

PROPERTY OF STANISLAUS COUNTY  
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# DEPARTMENT OF AGRICULTURE 1940



# STANISLAUS COUNTY ANNUAL REPORT

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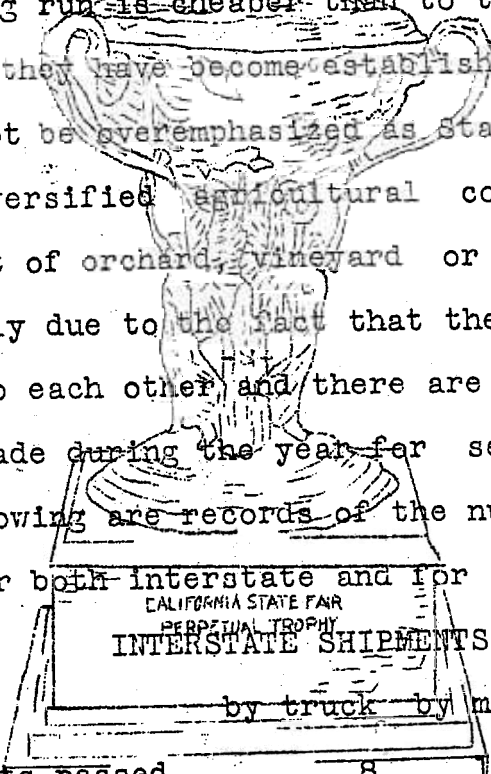
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## TO THE HONORABLE BOARD OF SUPERVISORS

Following is a brief report of the activities of the Stanislaus County Department of Agriculture for the calendar year 1940. Again this year we present this report in mimeographed form as there was a large demand for copies of last years report.

### PLANT QUARANTINE

Plant quarantine is perhaps the most important work being done by the department. The introduction into the county of an insect or plant disease pest would be the cause of serious damage to the agricultural crops. The prevention of these introductions in the long run is cheaper than to try to control or eradicate them after they have become established. The importance of this work cannot be overemphasized as Stanislaus County is one of the largest diversified agricultural counties in the state and a serious pest of orchard, vineyard or of field crops could spread very rapidly due to the fact that these plantings are in close proximity to each other and there are few natural barriers. Rejections were made during the year for several very serious pests. The following are records of the number of inspections and rejections for both interstate and for intrastate shipments.



	by truck	by mail	by rail	total
Number of shipments passed	8	1193	226	1427
Number of plants passed	19312	42544	111624	166880
Number of shipments rejected		14	7	21
Number of plants rejected		329	2512	2841

There were 398 fewer shipments of plants arrived in the county from outside of California than in 1939. There were 21 less rejections of shipments, however there were 1007 more plants condemned.

# REASONS FOR REJECTIONS ( interstate shipments )

Quarantine violated	No. of Violations	Name of Pest
Quar. Proc. No. 3	5	Oriental Fruit Moth
Quar. Proc. No. 5	1	Cotton Insects
Quar. Proc. No. 10	3	Citrus White Fly
Quar. Proc. No. 12	1	Nut Tree Insects
Quar. Proc. No. 13	2	Ozonium Root Rot
Quar. Proc. No. 19	1	Persimmon Root Borers
Sec. 118 Agr. Code	2	Gooseberry Fruit Fly
Sec. 115 Agr. Code	4	Citrus White Fly
Sec. 125 Agr. Code	2	Agropyron Smithii

Kind of Stock	Plants			
		Inspected	Rejected	
Fruit trees		120017	709	
Nut trees	26	41590	125	
Subtropical		1296		
Grapevines		54708	20	
Strawberry		3462		
Other berries		11569		
Vegetable Plants		7402	10	
			21	
Ornamentals	679	4	46319	140
Bulbs corms etc.	993		115219	
Bedding plants	82		747	
(flats)				
Seed	196	18	1265	763
Totals	2596	128	403594	1738

There were 64 fewer shipments inspected than in 1939 however there was 71 more shipments rejected. There were 233334 less plants inspected and 997 more plants rejected

# REASONS FOR REJECTIONS ( intrastate shipments )

There was one rejection for a violation of Quarantine regulation number one pertaining to Peach Mosaic Disease, 123 rejections for a violation of Section 124 of the Agricultural Code and 19 rejections for a violation of Section 125 of the Agricultural Code. Following is a list of the pests showing the number of times they were intercepted.

Pest	Times intercepted
Crown gall	95
Morning glory	7
Cuscuta Planiflora (dodder specie )	1
Parlatoria oleae (olive scale)	1
Hoary cress	1
Yellow Star Thistle	3
Johnson Grass	9
Soft brown scale	1
Black scale	1
Nematodes	3
Mealy bugs	1
Peach Mosaic disease	1
Alkali Mallow	2
Grape Phylloxera	1
	<u>127</u>

There was an increase in the number of times that insect pests, plant diseases and weed seeds were condemned during the year. There were 65 condemnations during 1939 or 62 less than in 1940. The most serious of these pests being Peach Mosaic Disease and the Olive scale ( Parlatoria oleae )

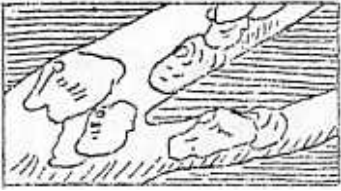
## COUNTY ORDINANCE NUMBER 181

This ordinance was adopted to prevent the sale of inferior quality nursery stock. Again this year there was a very noticeable improvement in the quality of nursery stock offered for sale. There were only eleven shipments rejected as compared with thirty one in 1939. There were 135 fruit trees and 142 nut trees rejected this year. Prior to the passing of this ordinance it was impossible to condemn trees with broken roots, frosted roots, bench roots or other defects which were not infested with either a plant disease or an insect pest. These were definitely inferior trees and in many instances were planted by farmers who had to replace them the following year. The loss by these causes has been almost entirely eliminated by the enforcement of this ordinance.

### NURSERY INSPECTION

There were fifty six nurseries inspected during the year. Inspections were made periodically depending on the pest found on previous inspections. All plants found infested with serious pests were placed in quarantine in an isolated section of the nursery where they were held to be cleaned up later. After sufficient time had lapsed after treatment to insure a cleanup and a reasonable time had elapsed to give assurance that the pests were all eradicated these plants were returned to the sales yards and again placed on sale. The following pests were found to infest nursery stock; Crown gall, Nematode, San Jose scale, Camelia scale, Mealy bug, Red scale, Olive scale, Black scale, Aphis, and Soft Brown scale. The most serious of these pests were the Olive scale and the Camelia scale. The more common insect pests were not condemned unless the plants were heavily infested.

