

TULE LAKE  
WRA FARM PROJECT  
NEWELL? CALIFORNIA

MEMO TO: W. T. Jarrett  
Chief of Agriculture

FROM: T. Hiramoto  
Insecticide Foreman

SUBJECT: Report on Fertilizer Consumption

<u>DATE</u>	<u>FOREMAN</u>	<u>QUANTITY</u>	<u>KIND OF FERTILIZER</u>	<u>KIND OF CROPS</u>	<u>ACREAGE</u>
8/3	Kanetomo	800 lbs.	10-10-0	Radish	2
8/7	Hiramoto	3600 lbs.	10-10-0	Celery	6
		300 lbs.	10-10-0	Tomato	3/4
8/23	Yokotake	1800 lbs.	10-10-0	Lettuce	2
		2700 lbs.	10-10-0	Nappa	3
8/26	Hitomi	2700 lbs.	10-10-0	Broccoli	6 $\frac{1}{2}$
8/27	Hiramoto	1500 lbs.	10-10-0	Celery	2
8/27	Yokotake	1500 lbs.	4-24-12	Daikon	4
8/29	Hiramoto	300 lbs.	10-10-0	Lettuce	$\frac{1}{2}$
8/29	Kawase	200 lbs.	10-10-0		
		1500 lbs.	4-24-12	Daikon	5

---

Total Consumption of Each Items:

10-10-0 ..... 13,700 lbs.

4-24-12 ..... 3,000 lbs.

cc: sent to:  
Cost Accountant  
Office Manager  
File

T. Hiramoto  
Insecticide Foreman  
Farm Division



Tule FS

Letter from Utz to Fryer  
June 24, 1942

\*\*\*\*\*

\*\*\*I understand since Mr. Cozzen's letter was written, that the potato acreage at Tule Lake has been reduced to the point where no surpluses will be available for market. It may be that the other crops we are growing at Tule Lake will not create any marketing problem for this fall.

It may be necessary to make some adjustments in the proposed acreage on the Gila area, again depending on the needs indicated in the report.

In my letter of June 20, I raised the question as to the amount of land which should be cultivated on the Manzanar project. The production for this year, of course, will be quite small. I understand that some definite policy statements either have been or are being formulated with regard to dehydration. As soon as these statements are released, we will be able to get more definite information as to whether or not we can secure dehydration facilities for use in any of the relocation centers.

It is our understanding that the greatest need at the present time is for dehydrated potatoes, and also that the Idaho potatoes have given by far the best product of any that have been tried so far. I raised the question as to whether our Tule Lake crop might not be equal in quality to the Idaho product, since the area is climatically not too different. I doubt, however, very much as to whether dehydration plant on the Gila area could be used for the dehydration of potatoes, since it is my understanding that the potatoes grown in that area do not dehydrate successfully.

As soon as further information can be gotten on the opportunities for dehydration, and on the possibilities of securing equipment, we will get in touch with you.



WRA Library Washington

AGRICULTURAL DIVISION  
TULELAKE WRA

SUMMARY OF REVENUE  
as of September 30, 1942

Referred to Mr. Bailey

By P. H. Embrice

Monthly report

	August	September	Total to Sept. 30
<u>SOURCE OF REVENUE:</u>			
Local Mess Management	\$1,780.95	\$ 6,154.63	
Other Projects	419.00	14,940.90	
Sales		2,731.30	
TOTAL INCOME	<u>\$2,199.95</u>	<u>\$23,826.83</u>	<u>\$26,026.78</u>

DISTRIBUTION OF REVENUE:

Beets	307.40	\$ 2,721.13	\$ 3,028.53
Daiikon	87.10	1,446.03	1,533.13
Nappa	772.30	3,396.81	4,169.11
Peas, Green	646.60	109.45	756.05
Radishes	73.60	561.00	634.60
Spinach	10.80	1,640.25	1,651.05
Turnips	302.15	3,656.92	3,959.07
Mustard Green		32.70	32.70
Potatoes		2,940.00	2,940.00
Beans		407.50	407.50
Lettuce		4,250.30	4,250.30
Squash		14.21	14.21
Onion (Green)		1,362.75	1,362.75
Rutabagas		289.60	289.60
Swiss Chard		102.15	102.15
Ice Charges		896.03	896.03
TOTAL	<u>\$2,199.95</u>	<u>\$23,826.83</u>	<u>\$26,026.78</u>

Remarks: During reporting period, a certain amount of barley, hay, potatoes and turnips went into storage. Quantity and amount covering those are not available at this time.

October 15, 1942

PER ACRE MACHINE HOURS  
FOR MONTH OF SEPTEMBER

<u>CROPS</u>	<u>TOTAL ACREAGE</u>	<u>TOTAL HOURS</u>	<u>COMMENTS</u>	<u>HOURS ACRE</u>
Barley	1157.0	370.0		0.32
Beans	21.4	34.5	Destroyed on Sept. 17	1.6
Beets, Table	48.4	17.0		0.35
Beets, Sugar	49.5	82.0		1.66
Cabbages	51.6	75.0		1.45
Carrots	114.8	208.5		1.8
Oats	35.0	13.0		0.37
Onions	130.5	116.0		0.89
Parsnips	27.1	32.5		1.2
Peas	38.4	40.0	Destroyed on Sept. 16	1.04
Potatoes	593.8	164.0		0.27
Rutabagas	132.5	22.0		0.17
Squash	16.4	31.5	Destroyed on Sept. 11	1.92
Turnips	54.0	18.0		0.33
Vegetables, Mixed	155.83	232.0		1.49
Farm	1399.64	226.5		0.16



FARM LABOR SUMMARY  
From Aug. 30 to Sept. 3

CROP		VI	VII	IX	XI	Total	% to Total
Potatoes	Irrigation	748	888	464	448	2548	15.2664
	Harvesting	5588	3760	448		4796	
		1336	4648	912	448	7344	
Carrots		XIII	X	Vic.Gar.		Total	% to Total
	Irrigation	1884				1884	5.8995
	Harvesting	896		34		930	
	Sowing		24			24	
		2780	24	34		2838	
Nappa		X	V			Total	% to Total
	Irrigation	48	48			96	5.7290
	Cultivation	1348				1348	
	Harvesting		1312			1312	
		1396	1360			2756	
Onions		XII	X			Total	% to Total
	Cultivation	696				696	5.0763
	Harvesting	748	998			1746	
		1444	998			2442	
Beets, Sugar		X				Total	% to Total
	Sowing	60				60	.2078
	Irrigation	40				40	
		100				100	
Turnips		X	XIII			Total	% to Total
	Cultivation	456				456	14.2602
	Irrigation	40				40	
	Harvesting		6364			6364	
		496	6364			6860	
Lettuce		X	V			Total	% to Total
	Irrigation	192	116.1			308.1	8.6051
	Cultivation	772				772	
	Harvesting		3059.5			3059.5	
		964	3175.6			4139.6	
Cabbage		XII				Total	% to Total
	Cultivation	1866				1866	4.2281
	Pest Control	168				168	
		2034				2034	
Beans		XI				Total	% to Total
	Harvesting	920				920	1.9126

CROP		FIELD		
Parsnip		XIII	Total	%to Total
	Cultivation	420	420	.8730
Rutabagas		XIV		
	Harvesting	1360	1360	2.8271
Beets, Table		XIV		
	Harvesting	3023	3023	6.2840
Squash		XIV		
	Harvesting	24	24	.0498
Cauliflower		V		
	Cultivation	536	536	1.9457
	Irrigation	400	400	
		<hr/> 936	<hr/> 936	
Celery		V		
	Cultivation	836	836	2.5859
	Irrigation	408	408	
		<hr/> 1244	<hr/> 1244	
Daikon		V	Vic.Gar.	
	Harvesting	2173.5	154	2327.5
				4.8382
Endive		V		
	Irrigation	116.1	116.1	.9896
	Cultivation	360	360	
		<hr/> 476.1	<hr/> 476.1	
Swiss Chard		V		
	Harvesting	360	360	.7483
Red Radish		V		
	Harvesting	366	366	.7608
Spinach		Vic. Gar.		
	Irrigation	108.1	108.1	6.5565
	Harvesting	3046	3046	
		<hr/> 3154.1	<hr/> 3154.1	
Black Radish		Vic.Gar.		
	Harvesting	823	823	1.7108
Mustard Green		Vic. Gar.		
	Harvesting	129	129	.2681
Radish		IX		
	Cultivation	504	504	1.0476
Chinese Cabbage		IX	XII	
	Cultivation	2550	2550	7.3296
	Harvesting	976	976	
		<hr/> 3526	<hr/> 3526	
GRAND TOTAL HOURS			48,105.8	100.00%



October 15, 1942

SUMMARY OF HEAVY EQUIPMENT REGISTER  
September 1 to September 30, 1942

Total number of machines operated.....	38 equipments
The mode of number of machines operating per day.....	15 equipments
Total average number of machines operating per day.....	17 equipments
Maximum number of machines operating in any one day....	21 equipments
Minimum number of machines operating in any one day....	12 equipments
Total number of days worked.....	24 days
Total machine hours worked on the farm.....	1682.5 hours
Total average hours worked per equipment .....	44.28 hours
Total daily average hours worked per equipment....	1.85 hours
Total average hours worked per equipment based on 17 machines per day...	98.97 hours
Total daily average hours worked per equipment based on 17 machines per day...	5.82 hours
Equipment most used - T 40B, Total of.....	126 hours
Equipment least used - McD 116, total of.....	0 hours
Crop utilizing most machine hours, Barley, total of	370 hours
Crop utilizing least machine hours (aside from mixed vegetables) Oats, total of.	13 hours

Sincerely yours,

(sgn) John D. Cook  
John D. Cook  
Reports Officer



519 615  
June 19, 1943

## GENERAL OUTLINE AND HISTORY

### Introduction:

Previous to operations here at the Tule Lake W.R.A. Project, we were confronted with various problems. The requirements for a limited or an unlimited program depended on the length of our stay here on the project. We took into consideration various phases such as acquisition of stock, extreme weather conditions, shelter and facilities, available feeds and the amount of pork required for camp consumption. However, the economic and practical advantages of the hog raising industry appealed to the W.R.A. as being the most needed. Hogs being proficient meat producers, combined with possibilities of two litters per year and farrowing on an average of 6 to 12 per litter. In planning our present project various studies of phases in different fields were made such as location, types of building required, number of men needed for care, records and accounts to be kept, feeding and types of swine.

