.00
Beans	28,244	17.00	480,148	Cwt.	3.05	1,464,451.00
Bean Straw	5,000	1.00	5,000	Ton	5.50	27,500.00
Corn	11,834	.90	10,650	Ton	24.00	255,600.00
Corn Husks			200	Ton	320.00	64,000.00
Canary Grass Seed	318	30.00	9,540	Cwt.	2.00	19,080.00
Flax Seed	3,893	19.00	73,967	Bu.	1.81	133,880.00
Grain Sorghum	9,363	1.00	9,363	Ton	21.00	196,623.00
Hay (Grain)	20,935	1.60	33,496	Ton	8.00	267,968.00
Hay (Wild)	11,369	1.30	14,780	Ton	6.10	90,158.00
Ladino Clover	11,443			Acre	35.00	400,505.00
Oats	11,050	10.00	110,500	Cwt.	1.20	132,600.00
Pasture	236,721			Acre	1.00	236,721.00
Peanuts	172	.40	69	Ton	65.00	4,485.00
Potatoes	8,930	180.00	1,607,400	Cwt.	.60	964,440.00
Pumpkins	587	13.00	7,631	Ton	3.00	22,893.00
Rice	2,659	30.00	79,770	Cwt.	1.20	95,724.00
Rye	147			Acre	15.00	2,205.00
Silage	2,501	12.00	30,012	Ton	5.00	150,060.00
Spearment and Peppermint	600	8.00	4,800	Gal.	12.00	57,600.00
Stubble	236,000			Acre	1.00	236,000.00
Sudan Grass	4,916			Acre	25.00	122,900.00
Sugar Beets	14,835	16.00	237,360	Ton	6.75	1,602,180.00
Sunflower	1,606	14.00	22,484	Cwt.	2.00	44,968.00
Sweet Potatoes	2,121	4.50	9,544	Ton	25.00	238,600.00
Wheat	60,787	10.00	607,870	Cwt.	1.10	668,657.00
					Total	$11,376,482.00

*Acres [illegible] for basis of valuation see page 12

VEGETABLE CROPS
SAN JOAQUIN COUNTY - 1938

CROP	BEARING ACRES	PRODUCTION PER ACRE	PRODUCTION TOTAL	PRODUCTION UNIT	*VALUE PER UNIT	*VALUE TOTAL
Asparagus (Fresh)	27,646 /	552.00	15,260,592	lb.	.0475	$ 724,878.00
(Cannery)		1,848.00	51,089,808	lb.	.035	1,788,143.00
Cantaloupes	211	200.00	42,200	Crate	.70	29,540.00
Carrots	322	300.00	96,600	Crate	1.10	106,260.00
Casabas	643	10.00	6,430	Ton	7.00	45,010.00
Celery ('38 - '39) (Season)	6,583	174.00	1,145,442	½ Crate	1.05	1,202,714.00
Honeydews	436	8.00	3,488	Ton	6.50	22,672.00
Onions (Early)	337	250.00	84,250	Cwt.	1.50	126,375.00
(Late)	522	175.00	91,350	Cwt.	1.20	109,620.00
Peas	2,017	88.00	177,496	30 lb. Hamper	.83	147,322.00
Persians	116	6.00	696	Ton	9.00	6,264.00
Spinach	534	3.00	1,602	Ton	11.00	17,622.00
Squash	326	8.00	2,608	Ton	8.00	20,864.00
Strawberries	92	400.00	36,800	20 Basket Crate	.50	18,400.00
Tomatoes (Pear)	4,238	9.00	38,142	Ton	14.50	553,059.00
(Round)	1,446	9.00	13,014	Ton	11.00	143,154.00
Truck Garden	3,012			Acre	80.00	240,960.00
Watermelons	1,648	14.00	23,072	Ton	5.00	115,360.00
					Total	$5,407,217.00

* Gross income - for basis of valuation see page 12.

/ For total acreage add 4053 non-bearing.

SEED CROPS
SAN JOAQUIN COUNTY - 1938

CROP	ACREAGE	PRODUCTION PER ACRE	PRODUCTION TOTAL	UNIT	* VALUE PER UNIT	* VALUE TOTAL
Alfalfa Seed	170	355.00	60,350	lb.	.16	$ 9,656.00
Asparagus Roots	118			Acre	200.00	23,600.00
Beet Seed	38	342.00	12,996	lb.	.145	1,884.00
Canary Grass Seed	318	10.00	3,180	Cwt.	2.00	6,360.00
Carrot Seed	53	368.00	19,504	lb.	.19	3,706.00
Celery Beds	80			Acre	200.00	16,000.00
Celery Seed	5	380.00	1,900	lb.	.75	1,425.00
Millet	561	8.00	4,488	Cwt.	1.50	6,732.00
Lettuce Seed	38	400.00	15,200	lb.	.25	3,800.00
Onion Seed	15	413.00	6,195	lb.	.375	2,323.00
Parsley Seed	2	300.00	600	lb.	.15	90.00
Parsnip Seed	2	850.00	1,700	lb.	.14	238.00
Salsify Seed	10	510.00	5,100	lb.	.35	1,785.00
Deciduous and Ornamental Misc'l. Seed Crops	80			Acre	1000.00	80,000.00
	85			Acre	100.00	8,500.00
					Total	$166,099.00

* Gross income - for basis of valuation see page 12.

Value of Fruit and Nut Crops	$ 8,384,207.00
" " Field Crops	11,376,482.00
" " Vegetable Crops	5,407,217.00
" " Seed Crops and Nursery	166,099.00
Grand Total	$25,334,005.00

FINANCIAL STATEMENT

YEAR 1938

Supervision	$ 7,022.66
Plant Quarantine and Nursery Stock Inspection	8,045.35
Standardization	8,429.53
Orchard and Field Inspection	7,223.78
Rodent Control	7,557.65
Weed Control	6,158.57
Apiary	1,161.52
Egg Inspection	602.09
Statistics	3,170.27
Seed Inspection	1,642.66
Fairs and Exhibits	1,959.43
Office Help	2,740.00
Equipment, Supplies and Miscellaneous Expense	5,002.65
Total	$60,716.16