## OLIVE SCALE ( *Parlatoria oleae* ) SURVEY



The survey in Stanislaus County for the olive scale, *Parlatoria oleae*, was begun February 15, 1940, after a few infested plants of *Catoneaster microphylla* were found in a nursery near Modesto. The only other infestation found was on February 19, 1940, in another nursery, this infestation being on the same species of plant. According to the owner, these plants had been brought from Merced during the winter of 1938-39. They were considered as undesirable and placed in a little used corner of the grounds. Although they had one entire season in which to spread, no evidence of such was found. All of the plants on this property were inspected.

At the beginning of this survey it was decided to keep a record of all of the infestations of the various species of scale insects found. The information obtained is included in this report.

In all, 860 properties have been inspected. This included nurseries, home gardens, parks, school grounds and farms. The greater part of the inspections were made in or near the city of Modesto, however inspections were also made in Turlock, Ceres, Oakdale, and Patterson.

From the beginning it was realized to be impossible to examine all possible places where there might be an infestation. Therefore, it was decided to examine the most likely places after an inspection of all of the nurseries, special attention was given to the newer sub-divisions in or near the various towns, since it was obvious that a larger percentage of recently planted shrubs would be found here. Following this, older sect-

but with an attempt to have all classes of properties and gardens represented. Therefore, in Modesto, besides all subdivisions, inspections were made on the east side, west side, and small outlying ranches. The district around Blue Gum and Woodland Avenues were completely covered, this being picked as a representative district with numerous olive trees.

A few days were spent in examining the sales slips of the nurseries that had been found infested. All sales of *Catoneaster microphylla* were followed up, however on inspection none were found infested. The plants around the olive plant on McHenry Avenue were given special attention as it was known that this Company imports olives from counties infested with olive scale and this might be a means of getting an infestation started on the premises adjacent to the plant.

The accompanying table shows the number of the different scale infestations found, listed according to plant hosts. No records were kept of the total number of each kind of plant inspected, so that it is not possible to give the percentage of each kind infested. It merely shows the totals found on the 860 properties inspected. The table shows that the San Jose and Black Scales are the most common species encountered. Rose and Flowering Quince are quite generally infested with San Jose Scale while Olive trees are nearly 100% infested with Black Scale. Some of the other more common insect infestations encountered were San Jose on *Pyrocantha* and *Catoneaster* Black Scale on *Oleander*, *Toyon*, *English Holly* and *Euonymus microphylla*; *Oyster shell scale* on *Lilac* and *Pussy willow*, *Citricola* Scale on *Citrus*, *Cottony Cushion Scale* on *Pittosporum* and *Mandina*, *Greedy Scale* on *Camelia* and larger varieties of *Euonymus*

The one infestation of Barnacle Scale, which was found in Turlock is believed to be the first record of this species in the county. This is also true of the finding of Chionopsis utrusca on Tamarack in Modesto. The former infestation was very light, while the latter was probably the heaviest infestation of any scale found during the survey.

The records for Aspidistra and for Mealy bugs should not be considered as complete as these occur commonly on home plants and succulent varieties, which were not inspected during the survey.

It should be added that the property owners were very co-operative, there being only two refusals to let the inspector inspect the premises. An attempt was made to be of as much service as possible in advising as to control of any pests found and several persons enthusiastically expressed appreciation of the Board of Supervisors and the Commissioner in conducting the survey.

During December eight days were spent re-inspecting the stock and premises of the nurseries in Modesto, Turlock and Oakdale for the Olive Scale. No evidence of this pest was found and there is reason to believe that the steps taken earlier in the year to eradicate the scale on the two infested properties were completely successful. All of the nurseries were found to have fewer scales of the species commonly found which no doubt is a result of the increased spraying and dipping and general co-operation of the nurserymen since the Olive Scale was found in the county in the spring.

Scale Insects	Aspidistra	Barnacle	Black	Calico	Cactus	Gillicola	Gentry Fashion	Hexode	Non-spherical	Ice	Jerican	Garden Shell	Panatoria Comelia	Paratoria Alex	Peach	Red	Rose	San Jose	Soft Green	Chiarosola Biscosa	Male Bug	Brown Aphid	TOTAL
Acuba																							
Purus																							
Pura																							
Ash																							
Barberry																							
Barries (Cane)																							
Boxwood																							
Bridle Wreath																							
Cactus																							
Camelia																							
Citrus																							
Coleaster																							
Crape Myrtle																							
Dogwood																							
Escalonia																							
Eucalyptus																							
Gardenia																							
Gonolium																							
Fern																							
Fernalia																							
Flavimana																							
Holly																							
Hypocist																							
Ice																							
Juniper																							
Lavender																							
Lilac																							
Logan																							
Myrtus																							
Nandina																							
Oleander																							
Olive																							
Oregon Green																							
Palma																							
Philosopha																							
Parlet Willow																							
Pine																							
Pyreocathia																							
Rose																							
Scotch Throom																							
Snowball																							
Tamarack																							
Trumpet Vine																							
Verbena																							
Virginia Creeper																							
Other																							
TOTAL	1	1	12	6	1	17	68	43	7	48	2	51	13	1	1	1	15	23	23	1	14	5	749

# INSECTS ENCOUNTERED IN PARIATORIA SURVEY

PARKLAND OK A SURVEY

## GRASSHOPPERS



The grasshopper infestation in the county was not as heavy as in 1939. There was some damage done to two vineyards in the foothill area, east of Oakdale and Waterford. The egg bed survey made in the fall of 1939 gave an indication that a smaller infestation could be expected. The infestation was a great deal lighter in the number of grasshoppers to each square yard of territory infested. The hoppers had hatched in the large pasture lands and after this land dried up and there was no more green feed they would move to the nearest cultivated farm to obtain green feed. The infestation on the pasture land was very light, there being approximately three hoppers to each square yard, which is considered very light. With this light infestation it was decided not to place poisons on the pastures. Poison was placed adjacent to the crops in line with the movement of the hoppers. The use of this procedure was the reason for a small amount of damage, however the damage done was a great deal less than would have been the costs of poisoning the pasture lands. It is estimated that the loss to crops was 480 dollars. This amount was figured as damage to 65 acres of grapes. There was some damage to alfalfa and to beans, however this damage was so slight that it is impossible to place any value on the losses. A total of 21,900 pounds of poison bran mash was used, to protect approximately 245 acres of crops.