For procedure of operation an outline was made so that the organization could function properly according to schedule. The following outline will state our method of approach and analysis of operation:

### I. Hogs

The actual operation of the Tule Lake Swine Project began on September 18, 1942. The initial stock of 559 hogs were selected and bought from local ranchers. These were vaccinated before arrival and were in good condition. The temporary location was on the Donovan tract across from the project. This site was previously used for cattle and repairs were made on corrals previous to arrival. Boars, sows, gilts, feeders and weaners were segregated and sectioned into five lots. Straw houses were made for shelter and water was furnished from the abandoned well on the project. Fifty-four sows were selected and two boars were kept but breeding was at random until we acquired six pure-bred Poland China boars from San Miguel; thereafter sows were tagged and breeding records were kept.

A month later we purchased 34 gilts and 28 sows of Poland China strain to attain pure-bred stock. However, our most important purchase was from Malin, Oregon of 100 sows and 37 bred gilts. These pure-bred Hampshires have farrowed since with an average of 7 per litter. We also acquired 2 Hampshire and 4 Berkshire registered boars to further our breeding program. In the course of our operation feeders purchased were fed garbage finished on grain and slaughtered when they attained an average of 270 pounds.

Our mortality of 105 to date has been very low. The extreme weather conditions during farrowing time, and some cases of pneumonia, and swine-erisipelas have been of some detriment. We have noted after agglutination tests that a mild form of *Brucella abortus suis* exists in our breeding herd. This disease being contagious, we are planning to segregate boars and sows after tests are made. Some losses in weaner pigs were due to worms. Symptoms showed them to be stunted with drooping tails and ears and loss of appetite. Tests show that these cases can be quickly remedied with use of phenothiazine. Some gilts and few boars were selected from weaners and feeders these were acquired from purchases. The monthly inventory at the end of May totals 1748 hogs on

13



hand. This consists of 17 boars, 248 sows and gilts, 125 sows with litters 809 sucklings, 325 weaners and 224 fat hogs for slaughtering.

## II. Feeding

The foremost item from an economical and practical viewpoint in raising stock is feeds and feeding. Hogs surpass all other farm animals in their ability to convert feed into edible flesh. Before acquisition of stock, our garbage situation was thoroughly studied and the commercial advantages of mess hall scraps had been of recommended value to local rancher who had contracted this garbage for their own stock. This garbage being high in proteins and carbohydrates have been of value in making approximately 1½ pound per hog per day on feeder hogs. Due to the cooperation of all mess hall workers who have been instructed in segregation of harmful items from edible scraps we have had excellent results. The garbage crew is capable of delivering between 90 to 100 cans daily for feed, but we are feeding only between 30 to 40 cans to fatten hogs; others we feed grain.

The excellent yield of the project grain consisted of 400 acres of Barley and 40 acres of Oats. We acquired 100 tons of alfalfa from Liskey Brothers, local ranchers, and also purchased 10,000 bags of government cracked wheat. We grind this grain and mix with concentrates and peets mineral to make a suitable ration for our preferred stocks. The concentrate for mixing should be a minimum of 37 percent protein and contain sufficient amount of supplement for making a necessary ration. At present we are pasturing some of our sows and weaners on 162 acres of young rye. With the use of electric fence we make sections for various sizes of hogs. We have 153 acres of alfalfa planted, which we plan to utilize for pasturing in sectional rotations.

## III. Facility:

The extreme weather conditions were noted as the Tule Lake Project is situated more than 4,000 feet above sea level. Housing and facilities were planned and built according to weather conditions. Large hogs as a rule can stand cold more readily than heat except during the time of farrowing. Wind directions were considered and a site for a permanent location was built suitable distance from the project. The shelter at the temporary location consisted of few straw houses in each pen, these being 16 by 30 feet which proved inadequate against snow and cold winds. When sows began farrowing, some litters were lost due to the freezing temperatures. On December 4th our hogs were moved to the permanent location which is little beyond the Poultry farm about two miles south west of the project. This location was very suitable being situated behind the high cliffs of Castle Rock Mountains for protections against wind, and there being very good drainage in the fine sand.

The present project is fenced into 6 lots; 3 lots 300 x 300' and 3 lots 300 x 400'. The community houses were built in four lots, these being 100 x 28. These community houses had no wooden floors and three of these houses are sectioned into stalls to accommodate sows during farrowing season. One community house was remodeled for slaughterhouse and tool-room.

During the cold weather coal stoves were set in these community houses to insure warmth and watched nightly. Portable wooden floors were installed

B



in the sectioned farrowing stalls as the uneven ground proved a hazard to the suckling pigs. Sows farrowing in community houses were turned into sectioned A house units after two weeks. When sucklings are weaned, we have built various pens to accommodate them and also the dry sows. We acquired 150 A house 8' x 8' from Henzel Brothers in Malin, Oregon also 14 portable houses, 266 panels, 8 creep feeders and steel water troughs. We have built on the project 10 portable houses, 15 creep feeders and various types and sizes of water troughs. Small portable garbage troughs that were built 4 x 12' are necessary because they are easily cleaned and moved as the ground will become stagnant and contaminated. We find that panels are the easiest and best means of fencing because they are so portable and give the best service for any sized pig. We have been hauling water by trucks each day and in the near future we plan to pump water from a deep well quarter of a mile south of the pens.

We have 17 grain bins available, each capable of holding 1500 sacks each. We purchased a grain grinder from Klamath Falls and the grain is ground daily and delivered to various pens according to formula. We plan to have electricity and other conveniences to light the community houses. Poles are set in and at present we are waiting for the wires.

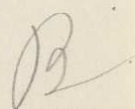
We acquired 3,000 bales of straw from the barley and oats harvest and this makes ample bedding. During the hot days we find that shade for the hogs can be constructed very easily by putting in posts and building framework and stretching wire netting over the top and utilizing straw on top of this for shade.

#### IV. Labor and Management:

The cost of producing pork is low when volume production combined with good farming organization, suitable fencing, and adequate watering facilities are adopted. The abundant foliage crops and the efficient self-feeder system which we use here will help cut down labor costs to a minimum. Labor requirements are based according to type and the amount of hogs being handled. Little labor is needed in buying feeder hogs and fattening till the time of slaughtering.

If sows are purchased for breeding and farrowing they must receive special care so they will be in good condition at all time. Large and fat sows as a rule tend to have small litters, being clumsy and have a tendency to crush their sucklings. Special care should be given to small hogs until after the weaning stage.

The present staff in the Management and Care of Hogs consists of 22 regular workers who are under the supervision of the Manager, Senior Foreman, Statistician, and six Junior Foremen. Each Junior Foreman with his crew is in charge of his field such as breeding, farrowing, care of sows and litters, care of weaners, and fat hogs. Records are kept by each foreman as to the feeds used, mortality, hogs purchased, and labor used. These records are then turned over to the statistician who compiles these reports and submits them to the accounting division. When repairs are made, tools are loaned out by the tool checker, who has charge of the toolroom. We have 19 part-time workers who work on Saturdays and Sundays. Then, too, we have 12 vocational agricultural students from the high school working mornings and afternoons, who may put their technical knowledge to practical use.





#### V. Consumption:

The demand for pork and their substitutes is very wide and insistent in our everyday diet. In this country more pork is eaten than any other kind of meat. Pork can be successfully cured into ham, bacon, lard, salami, and other non-perishable foods.

In supplying for colony consumption, we must slaughter 50 hogs per week. On November 4, 1942, our first hogs to be slaughtered were taken on W.R.A. trucks to Fall River Mills and then returned for colony use. On December 14, 1942, we started slaughtering our own hogs on the project. The remodeled community house served the purpose of a temporary slaughterhouse. Disposal of waste material was a problem at first but pits were dug and quicklime was used for sanitation.

To date, 786 hogs have been slaughtered, proper procedure in transfers are submitted upon delivery of hogs to be slaughtered and prices are at cost. A new slaughterhouse is under construction with all the needed facilities and time was taken for the cement to harden, but construction is nearing its final stages. A smokehouse was built on the project for the purpose of curing bacon and to date over 12,000# have been processed with good results.

#### Conclusion:

We hope that this tentative and introductory outline will be sufficient in explaining some of the principle points in our progress. However, it is our endeavor to achieve a more perfect organization in benefitting by various experiments. The Tule Lake Swine Club organized by workers here on the project hold meetings weekly on Monday nights. Under the capable supervision of our senior foreman who is chairman, meetings are held in orderly manner, various reports are turned in, problems are discussed and schedules made for future operations. The future prospects of acquiring pork and their substitutes are acute. During wartimes it is questionable as to where and when our source of supply will come. In view of all eventualities we feel that such an enterprise as this in supplying the needs of the colonists will be a great asset to our course.

Respectfully submitted,

*Ted Tokuno*

Ted Tokuno, Manager  
Swine Enterprise



WAR RELOCATION AUTHORITY  
Tulelake Project  
Newell, California

In reply, please refer to:  
Agriculture

Mr. Dillon S. Myer  
Director  
War Relocation Authority  
Barr Building  
Washington, D. C.

MAR 24 43

Attention: Mr. E. J. Utz

Dear Mr. Myer:

Enclosed are two copies of Proposed Crop Production Program, 1943, together with two copies of Kinds and Amounts of Vegetables Needed in Addition to those Produced on Area. There is also a revised Vegetable Production and Shipping Program.

You will notice in some instances we have changed the acreage dates and harvest dates from the schedule sent to us on February 18. This is due to the point ration program now in effect. This new schedule has been taken up with the Chief Steward and it was on his request that most of these changes were made.

The Mess Management is now trying to work out a program by which they can can some of the vegetables, such as peas, beans, spinach and brussels sprouts, that will not store. If it is possible for them to work out such a program, we will probably have to make a small increase in the above-named vegetables.

As soon as possible, we will send you a map of the three areas that we are going to farm this year, with the allotments of each crop sketched thereon.

The item of potatoes you will notice has been increased about two hundred acres. We have been requested by the AAA to make an increase of at least five hundred acres, but with our present equipment and uncertain labor, it would be very difficult to make an increase of that acreage.

We hope this program meets with your approval.

Very truly yours,

CEZimmer:my  
cc: Subj.  
Chron.

**SIGNED**  
Harvey M. Coverley  
Project Director

encs.



Project TulelakeYear 1943

Kinds and Amounts of Vegetables Needed  
(In addition to those produced on area)

Vegetable	Amount Needed											
	Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Asparagus				28,000	28,000	28,000						
Artichoke	24,000	24,000	24,000	24,000	24,000						24,000	24,000
Avocado					1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Bean-snap	24,000										24,000	24,000
Bean-sprout	16,000	16,000	16,000	16,000							16,000	16,000
Beet												
Broccoli	26,000	26,000	26,000								26,000	26,000
Brussel Sprout	14,000	14,000								14,000	14,000	14,000
Cabbage-White	60,000	60,000	60,000	60,000	60,000	60,000	60,000					
Cabbage-Red	24,000	24,000	24,000	24,000	24,000	24,000				24,000	24,000	24,000
Carrot	36,000	36,000	36,000	36,000	36,000	36,000	36,000					36,000
Cauliflower	16,000	16,000	16,000	16,000	16,000	16,000	16,000					16,000
Celery	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000			
Chard		26,000	26,000	26,000	26,000	26,000	26,000				26,000	26,000
Cucumber					15,000	15,000	15,000	15,000	15,000			
Egg Plant					16,000	16,000	16,000	16,000	16,000	16,000		
Kelce	75,000	75,000	75,000	75,000	75,000	75,000	75,000					75,000
Melon-Cant.							60,000	60,000	60,000			
Melon-Water							75,000	75,000	75,000			
Melon-Honeydew								60,000	60,000	60,000		
Mustard Green				20,000	20,000	20,000	20,000	20,000			20,000	20,000
Nappa	20,000			20,000	20,000	20,000	20,000				20,000	20,000
Potatoes-sweet	25,000	25,000							25,000	25,000	25,000	25,000
Parsley	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Parsnip					18,000	18,000	18,000					
Pepper-green							9,000	9,000	9,000	9,000	9,000	9,000



Vegetable	Amount Needed											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Onion-green	10,000	10,000							10,000	10,000	10,000	10,000
Onion-dry	35,000	35,000	35,000	35,000	35,000							35,000
Radish-red				10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Radish-daiikon					25,000	25,000					25,000	25,000
Rhubarb					20,000	20,000	20,000	20,000	20,000			
R. bage												
Spinach	20,000	20,000	20,000	20,000	20,000						20,000	20,000
Squash-Banana												
Hubbard	26,000	26,000	26,000	26,000					26,000	26,000	26,000	26,000
Squash-Summer	16,000	16,000				16,000	16,000	16,000				16,000
Squash-Zucchini	16,000	16,000				16,000	16,000	16,000				16,000
Tomato	24,000	24,000							24,000	24,000	24,000	
Turnip				40,000	40,000	40,000						
China-Green						20,000	20,000	20,000	20,000			
	551,000	530,000	425,000	517,000	570,500	543,500	570,500	379,500	412,500	224,500	349,500	519,500



Agriculture

Tule Lake Project  
Newell, California

JUN-1 '43

University of California  
Veterinary Science Division  
Davis, California

Dear Dr. Camoron:

Since the beginning of this month, we have been testing the gilts here. So far, we have tested about 100 gilts. Of these, we find that about 40% shows positiveness for Brucella infection.

Our method of testing is as follows: we are using the rapid-slide method as recommended in the antigens we were able to obtain. Serums of .08 cc, .04 cc, .02 cc, .01 cc and .005 cc to .03 cc of antigen to each diminishing amount of serum are being used as a method of test. We are calling ~~++~~ — or over as positive.

At the beginning of March, we have started to breed these gilts. At this moment, we find a great amount (about half) of these not showing any sign of pregnancy by external examination. This, we figure, is due to the Brucella infection.

After taking this situation up with the laboratory technicians in the hospital here, we agreed that some method of counter-acting the disease, or its prevention, may be worked out by laboratory methods here.

First, we figured on isolating the germ (Brucellae). Then we thought it wise to discuss the situation with you before doing anything, and to obtain any available information from you.

We would like, in particular, to know the possible ways of prevention, or cure, with the understanding that we will collaborate with the laboratory technicians here. Please give us technical knowledges along this line.

Thank you for your kind attention.

Very truly yours,

SIGNED

J. O. Hayes  
Acting Project Director

CEZimmer:by GSakoda:my

cc: Subj.

Chron.

Desk Copy ✓



WAR RELOCATION AUTHORITY

In reply, please refer to:

Tule Lake Project  
Newell, California

Agr.

JUN 23 '43

New York State Agricultural Experiment Station  
Geneva  
New York

Gentlemen:

I want to thank you in behalf of the Technical Staff of the Agricultural Division here at the Tule Lake Project for the wealth of information that we have received from you in regard to the production of sauerkraut for the consumption of the people here on this Project.

We have been producing and are producing large quantities of sauerkraut and also sauerkraut juice for current use at present. Unfortunately, the quality of the sauerkraut now being produced is not as high nor as satisfactory as we had hoped. We are, therefore, anxious to do what we can to improve their quality.

We found your Bulletin No. 613 of September, 1932, which deals with quality of commercial sauerkraut by an analysis of the cans of Kraut of various packers especially interesting. What we would like to do is to run an analysis of technical and physical characteristics of our sauerkraut similar to these tabulated in your Bulletin 613, in order to compare our kraut with the results of your analysis and to determine what needs to be done to improve their quality.

However, we found that the information contained in your bulletin was not enough for us to duplicate your tests. Could you please send as soon as possible a more detailed set of procedures on the tests for the





-2-

various factors listed in your bulletin, such as, the per cent of acidity, salt, etc. Please let us know as soon as possible whether this information is available and if it is, we would appreciate the information very much. Your immediate attention and consideration will be sincerely appreciated.

We thank you again for your sincerity in aiding us in this work.

Sincerely yours,

Harvey M. Coverley  
Project Director

GAHudson:ly  
retyped 6/22/43  
cc: Desk



WAR RELOCATION AUTHORITY  
TULE LAKE PROJECT

O F F I C E M E M O R A N D U M

Date: June 22, 1943

Whom it may concern:

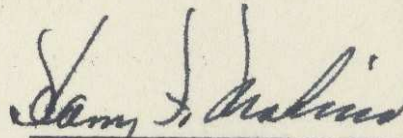
Harry Makino, Manager of WRA Poultry Farm

SUBJECT: Illegal of Panel Truck 500-06

June 19, 1943 at 6:00 p.m. I was married and in my capacity as Manager of the WRA Poultry Farm, the truck drivers who are in my employ~~ee~~ at the farm misunderstood the situation and under their own descretion left a panel truck #500-06 at Block 5 to be used for whatever purpose needed.

I did not need or use the panel truck that night and left it park~~d~~ there until the next morning. In leaving the panel truck at the Block 5 it was made necessary to use another truck from the Motor Pool to haul men for their regular night shift to the Poultry Farm. Previously the above mention panel truck had been used not for this purpose.

The procedure taken and the acts committed had been admittedly irregular and illegal according to project rulings, but in view of the circumstances involved and the apparent intentions as that the men that drive my truck had, I ask the leniency may be granted in this case.



Harry Makino  
Manager of WRA Poultry Farm



## WAR RELOCATION AUTHORITY

In reply, please refer to:

OAPD

Tule Lake Project  
Newell, California*James  
Hayes*

June 23, 1943

MEMORANDUM TO: Mr. C. E. Zimmer

SUBJECT: Unauthorized use of Panel Truck  
Assigned to Poultry Farm

On Saturday evening about 6:00 p.m., one of the boys from the poultry farm came to my house with a correct request initialed by you for the use of a cargo truck that night at the poultry farm. In talking with the boy, I was informed that you had given Mr. Makino permission to use the panel regularly assigned to this activity at Mr. Makino's wedding that night. I now have a memorandum dated June 22 from Mr. Makino (copy attached) in this regard.

It would seem to me there has been a collusion and that deliberately on the part of certain parties a lie was concocted in order that Mr. Makino might have the use of the panel at his wedding. This I very decidedly take exception to. I seriously doubt the accuracy of Mr. Makino's statement that he did not use the panel truck for his wedding and that it was left idle in Block 5. While I do not have any proof to the contrary, this hardly appears likely. A panel would be ideally suited for Mr. Makino's purpose and likely as not was used that evening; perhaps not by Mr. Makino but by some of his friends or attendants.

In any event, I wish you would make it quite clear that in the future I will not in your absence authorize use of project vehicles when doubtful cases





-2-

are involved. Further, should this type of case be brought to the attention of Mr. Failing or the Motor Pool again, persons involved will be suspended from continued use of project vehicles.

J. O. Hayes  
Acting Project Director

Attachment

JOHayes:fsy ✓  
cc: M. C. Cooke



August 21, 1943

Raymond R. Best, Project Director  
Tule Lake Center  
Newell, California

Dear Mr. Best:

We are becoming very concerned about the heavy losses of hogs in the feeding operations at some centers. The enclosed tabulation is made up from the reports received to date. In some instances the July losses are included and in others not. At any rate, each center knows its own situation.