An egg bed survey was started again this year, however due to a lack of rain until late very few egg pods were found. All female grasshoppers killed during the survey were examined for

eggs and all of them had large number of mature eggs ready to be deposited. We have had considerable cold weather since the survey work was done and it is doubtful if these late hoppers had an opportunity to deposit their eggs. Indications are that there will be even fewer grasshoppers in 1941 than in 1940.

We have on hand at this time  $23\frac{1}{4}$  tons of Federal bran for 1941 use.

#### BEAN WEEVIL CONTROL

The bean weevil infestation for 1940 showed a tremendous increase over 1939. The percentage of infestation was 80.18%, for a gain of 15.48% over the preceeding year. An effort was made this year to cut the infestation, the inspectors putting in approximately 45 days more on bean weevil inspection than in 1939. The infestation in 1939 was over 64% and it was known that if considerable work was not done there would be an increase in 1940. Inspectors found more bean straw being held over than in previous years and the farmers owning these hold over straw stacks were requested to burn or spread it out in their fields and plow it under before the growing season. The cooperation received in all instances where straw was found was good, however a number of the straw stacks had been covered with alfalfa hay or other material and the inspectors were unable to find it in all cases. The inspectors also did not have sufficient time to cover the territory thoroughly or to spend enough time at each farm to inspect all of the barns and other out buildings where bean straw or beans and bean screenings might be kept. The inspectors were all busy at this season of the year in plant quarantine work and in squirrel control work.

inspection a special effort was made to publicise the importance of a cleanup in order to reduce the weevil. Several newspaper articles were written and published in the local papers. newspapers gave these articles good space and their cooperation was good.

Also three radio programs were devoted to bean weevil control programs by the Merced and Modesto stations. Mr. Charles Kinsley the Agricultural Commissioner of Merced county and his inspector Mr. Matt Williams assisted in putting on these programs. Merced County has a bean weevil ordinance similar to the Stanislaus County ordinance and these programs were put on jointly so as to cover both counties at the same time. These programs were put on in dialogue form so as to make them as interesting as possible. The amount of good accomplished by these programs is not known, however we received a number of favorable comments.

A number of samples of beans inspected this fall contained year old beans. These samples were always heavily infested and of very poor quality. These holdover beans that have not been fumigated and small lots of beans stored in out of the way places has been responsible for the large increase in the weevil infestation.

Due to the poor prices being paid for beans this year the Surplus Commodities Corporation decided to buy a number of cars of beans this year. These were to be purchased on condition that they would pass the number one or number two Federal grades. The Federal grades will not permit the presence of any weevil cut beans and for this reason very few beans were purchased. An attempt is being made to get the government to pur-

chase beans with a few weevil cuts. The quality of the beans this year, other than for the weevil is the highest and grown for several years.

The following table will show the number of samples inspected and the percentage of the infestation. This information is tabulated according to warehouses in order to show the difference in the infestation in the various parts of the county. It will be noted that there was an increase in the number of lots inspected which indicated that there was an increase in the acreage planted and grown in 1940. Warehouses on the West side are not included in the report as no work on bean weevil is done in this area. Bean weevil has never been a problem west of the San Joaquin river. The practice of plowing under all bean straw each year has kept the area clean.

WAREHOUSE	TOTAL	WEEVILY	O.K.	WEEVILY
1. Lyng Whse. Co.	538	373	165	69.
2. Northern Calif. Whse.	346	264	82	76.
3. W.H. Sisk Whse. Co.	167	153	14	90.
4. Stanislaus Farmers Union	39	34	5	87.
5. Grange Company (Modesto)	99	55	44	55.
6. T.E. Wilson & Son	119	112	7	94.
7. Denair Whse. Co.	120	90	30	75.
8. Peerless Milling Co.	367	325	42	88.
9. Hughson Whse. Co.	358	263	95	73.
10 Poultry Producers	454	399	55	88.
11 Grange Co. (Turlock)	258	224	34	87.
Total for County - 1940.	2,865	2,292	573	
O/O Weevily - 1940				80.18%
Total for County - 1939	2,275	1,472	803	
O/O Weevily - 1939				64.70%
Gain over 1939	590	820	230 (Loss)	15.48%

## ELM LEAF BEETLE

There was very little damage to Elm trees during the year. Practically all of the Elms throughout the county were sprayed. The most of this work was done during May and June. There were a few owners who did not desire to have their trees sprayed. These people were informed by the spray crew that it would be impossible for them to return and spray their trees later. Later in the summer all of these unsprayed trees became badly infested with beetles and were losing their foliage rapidly. A number of these people called the office and requested that we return and spray their trees for them. Due to the fact there was a number of these calls the spray rig was reassembled in July and these trees sprayed. All of the trees on county property were sprayed. This property included roads, parks and hospital grounds. These trees were sprayed as a county project.

Trees were sprayed on 298 properties and a total of \$504.85, was collected for the work. A minimum charge of one dollar was made on these jobs that used less than 40 gallons of material. There were a few complaints that this charge was too large, however it cost the county at least this amount to spray their trees for them. The cost would have been even greater if it would have been necessary to make special trips to the property. The tree locations were all routed and all of the trees in the same neighborhood sprayed on the same trip.

No attempt has been made to force the owners to spray their trees. This could be done, however we have found the trees that were sprayed near unsprayed trees did not show any serious damage and as this is not in most instances an agricultural pest, we have left the owners the responsibility of a final decision.

## OTHER INSECTS

There was no other insect pest that was the cause of serious damage on a large scale in this county during the year. The more common pests such as peach twig borer, alfalfa weevil alfalfa caterpillar, aphids and others were present in the usual numbers and the usual control measures practiced.

TROPICAL RAT MITE was found in large numbers in one of the stores in Modesto. This mite feeds and builds up in large numbers on rats. When these rats are killed off they will feed on humans and are the cause of considerable annoyance. They cause an itching of the skin which is very similar to an infection of hives. They have been mistaken for this and other skin ailments. This pest cannot multiply on any other animal than rats and after the rats are killed they soon disappear. Rat control was recommended in this instance.

BEAN THRIPS CONTROL was carried on in the West Stanislaus bean growing area as in the past. The control of this pest has been accomplished by killing off all of the preferred weed host plants during the winter months this cutting down the population for early attack of the new beans. Prickly lettuce and annual sow thistle are the preferred hosts.

CUT WORMS did some slight damage to vegetable crops on the West side. The damage to other crops was very slight. It was necessary to put out some poison in a few grape vineyards.

There were a number of inquiries at the office regarding certain insect pests and plant diseases. In all cases where the crops were being damaged control measures were recommended. Inspectors made numerous calls on work of this type. A number of small home owners find pests in their gardens and request advise on the best methods of control.