The causes of these heavy losses, as reported by the various centers, seem to be: (1) Necrotic Enteritis or hog Dysentery; (2) Erysipelas; (3) Too sudden shift to feeding garbage; and (4) Carelessness in allowing injurious matter to get into the garbage, such as salt, bones, etc. All of these causes are, to a large degree, avoidable. We suggest that each center make a thorough survey of their own conditions and make the proper corrections as soon as possible. In some instances the losses already sustained would more than pay for the improved facilities needed to prevent them. We would like to make the following suggestions:

First: Since most of these losses have been caused by unsanitary conditions, we suggest that all garbage be fed on plank or concrete platforms. These platforms should be cleaned and washed every day.

Second: That alternate pens be provided so that no pen is used more than four months, then plowed up and planted to some growing crop. The continual use of pens will infect all lots of hogs that use them. They become a worse source of infection as time goes on.

In those localities where the land is low and sure to get muddy, it might be best to build pens with a complete concrete floor that can be washed and disinfected regularly. This may seem expensive, but the losses already sustained on some centers would more than pay for it.

Third: Use extreme care in starting hogs on garbage. Make the shift from grain to garbage gradually. Both erysipelas and necrotic enteritis are greatly aggravated by sudden changes in feed, or an unbalanced diet. A small amount of grain probably should be fed at all times.

Fourth: When the collection and use of the garbage is wholly within the WRA organization, there is little excuse for injurious matter getting into the garbage. The Chief of Agriculture should inform the steward how the garbage should be prepared in the kitchen, and the steward should instruct the mess halls to follow these instructions.



- 2 -

The losses to date would pay a thousand times over for the additional care necessary to see that the garbage is properly sorted and segregated.

While the monthly reports do not state the age and weight of the hogs that have died, it is safe to say that our losses in a few short months have exceeded \$10,000. A continuation of anything like these losses makes it very doubtful whether the production and feeding of hogs is a worthwhile venture.

Sincerely,



E. V. Utz, Chief  
Operations Division

Enclosure





Incomplete Report of Hog Situation as of August 1, 1943

(Information Taken from Monthly Reports)

Center	Hogs Purchased	Hogs Slaughtered	Hogs Died	Pigs Farrowed
Central Utah	1162	180	177	437
Gila River	371			251
Granada	1366	312	115	77
Heart Mountain	490		73	7
Jerome	1000	313	228	5
Minidoka	292		1	
Rohwer	440		110	
Tule Lake	<u>1004</u>	<u>775</u>	<u>102</u>	<u>1449</u>
Totals	6035	1580	806	2226



Tule Lake Center  
Newell, California

April 4, 1944

TO: Tad Yamashiro (Hog Farm)  
FROM: Geo. L. Andersen  
SUBJECT:

1. We have a number of sacks of feeds in one of the coop and I would like to have these fed to dry hogs. Just scatter them on the ground in the pens.
2. We have quite a number of barrels (wooden) around the farm. Would you see that two (2) barrels are placed at each end of each of the colony houses and fill it with water. Also place one (1) at each end of all the chicken coops and fill it with water. From now on we are not allowed to start a fire outside or in the yards surrounding the Hog Farm.
3. Gather up all garbage cans on the farm and place them on platform so we can exchange them for cans filled with garbage.
4. Distribute salt to Hog pens.
5. Segregate pregnant sows and put all dry sows in one pen. Start feeding the garbage as soon as possible also continue feeding these dry sows the same amount of grain as you are now feeding.
6. Feed hogs in fat pen three (3) pounds of grains each day along with garbage.
7. Remove all pigs that are not crippled or sick and leave only disabled pigs in pen.
8. Haul load of alfalfa and see that feeders have alfalfa in them at all times.

Geo. L. Andersen  
Asst. Supt. of Farm



C  
O  
P  
Y

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

May 2, 1944

MEMORANDUM TO: Mr. Paul G. Robertson  
Assistant Project Director  
In Charge of Operations

SUBJECT: Sanitary Report on Slaughterhouse

Attached is a copy on sanitary report received relative to the slaughterhouse.

I was particularly concerned on receiving this memorandum since if the conditions as outlined were to continue it would be impossible for the slaughterhouse to operate since meat processed under such conditions would not be fit for public consumption and would be hazardous to the health of the colonists. I felt it necessary, therefore, to check personally into the conditions at the slaughterhouse and am somewhat relieved to say that there has been some improvement since April 21st, the date on which a previous inspection was conducted and the insanitary conditions found. Not all of the items, however, have been corrected and there is a lot that still needs to be done.

The items are as follows:

1. The cleavers, knives and meat saws are still covered with old particles of bone and meat. The meat particles left on the cutlery spoil and hence when next used, the fresh meat is contaminated.
2. The curing room remains unscreened. Access of flies to the curing room allow the meat to be flyblown and hence contaminated.
3. Many of the lard cans still leak at the bottoms around the seams. The cans should be repaired in order to prevent leakage with subsequent soiling of the ground around them. Since such leakage attracts flies, it produces insanitary conditions.



4. The refrigerator room is not supplied with a refrigeration unit. Although not immediately essential today, as soon as the warm weather is here the room will be rendered useless unless refrigeration is supplied.

5. Boxes are still being filled with meat and chunks of lard without boxes being lined with paper nor the meat or lard being covered. In both instances the meat is liable to soiling and contamination.

6. Screen doors which have been provided for the lard rendering room have not been hung. As a result the flies are allowed free entrance to all parts of the slaughter House. It is necessary that all entrances not now supplied with screens have them installed.

7. Arrangements should be made so that each day the offal and dead animals which are disposed of in the pit adjoining the slaughterhouse; be protected by burning and all unburned material covered with lime.

8. Sewage from the washing room passes through settling beds and grease traps and then flows into the open ditches. As recommended by Mr. Lowe, a septic tank should be constructed in order to take care of the sewage before the overflow is allowed to run into open ditches. I understand that the construction of the septic tank is now pending the arrival of redwood. In the meantime the sections of wooden troughs which were placed in the ditches were covered with cinders without first bedding down cinders beneath the troughs. Without cinders beneath the troughs no absorption and leaching action is possible and as a result the drains are already better than 50% obstructed. Should the drains become completely obstructed and sewage becomes deposited on the open ground the situation will be untenable.

9. In general it seems that in addition to the above specific items there is need for some effort being put on general cleanliness and tidiness of the entire place. I got the impression that responsibility for the cleanliness of the slaughterhouse was not too clearly defined. I am sure that a little effort along this line would also assist in improving the present insanitary conditions now existing at the slaughterhouse.



C  
O  
P  
Y

- 3 -

I realize that the contents of this memorandum may seem to you to be quite an item. However, I am sure that you can appreciate the significance of our position in the matter and our concern over the potentialities should serious diseases result from food prepared at this source. I am quite concerned about the matter and would appreciate anything that might be done through your good offices to alleviate the situation.

/s/ Jack C. Sleath, M. D.  
Chief Medical Officer

Attach.



WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

May 4, 1944

MEMORANDUM TO: Mr. Paul G. Robertson, Chief of Operations  
FROM: W. T. Jarrett, Supt. of Farm  
SUBJECT: Sanitary Report on Slaughter House

Referring to Dr. Jack C. Sleath's memorandum of May 2, 1944.

The items are as follows:

1. Regarding the cleavers, knives and meat saws, this will be taken care of and they will be cleaned and steamed.
2. Concerning screens for curing room, we will take this up with construction again and see if we can have them installed.
3. Relative to the leaking lard cans, we have taken this up with Mess Management and this will be corrected.
4. I understand that the purchasing of a refrigerating unit is in the making.
5. Boxes hereafter will be cleaned and lined with paper and meat will be covered with paper.
6. This is construction's job and will pass this information on to them to have the screen doors installed.
7. We have made arrangements to burn and lime the offal and dead animals pit each day. We are setting up an old barrel out by the pit and will keep it filled with diesel fuel for this purpose.
8. As soon as our septic tank is set up this will improve this condition and in the mean time will do everything possible to keep these sewage troughs open.



9. Mr. Harper has been notified about keeping the Slaughter House clean in general and you will see some improvements in this in the future. However when they are slaughtering, things are bound to be in a mess and the floors in the Slaughter House are not sloped enough for drainage; therefore during the time we are steaming and scraping hogs also washing them, there is an excess amount of water and blood on the floors.

Also there is a problem of flies that creep in underneath the doors due to the facts of the unevenness of the concrete floors. And also quite a few holes around the eaves of the building and where the pipe goes through the walls which we will try to correct to eliminate this fly hazards.

It will be necessary to stop slaughtering after this week on kind of the hot weather until such time the refrigeration and screens are installed.

W. T. Jarrett  
Supt. of Farm



WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

May 11, 1944

MEMORANDUM TO: Mr. Raymond B. Hayward, Mess Management  
FROM: W. T. Jarrett, Supt. of Farm  
SUBJECT: Root Cellar

Please instruct your employees entering the Root Cellar to close and keep the doors closed at all times in order to keep the temperature right for seed potatoes and stored potatoes.

At the same time we suggest that you repair the egg crates on the outside as this will help keep the doors closed.

W. T. Jarrett  
Supt. of Farm

WTJarrett:sf  
cc: SUBJ.  
CHRON.  
DESK



WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

May 11, 1944

MEMORANDUM TO: Personnel Office  
Mr. Paul G. Robertson, Chief of Operations  
FROM: W. T. Jarrett, Supt. of Farm  
SUBJECT: NEW JOBS NOT SHOWN ON AGRICULTURE LIST

First Quarter Estimates for Evacuee and Evacuee  
Appointive Personnel Services.

Tool Room Foreman: (\$16.00)

His duties is to check and issue small  
tools to workers; also keep record of  
shovels, hoes, rakes, and any large hand  
tools.

Grease and Service Man for Tractors - 2 (\$16.00)

Their duties are to grease and put fuel,  
gasoline, or diesel oil in each tractor  
daily and also keep a record of fuel con-  
sumption.

Water Boy: (\$16.00)

His duties is to haul and distribute  
drinking water to farm workers and to all  
workers in the field.