## PLANT DISEASES

With the exception of considerable brown rot in the stone fruits there were no plant diseases that were the cause of wide spread damage in the county. The brown rot did not cause serious damage, however it did prevent storage for any length of time many of the stone fruits. All of the fruit consumed or canned soon after picking showed no effects of the disease.

Surveys were made in the county for the Peach Mosaic Disease and for Pierces Vine disease. The Bureau of Plant Pathology of the State Department of Agriculture employed two men in Stanislaus County for approximately ten days inspecting orchards and vineyards. Also inspectors of this department spent considerable time looking for these diseases. No infested trees or vines were found. The Peach Mosaic disease is doing considerable damage in southern California. There is at the present time a campaign of eradication in progress, work being supervised and done by The State Department of Agriculture, and County Agricultural Commissioner of the counties where the disease is present. The Pierces vine disease has been found in many counties of California and is doing considerable damage to vineyards in some of the southern San Joaquin valley counties. Quarantines have been put in effect by the State Department of Agriculture to prevent further spread of these diseases. Stanislaus County is an important peach and grape growing county and if these diseases should become established there is a possibility that considerable damage would be the result. An early discovery of diseases of these types is important as they can then be eradicated when only a few trees or vines are infested. It is important that these surveys be continued in the future.

## WEED CONTROL



Weed control is by far the largest activity carried on by inspectors in this work than in any other. Farmers are becoming more interested in weed control and as a result more work is requested and required of us. The results obtained in this work are small in comparison to the amount of weeds and weed work remaining to be done. The following paragraphs will show the amount of work done on each of the noxious weeds in the county. Also mention is made of the frequency of occurrence of these various weeds in this county.

**BERMUDA GRASS AND ANNUALS IN GENERAL.** Bermuda grass is perhaps the most widely distributed of all of the more serious weeds. No effort has been made to require compulsory cleanup of this weed due to its widespread. There has however been a large amount of work done in its control. We have encouraged the sterilization of canal banks and other unused places. During the year 19 miles of canal banks were sterilized with arsenic. The work of cleaning up the banks before the application of the arsenic was done mainly with W.P.A. labor. The Irrigation Districts furnished the materials and these were applied with equipment of this office. The largest part of this sterilization work was done in the Modesto Irrigation District.

**JOHNSON GRASS.** During the year the area to be worked by W.P.A. in Johnson Grass control was extended. All of the area in the county south of Dry Creek and east of the Santa Fe railroad was included in the W.P.A. work area. Also the area south of the Tuolumne river and east of the Southern Pacific Railroad

square yards of canal banks were dug at least three times during the year. Also  $26\frac{1}{2}$  acres of open land was dug. This open land was mainly planted to vineyards. The land owners are required to do work or hire work done on the control of the Johnson grass in an amount equal to 20% of the W.P.A. contribution. Only areas where this support is given are being worked. A number of requests have been received to extend the area to include other properties. As soon as W. P. A. labor is available and as soon as work inside the present area is completed these will be added to the project. There also was a small area of 190 square yards treated with sodium chlorate. This spray work was done in the Newman area. There are spots of Johnson grass in most of the irrigated sections of the county although it cannot be considered as infesting the county generally as is the case with Bermuda grass.

MORNING GLORY. There are a large number of infestations of this weed in practically all areas of the county. Until recent years very little work was done to control it. This was due to the lack of a thorough knowledge of control measures and to high costs of known methods. Control methods are still lacking, however some definite progress has been made. During the year 21 acres of this weed were treated with carbon bisulphide. The costs of treatment by this method is approximately 200 dollars an acre. The largest part of this acreage was on the west side near Patterson and Westley. The farmers in other districts also are using more carbon than in previous years.  $2\frac{1}{2}$  acres were sprayed with sodium chlorate. The chlorate was applied in the fall months so as to get the benefits of the winter rains to wash the chemical into the soil where the roots pick it up when

the plants start to grow in the Spring. Results obtained have been very good, however it has always been necessary to repeat this treatment for several years to get complete eradication. In the long run the costs have been as high as when carbon bisulphide is used.

**YELLOW STAR THISTLE.** This pest was found in a number of new locations during the year, most of them being in the Ladino clover area. Few new infestations were found in other parts of the county. The weed is not generally found in many sections. A total of 61 acres were sprayed with deisel oil. These infestations were sprayed due to the fact that they had been allowed to go to seed and burning after killing with oil was necessary. A large number of small infestations were killed out by hoeing before they had time to mature and to produce seed. The shipment of large numbers of lambs into the Ladino clover area from yellow star thistle areas of the state has been responsible for the introduction of many of these small infestations.

**RUSSIAN THISTLE.** This pest is common in the area west of Turlock. There has however been a large reduction in this infestation in the past few years. Few heavily infested fields remain in the county. A few plants of this weed can be found on almost all of the farms where there is a light sandy soil. An attempt has been made to keep it hoed on all county roads and also on heavily infested farms. This weed is not considered to be one of the most serious as it succumbs readily to cultivation. Thistles were hoed on ten acres of open land in addition to work done on county road. Eradication of this weed along with two other of our very common ones would again permit the planting of sugar beets in the county as these weeds are responsible for

much of the curley top disease. This has been the main reason for the encouragement of the control of Russian thistle.

PUNCTURE VINE. In spite of all of the work being done to control this pest there has been an increase in the number of infestations each year. This has been due to several things, mainly the haphazard and careless methods of control practiced by many farmers. This weed is peculiar in that it will have mature seed and be in blossom at the same time. If the plant is hoed similar to other annuals and the seed left on the ground very little results are obtained. A number of farmers when requested to eradicate or control this pest will plow or cultivate as they would for many of our more common annuals. By this method they are only increasing the infestation for another year. We have always recommended that the plants be hoed out or cultivated before they have had time to set any seed at all. When the plants have seeded we have recommended that plants be sprayed with oil and then burned. The amount of damage that this weed could cause if thoroughly established in the county would be great and the cost of control at this time is no where equal this amount. For this reason control of puncture vine should be vigorously continued. During the year men cleaning up puncture vine traveled 2,115 miles of road during the year. 115 acres of puncture vine were sprayed with deisel oil. This acreage was on a large number of farms, the total being the actual amount of ground covered with the vine.

HOARY CRESS. There is a fairly large number of small infestations of hoary cress in the county. The largest number of these are on the west side near Newman and Patterson. The control methods for this weed are similar to those used for Morning Glory. The hoary cress does not respond to treatment as readily

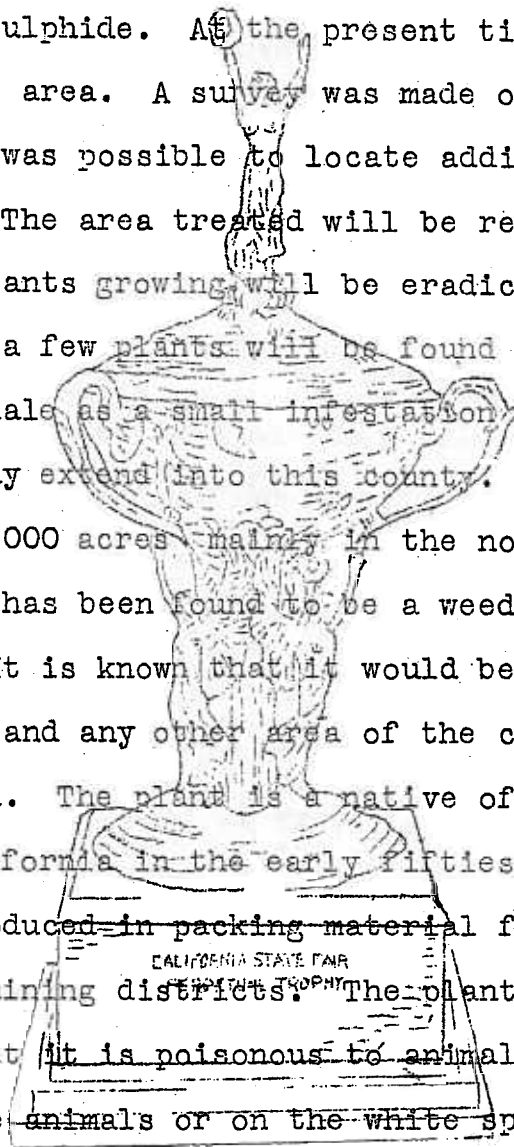
however, and is much harder to control by our present known methods. Carbon bisulphide was used on a small infestation of about two square rods this year. The results of the treatment were excellent and a few farmers have expressed a willingness to clean up a number of infestations next year. These infestations are mainly in alfalfa fields and there is very little spread from seed as the alfalfa is mowed too often to allow seeding. The only spread has been by the natural growth of the roots.

DOGBANE. Several new infestations of this weed were found during the year. The total acreage infested in the county is approximately three acres. Of this amount  $1\frac{1}{2}$  acres were treated with carbon bisulphide this year. This weed is not reported as doing serious damage in other sections of the state, however in the locations found here the growing conditions are apparently ideal and there are indications shown that it will spread rapidly and could cause considerable damage.

RUSSIAN KNAPWEED More work was done on the control of this weed than in any previous year. Five acres of the weed were sprayed with deisel oil to prevent seeding. 16 acres were sprayed with an acid arsenical and 185 square yards were sprayed with sodium chlorate. Russian knapweed responds to treatment with chemical sprays very readily and is the only one that can be eradicated by this method. The plants were sprayed with a weak solution of material, either an acid arsenical or sodium chlorate, when the plants are full grown just before the ripening of the seed and when there is a low moisture content in the soil. The infestation in the county has been reduced over half in the past few years.

KLAMATH WEED. This is the first year that this weed has been known to occur in Stanislaus County. A small infestation

was found growing on Patterson Avenue, east of Riverbank in the early Spring of 1940. The infestation was small only covering 12 square yards. 9 square yards of the infestation were treated with carbon bisulphide. At the present time there are no live plants in the area. A survey was made of the Ladino clover area to see if it was possible to locate additional plants and none were found. The area treated will be rechecked from time to time and all plants growing will be eradicated. There is a possibility that a few plants will be found next year in the area north of Oakdale as a small infestation found recently at the county line may extend into this county. This weed infests approximately 100,000 acres mainly in the north coast counties of California and has been found to be a weed that destroys all native pastures. It is known that it would be a serious pest in our pasture areas and any other area of the county if it should become established. The plant is a native of China and was introduced into California in the early fifties. It is thought to have been introduced in packing material for dishes that were shipped into the mining districts. The plant has an additional bad feature in that it is poisonous to animals causing a rash to break out on white animals or on the white spots of spotted animals.



WILD ARTICHOKE. A new infestation of artichoke thistle was found east of Riverbank this year covering approximately one quarter acre. This weed was thought to have been eradicated from the county for several years however this new infestation appeared this year. This plant is a cardoon and was introduced as a food plant however after it is neglected a few years it becomes a serious pest. The plants found in this new infest-

ation had seeded before being located and the plants were all sprayed with deisel oil in order to kill the seed. This plant is easily eradicated by grubbing out to a depth of four or five inches.

WHITE HORSE NETTLE. The small infestation of white horse nettle treated with an acid arsenical in 1939, was treated this year with carbon bisulphide as the treatment of the previous year was not successful. All of the infestations in the county of this weed have been and are being kept under control. No new infestations were found during the year and several of the present infestations have been eradicated.

SYRIAN BEAN CAPER. This weed is an introduction of southwestern Asia and is known to occur in two other locations in California in addition to the location in this county. The infestation in this county is located near Patterson and covers approximately ten square rods. The infestation was treated with an acid arsenical in 1939 and again this year. It may be necessary to treat a few plants next year with carbon bisulphide in order to obtain complete eradication. The growth of the plants in the plot has been greatly reduced in number and it is possible that only a few plants will remain to be treated.

#### CHEMICALS USED FOR WEED CONTROL

Carbon bisulphide	6854 gallons
Sodium chlorate	22400 pounds
Arsenic	27848 pounds
Deisel Oil	81493 gallons

## SEED SCREENINGS INSPECTION FOR WEED SEED

Inspections were made of all lots of beans for weed seed. All lots found to contain weed seed were red tagged and held until they had been ground.

prevents  
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or poultry feed.  
tagged  
during the year.