Box Makers: (\$16.00)

To make up new crates and keep old ones  
repaired. Crates to be used for hauling  
produce from field.

Root Cellar Man: (\$16.00)

To check produce in and out of Root Cellar;  
to open and close ventilators so it will  
keep temperature as even as possible.

WTJarrett:sf

cc: SUBJ.

CHRON.

DESK

W. T. Jarrett  
Supt. of Farm

WAR RELOCATION AUTHORITY  
Tule Lake Project  
Newell, California

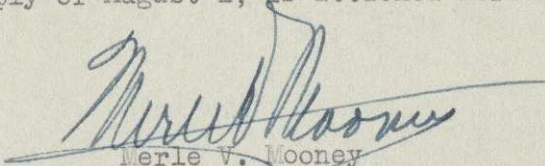
OFFICE MEMORANDUM

Date: August 5, 1944

To: W. T. Jarrett, Supt. of Farm  
From: Merle V. Mooney, Procurement Officer  
Subject: Letter from State of California, Department of Agriculture

Reference is made to our letter of July 28, to the State Department of Agriculture at Sacramento.

Mr. C. E. Tucker's reply of August 1, is attached herewith for your files.

  
Merle V. Mooney  
Procurement Officer

Attachment



A. A. BROCK  
W. J. CECIL  
DIRECTOR

Earl Warren  
Gulbert L. Olson  
Governor

BUREAU OF WEIGHTS AND MEASURES  
C. E. TUCKER, CHIEF



STATE OF CALIFORNIA  
Department of Agriculture

SACRAMENTO  
August 1, 1944

Merle V. Mooney  
Procurement Office  
War Relocation Authority  
Tule Lake Center  
Newell, California

Dear Mr. Mooney

The enclosed Commodity Net Weight Standards 1, 2, 4, 5, 6 and Standard No. 3, Apple Box Tare Weight, are being sent to you in answer to your request of July 28, 1944.

Should you desire any additional information, we would appreciate your inquiry.

Sincerely yours

C. E. Tucker, Chief  
Bureau of Weights & Measures

*J. E. Brenton*  
ASSISTANT CHIEF  
JEB p  
Enc. 7



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

August 9, 1944

MEMORANDUM TO: Mr. Paul G. Robertson,  
Chief Operations Division

FROM: W. T. Jarrett, Supt. of Farm

SUBJECT: Grass and Weeds Around the Farm Buildings

Your memorandum of August 8, concerning the grass and weeds around the buildings in the Farm area.

At this time we have tractor with the disk and road blade and working as close to these buildings as possible; however, there will still be considerable amount of hand work to be done. The farm hasn't any man power to put on this job at present and was wondering if Fire Protection Department has extra help or could recruit to do this kind of work not only around the farm buildings but around all the buildings in the area.

W. T. Jarrett  
Supt. of Farm

cc: Mr. Owens, Fire Dept.

WTJarrett:sf  
cc: Subj.  
Chron.  
Desk



UNITED STATES  
DEPARTMENT OF THE INTERIOR

Tule Lake Center  
Newell, California

September 7, 1944

MEMORANDUM TO: Paul G. Robertson, Chief of  
Operations Division  
FROM: W. T. Jarrett, Supt. of Farm  
SUBJECT: Garlic

The garlic has been harvested and there are about 75 sacks at 75 pounds each or total of 5,500 pounds. Mess Operations refused to accept this because they have a surplus left over from last year.

Would like to have your suggestions on this. The commercial market at present is between 20¢ to 25¢ per pound.

W. T. Jarrett  
Supt. of Farm

WTJarrett:sf  
cc: Subj.  
Chron.  
Desk

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

October 21, 1944

MEMORANDUM TO: Mr. Stuart  
Slaughter House Supt.

FROM: W. T. Jarrett, Supt. of Farm

SUBJECT: Refrigerating Plant at the Slaughter House

There has been considerable trouble with refrigerating plant at the Slaughter House.

It has been suggested that the doors to the drip room be kept closed except when actually putting hogs in the room. It was also suggested that if possible to let the hogs hang outside during the interval of butchering another hog.

Please check into this and see what you can do.

W. T. Jarrett  
Supt. of Farm

WTJarrett:sf  
cc: Subj.  
Chron.  
Desk



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

November 1, 1944

MEMORANDUM TO: Geo. L. Andersen, Ass't Supervisor of Farm  
FROM: W. T. Jarrett, Supt. of Farm  
SUBJECT: Complaints From Fire Protection Officer  
Concerning Buildings at the Hog Farm

We have a complaint from Fire Protection Officer concerning two buildings at the Hog Farm.

Listed below are his quotations:

- (1) "DRESSING ROOM NORTHWEST OF CHICKEN HOUSE:  
The roof jack should be installed and more clearance provided between the roof materials and the stove pipe.
- (2) "SMALL SHED NEAR THE GRAINARY: The stove and stove pipe are defective. If a stove is to be used in this location, proper equipment should be installed."

After these conditions are corrected, I would like to have the Fire Protection Officer give his o.k. on the buildings.

W. T. Jarrett  
Supt. of Farm

WTJarrett:sf  
cc: Subj.  
Chron.  
Desk

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

November 4, 1944

MEMORANDUM TO: Mr. Homer G. Ricketts  
Chief Engineer

FROM: W. T. Jarrett, Supt. of Farm

SUBJECT: Budget for Fiscal Year of 1946

Include in your Budget for Fiscal Year of 1946 approximately 8,000 board feet of lumber also eight kegs of nails in various sizes.

Listed below are the dimensions on the lumber:

20 - Feed Troughs, 24" x 6" x 12'  
20 - Water Troughs, 12" x 10" x 12'  
50 - Panels, 12' long, 4' high

Balance of the lumber is for repairing shelter which could be 2 x 8 in various lengths.

W. T. Jarrett  
Supt. of Farm

WTJarrett:sf  
cc: Subj.  
Chron.  
Desk



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

November 6, 1944

MEMORANDUM TO: Mr. Homer G. Ricketts  
Chief (Acting) Operations Division

FROM: W. T. Jarrett, Supt. of Farm

SUBJECT: Grain Buster

We have been trying for some time to run our grain buster by electricity. We have on hand a three-phase five-horse-power motor but we do not have three-phase current at grain bins. And it takes  $2\frac{1}{2}$  to 3hp to run this grain buster. We would like to have transformer installed for three-phase current or exchange this motor with some other department who has single-phase current.

This was put in the last quarterly budget by the engineering department; however, I do not know whether it was approved.

W. T. Jarrett  
Supt. of Farm

WTJarrett:sf  
cc: Subj.  
Chron.  
Desk

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

November 6, 1944

MEMORANDUM TO: Mr. Homer G. Ricketts  
Acting Chief of Operations Division

FROM: W. T. Jarrett, Supt. of Farm

SUBJECT: Paper Conservation

You will find attached Forms WRA-7 and WRA-349. Seems to be that one of these Forms could be eliminated. Also attaching Forms WRA-335 and WRA-TL-662. You will note on WRA-335 there is a space for vacation leave as well as sick leave and on Form WRA-TL-662 it is used for sick leave only. It is my opinion that latter could be discontinued.

On Forms WRA-623 and WRA-TL-620 attached, it is my opinion that these forms could be consolidated into one.

W. T. Jarrett  
Supt. of Farm

Attachments

WTJarrett:sf  
cc: Subj.  
Chron.  
Desk



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

November 11, 1944

MEMORANDUM TO: Mr. Homer G. Ricketts  
Chief, Engineer

FROM: W. T. Jarrett, Supt. of Farm

SUBJECT:

As winter is coming on, water lead pipe is subject to freeze. The pipe going to the storage tanks at the Hog Farm is bare for about fifteen feet. This should be insulated.

Would also suggest that there be an opening out from the compressor room to the boiler room so that warm air can circulate around the compressor.

Suggest that the doors at the end of the gang walk be moved to the outside edge of the building where the screen starts. By doing this, it will give the heat in the wash room also protect the overhead pipes.

Would also suggest that the strip of tar paper be put around the ventilator that is over the boiler. This will have the tendency to hold the heat inside of the building as it will help keep the pipes from freezing.

W. T. Jarrett  
Supt. of Farm

WTJarrett:sf  
cc: Subj.  
Chron.  
Desk

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

November 30, 1944

MEMORANDUM TO: Mr. Raymond B. Hayward  
Chief of Mess Operations

FROM: W. T. Jarrett, Supt. of Farm

SUBJECT: Suggestion on Your Storage of Carrots

May I offer a suggestion on your storage of carrots.

It is my opinion that the straw has a tendency to heat when it pulls the moisture from the carrots. I believe these would keep longer if they could get air. If you wish to separate rows perhaps a small board placed in between would do the trick.

You will remember that carrots stored last year at Taylor Warehouse were kept up to the first of May.

W. T. Jarrett  
Supt. of Farm

WTJarrett:sf  
cc: Subj.  
Chron.  
Desk



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

December 2, 1944

TO ALL FARM EMPLOYEES:

It is necessary that each farm employee report for duty on time each work day regardless of weather condition if they expect to receive their day's pay. This ruling is in accordance with the Manual. It must be carried out!

W. T. Jarrett  
Supt. of Farm

Desk

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

December 12, 1944

MEMORANDUM TO: Mr. Mark Stuart

It has been called to my attention that some worker have been making repairs and adjustments on various boiler fitting and electric pump. Please instruct all workers that repairs pertaining to boiler or any connecting parts must be made by Maintenance crew.

W. T. Jarrett  
Supt. of Farm

P L E A S E   P O S T

Desk



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

December 14, 1944

MEMORANDUM

TO: Farm Office  
Hog Farm Office  
Slaughter House

FROM: R. R. Best, Project Director

SUBJECT: Report of Traffic Accidents

The attention of all employees, appointed and evacuee, whose duties involve the operation of cars and trucks, is directed to the necessity of making prompt report to the Police Department of any traffic accident in which their vehicles may be involved. This report is in addition to the formal written reports on Standard Forms 26, 27, and 28 required by Section 20.20.3.B of the Manual.