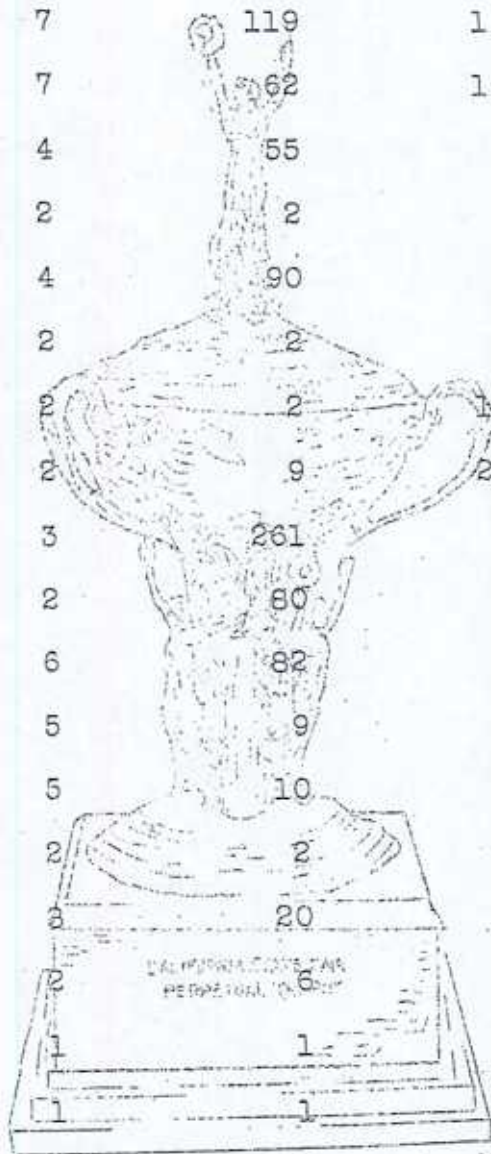
served

premises. contained  
either puncture vine, morning glory, or Johnson grass seed. While there was considerable more work done in this seed screenings work there is need for much more, especially in other crops.

### SEED INSPECTION

The inspection of crop seed before planting is perhaps the best method of weed control; in that you prevent the planting of weed seed. It is much cheaper to spend a little time in examining seed than to eradicate the weeds after they have become established in the fields. The seed analyst inspected 264 lots of seed containing 7,591 bags. Of this amount 22 lots containing 939 sacks were rejected as they contained noxious weed seed. The following charts will show the kind of seed inspected, the number of lots passed or rejected, the number of bags passed or rejected and the reasons for the rejections. The total amount of the seed rejected, if it had been planted in the usual amount per acre would have been cause of an infestation of approximately 4,700 acres of weeds.

KINDS OF SEED	NO. LOTS INSPECTED	NO. SACKS INSPECTED	NO. LOTS REJECTED	NO. SACKS REJECTED
Alfalfa	90	2306	3	26
Ladino, Clover	18	86		
Melilotus indica	7	119	1	10
Melilotus alba	7	62	1	1
Meliltus officinalis	4	55		
White Dutch Clover	2	2		
Bur Clover	4	90		
Birds' Foot Trefoil	2	2		
Clover				
Korean Lespedeza	2	2		1
Clover				
Fenugreek	2	9	2	9
Common Vetch	3	261		
Purple Vetch	2	80		
Mustard	6	82		
Rye Grass	5	9		
Orchard Grass	5	10		
Brome Grass	2	2		
Kentucky Bluegrass	2	20		
Dallis Grass	2	6		
Chewing's Fescue	1	1		
Rhodes Grass	1	1		
Wheat	2	100		
Barley	2	105		
Millet	3	3		
Lawn Mixtures	5	25		
Rye	5	7		
Double Dwarf Red Milo	1	152		
Honey Sorghum	2	34		
Amber Cane	2	6		



AGRICULTURAL

NOXIOUS-WEED SEEDS & NO. FOUND PER LB.

SEEDS REJECTED

	NO. OF SACKS	Johnson Grass	Morning Glory	Yellow Star Thistle	Hoary Cress	Creeping Mallow	Dodder	Russian Thistle	TOTAL PER POUND
Alfalfa	7	27							
	3		9	9					
	16								9
Sudan Grass	202		3						3
	101		6						6
	1							51	51
	12		4						4
	100	3							3
	100	6							6
	125	6							6
	10			3					3
	47	3							3
	24		9						9
	60		3						3
	60		3						3
	50		18						18
	10	3				3			6
Melilotus alba	1						36		36
Melilotus indica	10	18	9	144	9				
Lespedeza Clover	1						99		99
Fenugreek	5		12						12
"	4		3						3

## SQUIRREL CONTROL



The squirrel control work was carried on as in the preceding years, with the exception that it was impossible to use poison grain to any extent. There was very poor acceptance of grains, therefore very little was used. Prebaits were applied from time to time during the year. If acceptance was good, poison grain was used. From the following tabulation showing the materials used the small amount of acceptance of grains is indicated. For the above reason it was necessary to use more carbon bisulphide than in previous years. Practically all of the farming areas of the unty were gone over with this material, and also a large part of the range land, especially that land that was not too heavily infested. The squirrel work was started as soon as the quarantine work let up in February and was continued until the weed season started in June. Some work was done in the fall with strychnine barley.

The control of squirrels is a responsibility of the owners of the infested land. The Department is responsible in that we are to see to it that the farmer keeps them under control. After men from this department go through an area poisoning squirrels and get a kill of from 90 to 95% very few farmers follow up the work during the other months of the year and effect a complete cleanup. They wait until the following year expecting this department to do the work for them. With the limited personnel and the various other duties required of us no more time can be devoted to this squirrel work than at present. There are areas in the county where there are squirrels that none of the farmers buy poison or do any work whatever after the county crews have

ication of this pest cannot be accomplished unless farmer co-operation is received, or unless more money is appropriated for this particular work.

#### MATERIALS USED SQUIRREL CONTROL

KIND OF MATERIAL	AREA TREATED	AMOUNT
Thaloats	405 acres	309 Lbs.
Strychnine Barley	33640 acres	13291 Lbs.
Carbon Bisulphide	69291 acres	7967 Gal.
Methyl Bromide	1000 acres	441 Lbs.

#### COYOTES

During the year there were 80 claims presented for bounties on coyote scalps. A total of 275 scalps were turned in or ears were punched on hides. 550 dollars being the total amount paid. This is 94 scalps less than was turned in for the preceding year. There were fewer trappers working during the year and as a result fewer scalps were turned in. From information gathered from these trappers there is a larger population of coyotes than in 1939. They report that the increase is mainly in the higher foothill areas and that many deer are being killed in that area. Indications are, at the present time, there will be more trapping done in the future, as there are several trappers moving into the heavily populated areas. There has not been as much enthusiasm expressed and shown in trapping as was indicated in 1939.

#### OTHER PESTS

A number of requests were received for information on methods of controlling rats, mice and gophers. In all instances where complaints were received formulas were given out and in many instances Inspectors assisted in the preparation and application of the poisons.

## FRUIT AND VEGETABLE STANDARDIZATION

There was about the same amount of standardization work during 1940, as during the preceding year. There were 1358 clearances issued for fruits as compared with 1300 in 1939. The number of clearances issued gives a fairly good figure for a comparison from year to year, to show the amount of work being done. It was necessary to hire additional help to take care of this work. Three extra men were hired for approximately three months. The bulk of the standardization work is done during July, August and September. It was not necessary for this county to furnish a man to assist the State this year at their highway inspection. The following figures show the number of inspections for clearances issued. The records will also show the volume inspected.

### COMMODITIES INSPECTED FOR WHICH CLEARANCES WERE ISSUED.

Cantaloupes	52293 crates	Honey dews	17727 crates
Persian Melons	1710 "	Casabas	3081 "
Misc. Melons	1003 "	Sweet potatoes	14590 baskets
Peaches	42041 lugs	Plums	12049 lugs
Nectarines	9912 "	Apricots	2951 "
Grapes	6023 "	Figs	35562 flats
Berries	4085	Strawberries	4085 crates
Crabapples	361 lugs	Cherries	49 lugs
Citrus	58 "	Tomatoes	2955 "
Onions	1012 bags	Peas	462 hampers
Vegetables	4139 crates		

Misc. Melons includes Santa Claus, Cranshaw, Hybrids

Vegetables includes Egg plant, carrot, squash.

# BULK LOTS INSPECTED FOR WHICH CLEARANCES WERE ISSUED

Watermelons	2853 tons	Honey dew's	180 3/4 tons
Persian melons	79 3/4	Cantaloupes	50 3/4 "
Squash	9 tons	Misc. Melons	1 3/4 "
Sweet potatoes	3 3/4		
Misc. Melons includes Santa Claus, Cranshaw and Hybrids			

Total number of clearances issued 1358

Following is a tabulation of carlots inspected of the various commodities. These are shipments passed.

Cantaloupes	585 cars	Honey dew's	441 cars
Watermelons	145 "	Mixed melons	132 "
Casabas	13 "	Peaches	17 "
Nectarines	8 "	Plums	11 "
Grapes	76 "	Sweet potatoes	45 "
Peas	182 "	Lettuce	23 "
Carrots	47 "	Celery	112 "

The following shows the total produce in violation and the reason for the rejection being made.

	REJECTED		DUMPED		RECONDITIONED	
	pkgs	tons	pkgs	tons	pkgs	tons
Excessive defects	2312	25	1349	8 3/4	960	16 1/4
Maturity	42	74 1/2	12	39 1/2	30	35
Deceptive pack	240		5		235	
Markings	438				438	
Total	3032	99 1/2	1366	48 1/4	1663	51 1/4

Arrests for violations 3, Convictions 3, fines \$ 150.00.

There were ten less arrests made than in 1939. The total fines collected in 1940, however were \$ 100.00, more than in 1939. We have attempted to enforce these laws without making wholesale arrests. Only flagrant violators have been arrested.

The principal commodities rejected were watermelons cantaloupes and Sweet potatoes. Two of the arrests were for deceptive markings and the other for excessive defects. There were a number of market inspections made during the year. The figures of volume inspected do not include these amounts however they do include the rejections. There is room for much more work to be done in this market inspection work. Inspections are made periodically of the stores and some times due to an urgency for other work they are neglected for several weeks at a time. We find that when inspectors stop making regular calls at the markets that the quality of produce being sold is much poorer.

#### EGG STANDARDIZATION

Number of Inspections	40
Total number dozens represented by all samples inspected	1358
Total number of dozens rejected	442
Number of citations	None
Number of convictions	None

#### REASONS FOR THE REJECTIONS

Dozens rejected containing inedibles	150
Dozens mislabeled as to quality	15
Dozens mislabeled as to size	12
Dozens rejected because of lack or markings	265
Total	442

There was considerable less work done in egg inspection work than in the previous year. The largest number of violations usually occur during the summer months and at this season of the year there is activity in all of the other branches of work. We have done very little work unless we received complaints. In all instances where complaints were received inspections were made

## MARKET ENFORCEMENT

The Division of Market Enforcement maintains a room in the office of the County Department of Agriculture. The State has furnished this room with furniture and uses the room as headquarters when Department men are working in the County. When not in use by the State Department this room is used by the county for meetings, etc.

The County Department of Agriculture keeps a file containing application blanks and assists buyers in making these out. The county office also assists growers by accepting complaints for the Division of Market Enforcement and advising growers of the law and benefits to be derived by taking advantage of the services of the Bureau.

The following is a statement of recoveries made by the Bureau of Market Enforcement for the benefit of growers and producers in Stanislaus County during 1940. Following is a brief statement of the information listed below; During 1940, 10 formal hearings were held in the office by officers of the Bureau of Market Enforcement, representing the Director of Agriculture of California, at which time growers appeared to present their claims against licensed processors and produce dealers. Through the results of these hearings and of other adjustments made between growers and processors or produce dealers, the total amount of \$ 45,904.51, was recovered for 302 growers and producers. During this period the licenses of 3 operators were also revoked or denied, owing to their failure to comply with the Agricultural Code in their dealings with growers.

	Number of Participants	Amount Recovered
Produce Dealers Act	23	\$ 4,915.05
Processors Law	277	40,480.44
Milk	2	509.02

## STATE FAIR

On May the fourteenth the department was notified to prepare and participate with an exhibit at the California State Fair at Sacramento. The exhibit was designed by this department the county Engineers office assisted by drawing the plans to scale for us. The art work was done under our supervision by Coffin and Breen of Denair. These men also gave us a number of very valuable suggestions to improve the original plans, especially regarding lighting and materials used.

The county slogan, Water Wealth Contentment Health, was used as a feature for the exhibit. Four large circles in the back wall were arranged, one for each word of the slogan, with a picture showing motion in each circle. Water was flowing over a dam to represent the first word, a money machine to represent the second, a comical cows head moving back and forth for the third and a bathing beauty standing on a diving board with the water shimmering in the background for the fourth. In the center of the background was a large door with steps leading up to it with the word opportunity above. The steps were draped with a rich colored purple rug. On one end of the exhibit was a large picture representing agriculture and on the other end a picture representing industry. The color scheme was yellow and black,

was covered with linoleum in a harmonizing color.

The fruits, grains and other crops entered in competition were gathered and prepared by the regular staff of the office. The largest part of this work being done in the early part

early as four o'clock

Some extra help was hired to prepare the bean and grain exhibit

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and in packing the fruits at the exhibit. It was necessary to work all night to prepare and get the exhibit in shape for the opening morning August thirtieth. It is estimated that the extra work done by the entire office personnel would represent one years work for one man. It was also necessary to neglect some of our regular duties in order to do justice to the fair exhibit.