A Report must be made to the Police Department immediately by telephone, giving such information as will enable Officer to be dispatched to the scene to make the investigation of the circumstances of the accident. The report will be made regardless of whether any person has sustained an injury, whether any material damage has been done to the vehicles, or whether government or privately owned cars are involved.

In all appropriate cases, the report of the Police Department investigation of a traffic accident will be made available to the Board of Survey.

Division, Section and Unit Chiefs are requested to transmit these instructions to all employees under their respective jurisdiction.

/s/ R. R. Best  
Project Director

P L E A S E   P O S T

It is also necessary to report immediately the accident to your Supervisor. If you are unable to report the accident to the Police Department by telephone, your Supervisor will report it for you. In case of an accident no cars or trucks are to be moved before the Police Department has made their investigation.

W. T. Jarrett  
Supt. of Farm



WAR RELOCATION AUTHORITY  
Yearly Summary Report - Crops

For Year Ending December 31, 1944

Tule Lake Center

Crop	Acreages			Total Production  (lbs.)	Yield Per Harvested Acre  (lbs.)	Disposition of Produce			Average Price Per lb.  (¢)
	Planted	Abandoned	Harvested			Used on Center  (lbs.)	Shipped to other Centers  (lbs.)	Sold  (lbs.)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Beets	10	-	10	154,470	15,447	154,470	-	-	.036
* Broccoli	6	Last cutting	6	19,130	3,188	19,130	-	-	.063
Cabbage	12	-	12	229,492	19,124	229,492	-	-	.02
* Carrots	16 (10)	3	13	568,813	43,755	568,813	-	-	.022
Cauliflower	9	-	9	115,750	12,861	115,750	-	-	.038
Daikon	32	7	25	419,770	16,791	419,770	-	-	.032
Garlic	2	-	2	4,440	2,220	4,440	-	-	.21
Gobo	6	-	6	44,419	7,403	44,419	-	-	.042
* Lettuce	21	-	21	234,010	11,143	234,010	-	-	.041
* Nappa	44	8	36	446,230	12,395	446,230	-	-	.039
* Dry Onions	15	2	13	198,555	15,273	198,555	-	-	.02
* Green Onions	7 (7)	-	7	89,297	12,757	89,297	-	-	.068

NOTE: \*See Narrative Report



WAR RELOCATION AUTHORITY  
Yearly Summary Report - Crops

For Year Ending December 31, 1944

Tule Lake

Center

Crop	Acreages			Total Production  (lbs.)	Yield Per Harvested Acre  (lbs.)	Disposition of Produce			Average Price Per lb.  (¢)
	Planted	Abandoned	Harvested			Used on Center  (lbs.)	Shipped to other Centers  (lbs.)	Sold  (lbs.)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
* Pea	25	10	15	19,241	1,283	19,241	-	-	.057
Potato	153	-	153	1,650,460	10,787	1,650,460	-	-	.028
Radish	11	-	11	92,428	8,402	92,428	-	-	.046
* Spinach	10	10	-	-	-	-	-	-	-
Turnips	14	-	14	341,959	24,425	341,959	-	-	.02
* Barley	450	-	450	540,375	1,201	540,375	-	-	.013
* Oats	100	-	100	39,840	398	39,840	-	-	.03
* Alfalfa	(232)	20 grazing	212	954,250	4,501	706,990	-	247,260	.06
				(Alfalfa grazing hogs, rental charge - \$997.50					
* Clover	(71)	-	71 acres grazing hogs, rental charge - \$1597.00						

NOTE: \*See Narrative Report



WAR RELOCATION AUTHORITY  
Yearly Summary Report - Livestock

For Year Ending December 31, 1944

Tule Lake Center

TABLE I HOGS

Beginning Inventory				Purchased				Litters Farrowed		Slaughtered		
Feeders		Breeding Stock		Feeders		Breeding Stock		Litters	Pigs Raised	No.	Av. Dr. Wt.	Av. Pr. pr. lb.
No.	Av. Wt.	No.	Av. Wt.	No.	Av. Wt.	No.	Av. Wt.	No.	No.			
1337	106	405	407	683	124	-	-	345	1767	*1495	258	22¢
				Death Loss			Closing Inventory					
				Under 6 wks.	Over 6 wks. old		Feeders		Breeding Stock			
				No.	No.	Av. Wt.	No.	Av. Wt.	No.	Av. Wt.		
				715	235	119	1806	173	-	-		

TABLE II CHICKENS

Beginning Inventory				Purchased				Eggs Produced		Butchered		
Chicks No.	Pullets No.	Hens No.	Other No.	Chicks No.	Pullets No.	Hens No.	Other No.	No. of Doz.	Av. Pr. pr. doz.	No.	Av. Dr. Wt.	Av. Pr. pr. lb.
				Death Loss		Closing Inventory						
				Under 6 wks. No.	Over 6 wks. No.	Chicks No.	Pullets No.	Hens No.	Other No.			

NOTE: \*See Narrative Report

(up and over)



TABLE III

## BEEF CATTLE

Beginning Inv.		purchased		Calves Born	used on Center			Shipped to other Centers			Death Loss		Closing Inv.	
No.	Av. Live Wt.	No.	Av. Live Wt.	No.	No.	Av. Dr. Wt.	Av. Pr. pr. lb.	No.	Av. Wt.	Av. Pr. pr. lb.	No.	Av. Wt.	No.	Av. Live Wt.

OTHER



## NARRATIVE REPORT

Broccoli - Was very slow in flowering this year; and consequently it cut down on production and the heavy freeze in November took the last cutting.

Carrots - Three acres which was expected to be harvested had to be abandoned on account of frozen ground. These were covered with dirt and no doubt a portion of them will be harvested in the Spring. Ten acres were planted late purposely after other crops were harvested on the same ground and these are to be harvested in early Spring of 1945.

Daikon - Five acres of Sakurajima daikon was completely lost to cabbage maggots and two acres frozen in November.

Lettuce - A small portion went to seed. Regardless of staggered planting time, a certain percentage seems to mature all at once.

Nappa - About five acres completely lost to cabbage maggots, and three acres frozen in November.

Onions - Dry Onions is quite a problem here to cure in such a short growing season. On the two acres left in the field, these will be used as green onions in the Spring. Seven acres of green onions were planted late purposely as an experiment for early maturity in 1945.

Pea - The first planting of fifteen acres were damaged by wind storm in May. The plants were cut off at the ground and some completely covered with sand and dirt. The fifteen acres were replanted. Ten acres of late planting were just about ready to pick when several heavy frost cooked them.

Spinach - This was a complete lost. One acre of early planting lost by wind storm. Seven acres completely damaged by leaf miner and then another two acres planted and lost to leaf miner.

Barley and Oats - The low production is partly due to the wind storm as in some spot it blew roots right out of the ground; also planting time was delayed on account of receiving grain drills very late.

Alfalfa - Of the 232 acres, twenty acres were used completely for grazing feeder pigs, 212 acres of first cutting for hay, 145 acres of second cutting for hay, and the remaining 67 acres of second cutting was used for grazing hogs. With the one baling machine, it is almost impossible to get first cutting completed in time to get a full maturity on the second crop.



Clover - This was used entirely this year for grazing feeder hogs.

The total harvest of vegetable in 1944, ran about 4,628,464 pounds which was delivered to Mess Operations at an average price per pound just a little over three cents.

No fertilizer was used in 1944, but it is quite evident that some variety of fertilizer should be used in 1945 farm program providing it can be purchased.

There were 72 days of growing season between frost in 1944. A very severe wind storm in the middle of May did considerable damage to crops that were planted. Very little harvest was done in November because of freezing temperature.

In the "Slaughtered" Column of Report WRA 310 which show 1495 head, 61 head being slaughtered in December but the process meat was delivered to Mess Operations in January.

The Slaughter House started operation in March, 1944, with evacuee crew and operation stopped during May, June, and July on account of refrigeration.

Due to shortage of space at Mess Operations the butchers at Slaughter House do enough cutting and trimming to get the lard for rendering. The sausage is also made by this crew; and then delivered to Mess Operations in three commodities: for the year of 1944, Slaughter House has delivered to Mess Operations, fresh pork, 246,185 pounds; sausage, 30,462 pounds; lard, 81,565 pounds; total 358,212 pounds.

Purchased for the year of 1944 were 683 head, average price per pound .137.

In the month of July when the Slaughter House was closed down, it was necessary to sell some hogs that were ready to slaughter. 428 head were sold, average weight 343 pounds at 12¢ per pound and fourteen stags, average weight 491 pounds at 07½¢ per pound.

The closing inventory of 1806 head showing 173 pounds average weight broken down into groups as follows:

Under 100 lbs.	- 131 head, avg. wt. 68#
100 lbs. to 180 lbs.	- 930 head, avg. wt. 135#
Over 180 lbs.	- 745 head, avg. wt. 242#



UNITED STATES  
DEPARTMENT OF INTERIOR

Tule Lake Center  
Newell, California

Agriculture

Dillon S. Myer, Director  
Darr Building  
910 17th Street NW  
Washington 25, D.C.

JAN 16 '45

Att: C. H. Powers, Acting Chief Operations Division

Dear Mr. Myer:

We thank you for your approval of our proposed vegetable program for 1945. We will start working out the detail along this line immediately.

The proposed 1945 pork program was set at 625,300 pounds because of shortage of space and facilities at the slaughter house.

At present the slaughter house operations consist of slaughtering, cutting carcasses, tripping fat for lard, rendering lard, and making sausage. Of course, it is generally understood that the processing of all meat should be done by Mess Operations but, at present, they do not have the space or facilities.

Just as soon as the new refrigeration plant for Mess Operations is completed which will be about March 15, this will give them sufficient space; then they will be able to take over the processing of meat. This will enable slaughter house to increase the pork production to your suggested figure of 975,000 for the year of 1945.

The present program on lard production is about 2000 pounds per week which is only 1/3 of the center's consumption.

The hogs on inventory now to be slaughtered in the next six months are the breed of Hampshire and being a large hog, they do not fill out until they reach around 300 pounds; however, just as soon as these are slaughtered, we will get down to around 250 pounds per head for slaughtering.

We will immediately contact centers for surplus vegetable seed as per your suggestion.

Sincerely,

WTJarrett:sf:br  
1/16/45

cc: subj  
chron  
desk  
Mr. Best

R. R. Best  
Project Director



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

March 23, 1945

MEMORANDUM TO: Mr. Butterfield  
Supply Officer

FROM: W. T. Jarrett, Supt. of Farm

SUBJECT: Surplus grain at Heart Mountain

Will you please make arrangements to have Heart Mountain ship the following:

Wheat	50,000 lbs.
Barley	200,000 "
Oats	280,000 "
Rye	76,000 "

TOTAL 606,000 lbs.

(Corn, 60,000 lbs shipped 3/15/45.)

It is our suggestion that one to two cars be shipped each week and we prefer to have one or two cars of each barley and oats to be shipped ahead of rye or wheat.

W. T. Jarrett  
Supt. of Farm

WTJarrett:sf  
cc: Subj.  
Chron.  
Desk  
Hog File

*orig routed to Mess Mgmt.*

*Ag.*

*Copy*

March 27, 1943.

Mess Division  
Tule Lake Relocation Center  
Newell, Calif.

Gentlemen:

There seems to be a lack of clearness among the trade regarding the position of Soybeans, Mung Beans and Azuki with regards to the point rationing system. We have a ruling directly from Washington in regards to Soybeans. They are definitely not considered as Dried Beans as far as the rationing regulations are concerned. We are further advised today that Mung Beans and Azukis can be considered in the same classification as Soybeans until we are instructed to the contrary.

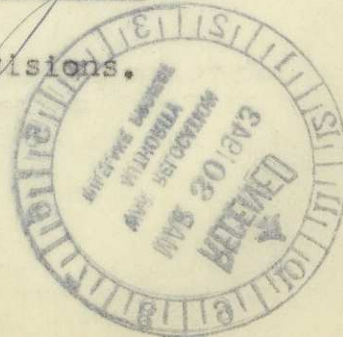
The handling of these Beans being an important part of our business, we are keeping ourselves very closely informed on this matter and will relay any new developments to you.

Yours very truly,

MOUNTAIN AND PLAIN JOBBING CO.

*W. K. Oyama*

LTN/W.K. Oyama  
Copies: Agricultural and Procurement Divisions.





UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

April 17, 1945

MEMORANDUM TO: Mr. Ralph Butterfield  
Supply Officer

FROM: W. T. Jarrett, Chief of Agriculture

SUBJECT: Containers

Listed below is a number of containers farm received during the month of March from Mess Operations:

Lettuce crates	1253
Cauliflower crates	673
Orange and Apple boxes	252
Celery crates	1004
Cabco	50
Fish boxes	62
Total ----	3294

Farm also delivered to Mess Operations during March 761 lettuce crates filled with onions harvested in 1944 crop.

Up to April 14th farm received the following containers from Mess Operations.

Lettuce crates	425
Cauliflower crates	247
Orange and Apple boxes	76
Celery crates	3
Total ----	751

WTJarrett:sf

cc: Subj.

Chron.

Desk

W. T. Jarrett  
Chief of Agriculture

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

April 19, 1945

MEMORANDUM TO: Slaughterhouse Workers  
Livestock Workers  
Farm Workers

FROM: W. T. Jarrett, Chief of Agriculture

SUBJECT: Time Off

Any worker who fails to report for duty without a very good reason of illness and also takes time off without prior approval from supervisor will be charged for unauthorized leave without pay; and if unauthorized leave without approval continues, worker will be subject to discharge.

No vacation or annual leave shall be allowed without approval first from supervisor.

W. T. Jarrett  
Chief of Agriculture

cc: Nori Hasegawa, Timekeeper  
Ken Yada, Timekeeper

Desk



UNITED STATES  
DEPARTMENT OF THE INTERIOR

Tule Lake Center  
Newell, California

Agriculture

Mr. Dillen S. Myer  
Director  
War Relocation Authority  
Barr Building  
Washington 25, D. C.

APR 24 '45

Attention: E. J. Utz, Chief of Operations Division

Dear Mr. Myer:

The buying of feeder pigs has become quite a problem due to high prices that they are selling for in this area.

Our best source of supply is the Shasta County Farm Bureau at Redding, California. They have an auction sale the third Wednesday of each month.

Mr. George L. Andersen, Assistant Superintendent of Farm, was there in March and purchased 209 head, average weight 100 pounds at 13½ cents per pound. A total of 660 head were sold at an average price of 22 cents per pound. Mr. Andersen also attended the April sale held last week. A total of 550 head were for sale. The average price for the 550 head sold was 23½ cents per pound. The highest price was 27½ cents per pound for 100-pound feeder. We believe Mr. Andersen used very good judgment in not buying feeder pigs at such high price. However, he was able to buy 75 head as follows:

5 sows	avg. wt.	407 lbs.	\$14.40	ceiling price		
3 barrows	"	316 "	\$15.18	"	"	
68 feeders	"	122 "	\$23.50	"	"	

Total of 12,260 pounds \$2455.50 averaging 20 cents per pound.

At our present slaughtering schedule, it will be necessary to purchase between 550 to 400 head feeder pigs per month. Our present inventory is:

Under 100-pounds	83 head
100 to 150 pounds	355 "
Over 150 pounds	647 "
Total -	1085 head

Ague



Dillon S. Myer -2-

We are slaughtering 300 head per month so at this rate we only have three months supply on hand.

To buy any amount of hogs from local farmers is almost impossible, as they can sell any thing from 50 pounds to 150 pounds at 20 cents right in their yard. On Sunday, April 22, we were very fortunate in buying about 80 head, average weight 100 pounds, at Klamath Falls at 21 cents delivered to the Center.

We would like to have your suggestion on this hog deal; and also how high in price should we pay for feeder pigs.

Sincerely,

R. R. Best  
Project Director

4/24/45

WJarrett:sf

cc: ~~Subj~~

Chron.

Desk Best



C 5/4/45  
O  
P  
Y

Tule Lake  
W. R. A. Farm Office  
Newell, California

May 3, 1945

Memorandum to; W. T. Jarrett  
Chief of Agriculture

FROM: T. Hiramoto  
Foreman of Insecticide Unit

SUBJECT: Fertilizer's Report

<u>Date Used</u>	<u>Foremen</u>	<u>Quantity Used</u>	<u>Kind of Fertilizer</u>	<u>Kind of Crops</u>	<u>Acreage Used</u>
4/10/45	Hiramoto	5/100#	10-10-0	Green Onion (Planted 1944)	3 $\frac{1}{2}$ Acres
4/23/45	Hiramoto	5/100#	10-10-0	Green Onion (Planted 1944)	3 $\frac{1}{2}$ Acres

---

Total 10/100#

Submitted by:

T. Hiramoto  
Insecticide Foreman  
Farm Division

T.H./S.H.  
cc: Sent to  
Cost Accountant  
Office Manager  
File

4000  
75  
105

Tule Lake  
W. R. A. Farm Office  
Newell, California

June 1, 1945

Memo to: W. T. Jarrett  
Chief of Agriculture

From: T. Hiramoto  
Insecticide Foreman

Subject: Report on Fertilizer

<u>Date Used</u>	<u>Foreman</u>	<u>Quantity Used</u>	<u>Kind of Fertilizer</u>	<u>Kind of Crops</u>	<u>Acreage Used</u>
5/2-8/45	Shimada	120/100#	6-19-8	Potato(Red)	33 Acres
5/8-10/45	Shimada	60/100#	6-19-8	Potato(White)	17 Acres
5/10-28	Shimada	148/100#	6-19-8	Potato(White)	41 Acres
5/29-31	Shimada	58/100#	6-19-8	Potato(White)	15 Acres
5/10/45	Kanetomo	8/100#	10-10-0	Spinach	2 $\frac{1}{2}$ Acres
Total		394/100#			

Respectfully Submitted,

t.h./s.h.  
cc. Sent to:  
Cost Accountant  
Office Manager  
File

T. Hiramoto  
Insecticide Foreman  
Farm Division



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
WAR RELOCATION AUTHORITY  
Tule Lake Center  
Newell, California

June 18, 1945

MEMORANDUM TO: Mr. George L. Andersen  
Mr. John J. Crowe  
Mr. Harry W. Moore  
Mr. Mark Stuart

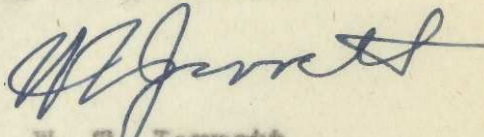
FROM: W. T. Jarrett, Chief of Agriculture

SUBJECT: Clean-up Week

From June 18th to 24th has been designated Clean-up Week for Tule Lake Center; of course, this includes the Farm Area.

I want to put forth quite a little effort in cleaning up during this period. Here is a few of my suggestions for the Livestock Unit: Pick up excess tools, shovels, hoes, rakes, scoops that are around the grain bins; also clean up the waiting rooms inside and out, the hog farm office and the warehouses, hog pens and the straw piles were they are dumping the garbage from the pens; water barrels should be filled around the chicken houses; and fire buckets should be attached to the barrels.

On the dirt farm: lumber, cans, rocks, and many other things scattered up and down the ditch banks; quite a few surplus timbers around the box pumps; the office area should be cleaned up. Maintenance crew to clean up shops and around the other buildings they have.