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The exhibit attracted considerable attention, as the exhibit was awarded the special Award for the most attractive display and best exhibit at the fair. The large gold cup awarded for the best display is a perpetual trophy and must be won three years out of five before it becomes the permanent property of any county. This cup is now on display in the lobby of the Hall of Records where it will remain until next opening of the fair, when it will be returned to the Fair Officials who will present it to the new winner.

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Stanislaus also won six sweepstake awards. First award on peaches the most outstanding; first on melons and squashes; second on beans; third on grapes; third on apricots and nectarines and third on grains. There was a total of 125 individual entrees out of which only 37 failed to win ribbons, a total of 88 ribbons being won

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1500 dollars was budgeted for this work, of this amount \$ 1,388.88, were spent on this years exhibit. Stanislaus County received \$ 1,054.00 in prize money, which made the cost to the County \$ 234.88. This does not include the time spent by the regular office personnel.

COUNTY EXHIBIT AT THE  
WORLDS FAIR AT SAN FRANCISCO

Before the opening of the 1940 San Francisco worlds fair approximately a week was spent in doing over the Stanislaus county exhibit to make it more attractive. The entire exhibit was painted over and the plan changed in a general way. Cutouts were placed in the painting of the background. These were illuminated with lights placed behind each transparent picture. The picture of Don Pedro that was used at the San Diego exposition was repainted and used also. The slogan Water, Wealth, Opportunity was placed on the background in block letters and the slogan where the land owns the water and power was placed in front of the exhibit in block letters above the words Stanislaus, County. Small toy trucks each loaded with some county product were placed in the exhibit and were labeled as being from the various towns of the county. The exhibit was enclosed in glass which added to the attractiveness of the display.

The moving pictures used in the theatre of the Alta California building which housed the county exhibit were lacking in color as they were taken in the winter time. For this reason it was decided to take new pictures for the 1940, showing. Three hundred feet of film was retaken and spliced into the 1939 film. The cost to the county was approximately thirty dollars which did not include the time spent by your Agricultural Commissioner in taking the pictures. As these new pictures were taken of wild flowers and other scenes with brilliant color, the pictures were made more interesting to the audiences.

# APIARY INSPECTION

inspection of Apiaries for American Foul Brood a disease of the brood of bees is a part time activity of the Bee Inspector as only \$ 1,000.00, is budgeted for this work. The Inspector starts work in February and the work is completed in October of each year.

	No. Apiaries	No. Colonies
Registered Apiaries	300	12000
Entering the County	48	5557
Leaving the County	39	3372
Inspected	155	5599
Infected with American Foulbrood	41	139
Infected with European Foulbrood	1	1

## CROP REPORT

The farmers are not complying with orchard registration requirements of the Agricultural Code by registering their plantings or in obtaining permits to plant. The State Department realizing that the farmers would not comply sent a man into the county to work for a few months getting the information from the farmers, approximately two months were spent at this work. Approximately one third of the orchard area of the county was covered in the survey. From the information gathered and tabulated a new estimate of the county acreage was compiled. The typing and clerical work was done by this office. There was some criticism of the Department for not compiling the Agricultural statistics each year. This work has been done by the Agricultural Extension Service for a number of years and a duplication of work is not desirable. This year the report was prepared jointly by the two offices. The orchard figures contained in the report are from the above mentioned survey. A copy of the report may be obtained at either the Extension Service or this office.

### OTHER ACTIVITIES.

This year it was not necessary to inspect and test grapes at the wineries of the county. Again as in the past the wineries did not buy grapes on a sugar test basis and the inspection was not required. The money budgeted for this purpose was not used.

Pest control operators were licensed as in previous years. Equipment of these operators was inspected and their work checked. There were no complaints received by this department from farmers regarding work done by these pest control operators.

Pear fumigation work was somewhat lighter than in 1939. It was necessary to fumigate only two lots of pears. This department did however, supervise the fumigation of, and issue a number of certificates for work done by other operators of fumigators.

### COMMENTS

The financial statement covers the period from June 1, 1939 to July 1, 1940, while the work report figures are for the calendar year. For this reason the cost figures for the individual activities will not be accurate as they are figured as an estimate on a percentage basis for the time spent by the inspectors in the various activities and are taken from their daily reports. If the individual activity such as grasshopper work was performed during the year covered in the financial statement the figures will be fairly accurate.

The Department operated at a smaller cost to the county by a little over \$ 1,000.00, than for 1939. This was due to the fact that it was not necessary to do as much grasshopper work during the year. There was some difference in the amounts of materials purchased during the year, however these differences do not show in the financial statement. There was a smaller amount of deisel oil

# FINANCIAL STATEMENT

	Total	Subtotal	Grand Total
Salaries & Wages			
Commissioner	\$ 2,700.00		
Inspectors	12,375.00		
Office help	1,320.00	\$ 16,395.00	
Office & General Expense		29,188.96	
Materials & Supplies			
On hand July 1, 1939	\$ 2,809.23		
Add purchases during yr.	13,803.43		
Deduct on hand June 30, 1940	4,181.28	\$ 17,436.38	
Equipment purchases	1,105.45	1,105.45	
Deduct refunds due			\$ 64,125.79
Returned to County Treasurer Rev. Sales & Ser.			21,575.79
Actual Cost to County			42,550.00

## Standardization

Rodent Control (County Expense)	12,500.00	
Weed Control (County Expense)	36,825.79	
Apiary Inspection	1,000.00	
Grasshopper	500.00	
Bean Weevil	500.00	\$ 64,125.79

Personnel of the Department serving during year.

Milo M. Schrock.....Commissioner  
Eunice D. Kooy.....Clerk  
R. G. Hunter.....Inspector  
Guy L. Wolfe.....Inspector  
Lyle Macomber.....Inspector  
A. L. Post.....Inspector  
Henry Johnson.....Inspector  
Emro C. Bruch.....Inspector  
Wm. Doerksen.....Inspector  
Wm. C. Sinclair.....Inspector  
T. L. Hawes.....Inspector

The Commissioner and his assistants wish to thank  
your honorable body for your assistance and co-  
operation in carrying out the duties of the County  
Department of Agriculture.

CALIFORNIA STATE FAIR  
PERPETUAL TROPHY  
Respectfully submitted,  
*Milo M. Schrock*  
Milo M. Schrock  
Agricultural Commissioner

Compilation of figures L. E. Macomber  
Mimeographing Eunice Kooy