  
W. T. Jarrett  
Chief of Agriculture



Tule Lake  
W. R. A. Farm Office  
Newell, California

August 1, 1945

Memo to: W. T. Jarrett  
Chief of Agriculture

From: T. Hiramoto  
Insecticide Foreman

Subject: Report on Fertilizer Consumption

<u>Date</u> <u>Used</u>	<u>Kind of Crops</u>	<u>Acreage</u>	<u>Quantity</u> <u>Used</u>	<u>Kind of</u> <u>Fertilizer</u>	<u>Foreman</u>
7/2	Radish	2	800 lbs.	6-19-8	Naito
7/6	Tomato	3/4	300 lbs.	6-19-8	Hiramoto
7/6	Beans	1/4	100 "	6-19-8	Hiramoto
7/7	Cucumber	3/4	100 lbs.	6-19-8	Hiramoto
7/7	Celery	3/8	2500 "	6-19-8	Hiramoto
7/9	Cabbage	18	6400 lbs.	6-19-8	Hitomi
7/11	Potato	10	4200 lbs.	4-24-12	Shimada
7/12	Potato	10	4000 lbs.	4-24-12	Shimada
7/13	Nappa	4	1600 lbs.	10-10-0	Yokotake
7/16	Broccoli	6 1/2	2600 lbs.	4-24-12	Hitomi
7/17	Lettuce	4	1600 lbs.	10-10-0	Yokotake
7/17	Nappa	3	1400 lbs.	10-10-0	Yokotake
7/17	Celery	3	2400 "	6-19-8	Hiramoto
7/17	Lettuce	1 1/8	200 "	10-10-0	Hiramoto
7/19	Nappa	4	1400 lbs.	10-10-0	Yokotake
7/19	Lettuce	3	1200 "	10-10-0	Yokotake
7/21	Celery	2	2000 lbs.	10-10-0	Hiramoto
7/24	Nappa (Takana)	5	1700 lbs.	10-10-0	Kanetomo
7/26	Cauliflower	7 1/2	3800 lbs.	4-24-12	Hitomi
7/30	Onion	7	3100 lbs.	6-19-8	Mano

Total consumption of each item:

6-19-8 .....15,700 lbs.  
4-24-12.....14,600 lbs.  
10-10-0.....11,100 lbs.

Respectfully Submitted,

th/sh

cc: sent to:

Cost Accountant  
Office Manager  
File

T. Hiramoto  
Insecticide Foreman  
Farm Division



D E H Y D R A T I O N P L A N T

A NECESSITY  
in the  
TULE LAKE PROJECT

\*\*\*\*\*

Richard Sato



This report deals with the need of a dehydration plant in the War Relocation Authority, Tule Lake Project, Newell, California and calls immediate attention to the part that dehydration plant will play in the "Food for Freedom Program." It enumerates the vegetable crops available for dehydration and the Project's present facilities for the production of dried commodities.

Dehydrated food products are destined to play a most vital role during the war period. These products are especially well suited to war time conditions as not only are they easily portable, but will preserve well and are ideal for supplying other relocation and assembly centers as well as fill an important need for our own center.

It goes without saying that the production and preservation of food are matters of vital importance during wartime. Concerted efforts have resulted in a material increase of the productive capacity at Tule Lake brought about by the availability for cultivation of 6,460 acres next year. (In 1942, 2600 acres were productive). A total farming area of 32,000 acres is expected to be realized in the future. However, sad to relate, comparatively little attention has been given to the matter of the preservation of the perishable foods produced.\*

It is my opinion that immediate attention should be given to dehydration so that valuable time will be saved and make possible dehydration to play its full part in the war effort by 1943.

While many recognize its importance, it is not likely that positive steps will be taken in the immediate future unless good reasons for preservation by dehydration are pointed out. Some of these reasons are listed as follows:

I. Tule Lake Project is in a favorable position to make a great material contribution to the War Relocation Authority centers' supply of food commodities because we can produce surplus food material, due to rich alluvial soil conditions. We can produce a wide variety of vegetables suitable for drying. On the basis of present production from 2,600 acres, we have a total of                      pounds of vegetables suitable for dehydration, and production may be expected to be tripled in 1943. The vegetables available at Tule Lake for drying are: beans, peas, carrots, celery, onions, spinach, turnips, potatoes, parsnips, rutabagas, squash, table beets, and cabbage. See figures 4 and 5. Due to the curtailment of tin and rubber supply, the plan to preserve perishable food by other means than by heat sterilization in tin containers must be solved. "What about glass jars," would be a common response, but the glass factories cannot supply sufficient glass containers for all food which was previously canned. Doubling the present production of glass jars will only permit to "can" in glass only about one-fourth of the perishable food now being preserved by heat sterilization.

---

\*Compare figures 4 and 5.



"What about freezing the perishable food?" That is also limited by the amount of cold storage space which is now available. If we plan to construct cold storage space, cork for insulation of cold storage must be transported from Spain which is very difficult, thus making it almost unavailable at this time while restrictions imposed upon the manufacture of all types of machinery for civilian use adds to the difficulty. Therefore dehydration would be the most practical method applicable to our need. Dehydration is of special significance since it is practically the only method of processing that can be expanded at the present time. It offers the chief, and in many cases, the only outlet for surpluses or increased production of many vegetables.

II. There are probably more ways of getting around climatic handicaps in the case of vegetables than there are with any other crops; yet it is also true that climate is still the main factor in vegetable production. Because of the short agricultural season in the Tule Lake district, we cannot farm on a year-round basis which would be possible elsewhere. Here, we only have an average growing season of 64 days, based upon ten-year data compiled by the United States Department of Agriculture, Weather Bureau.

A. Frost data from January, 1932 to December, 1941. (See Table I, Figure I). Observations and conclusions:

1. Frost has lifted as early as May 22 in the past ten-year period.
2. Frost has come as late as September 13.
3. Average number of days free from frost in the past ten-year period - 64 days.
4. Latest killing frost recorded before July 15th in the past ten-year period - June 30, 1935.
5. Earliest killing frost recorded after July 15th in the past ten-year period - July 31, 1934.
6. Shortest growing season recorded in the past ten-year period = 36 days.
7. Longest growing season recorded in the past ten-year period = 93 days.

B. The monthly and annual precipitation from January, 1932 to June, 1942. (See Table II and Figure II). Observations and conclusions:

1. Average annual precipitation was 9.37 inches.
2. Month of heaviest precipitation, February - ten year average was 1.05 inches.
3. Month of lightest precipitation, August - ten year average was 0.13 inches.

C. The monthly and seasonal snowfall from January, 1932 to May, 1934. (See Table III, Figure III). Observations and conclusions:



1. Season of lightest snowfall, October, 1933 to May, 1934, total snowfall of 2.0 inches.
2. Season of heaviest snowfall, November, 1937 to April, 1938, total snowfall of 36.1 inches.
3. Average total snowfall for the past ten-year period, 19.0 inches.
4. Snowfall may be expected for at least six months of the year, between November through April.
5. Months absolutely free from snowfall, July and August.
6. Months relatively free from snowfall, May through September.
7. Average snowfall per snowfall month (November to April) 3.2 inches.

A study of the monthly and annual precipitation, and the monthly and seasonal snowfall leads to the conclusion that there is a possibility that the ground may freeze as it has occurred in the past years. Hence, root vegetables and potatoes cannot be left in the ground without injury late in the season.

The harvesting of truck crops must be done promptly and quickly lest the products pass their prime and become inferior in quality. After harvesting the deterioration of perishable vegetables is rapid; therefore we must find adequate means to prevent spoilage and waste. No means of accomplishing this exists except by shipping out to other W. R. A. centers and by consumption in the Project. Also, due to the short, unfavorable, climatic conditions, we are compelled to produce and preserve a vast amount of perishable commodities for year round needs within a relatively short period of two months.

At the present time other W. R. A. centers are still in the state of settlement and can consume our surplus productions; however when they begin to produce their own food products, it will not be necessary to ship out our vegetable crops to them, thus making more acute the need of a means of preserving the surplus.

III. The handling of fresh vegetables is handicapped at the present time as many of the products in question are easily perishable, and are not adapted to handling in a fresh state. Fresh shipments usually require refrigeration, and there is a definite limit to the amount of refrigeration space available for this purpose and it is also probable that transportation difficulties due to the limitations being laid on the nation's shipping facilities will be encountered.



IV. Dehydration may be the means of salvaging many products that would normally go to waste. This applies particularly to off-grade vegetables called out from fresh shipments. These could be converted into excellent dried products.

V. Tule Lake Project should dehydrate vegetable products during the war period to aid in national economy. This Project is far removed from the populous centers of consumption and it is likely that transportation facilities will be hard-pressed. Dehydration would relieve much of the strain incident to the transportation of bulkier and more perishable products requiring no specialized equipment such as refrigeration or refrigerated cars. Many of the dehydrated food products can be stored for about a year.

Recent contacts with Mr. R. S. Hollingshead, Assistant Chief of Agricultural Chemical Research Division, The United States Department of Agriculture; Mr. E. M. Chase, Chairman of Dehydration Committee of Western Regional Research Laboratory, Albany, California; Dr. E. M. Mrak, Division of Fruit Products, College of Agriculture, University of California; Mr. C. F. Zimmer, Chief Agricultural Engineer of the Regional Office in San Francisco, California; Mr. E. J. Utz, Chief of Agricultural and Production of W. R. A. Office in Washington, D. C.; indicate that many are willing and anxious to see us participate in the production of dried commodities for the war effort. They point out, however, that definite information is needed before substantial progress can be made and the priority for the dehydration equipment obtained which is very difficult at present.

New equipment will be necessary if dehydration is undertaken. As the situation now stands, Tule Lake Project can prepare to turn out quantities of dried vegetables if adequate equipment is provided. Equipment should include washers, trimmers, cutting tables, slicers, shredders or dicers, peelers, inspection tables, blanchers, dehydrater, and packaging equipment; but the extent of the necessity of food preservation equipment at Tule Lake Agricultural Project shall need to be determined by the Agricultural Marketing Administration, Washington, D. C., the agency controlling priority on such equipments.

This report was compiled with a foresight and appreciation of the need for dehydration equipment at Tule Lake Agricultural Project.