

MANZANAR RELOCATION AREA
Manzana r, California

#112

11.312 B

January 29, 1943

MEMORANDUM TO: Office of Reports (Roy Takano)

SUBJECT:: Quarterly report from October 1 to December 31

With the harvesting of carrots and daikon the latter part of December, all crops have been harvested. It was estimated that about 717 tons of vegetables, melons, and pears were harvested with a value of \$43,500.00, based on the Los Angeles market reports. All the products were consumed at the center with the exception of three carloads of nappa and two carloads of watermelon which were sent to other relocation centers. No planting was done after September on account of danger from frost. The cabbage crop which was planted on Sept. 15 mainly as an experiment to see how vegetables will stand under fall conditions here, was very poor on account of the late plantings. On October 29, frost damage to part of the crop was done, but the tomato crop was mostly saved by picking them green.

Only about one third of the available acreage was utilized due to the shortage of farm implements, makeshift irrigation system, and the belated planting, but for 1943 we have laid plans for planting a little more than 300 acres. Since the latter part of October, the clearing of approximately 150 acres of new land on the north side of the center has been started. Work also has been begun clearing new land, discing, and plowing of harvested areas on the south fields, starting November 1, making a total of about 225 acres developed. During the next few months the agricultural workers will devote considerable part of their time in installing new irrigation lines and ditches and improving existing irrigation facilities.

Our soil chemist has started making analyses of the various sections of the farm lands and his suggestions for the proper kind of fertilizers to use will greatly aid in the success of the farm project. Tests so far made on the new lands on the north side of the center show them to be slightly alkali, in general, and showing a high Potassium and Phosphorus content, but a very low Nitrogen content. Also the soil is sandy and low in organic matter.

10#108

The Jackrabbits caused a great amount of damage to the growing crops during summer, especially to young plants, so we acquired 4 greyhound dogs in October, and they have helped to partially control this type of pest.

Our orchard crew of 22 men are nearly finished with the pruning of 600 apple and 400 pear trees, and will be ready to spray the trees when the spraying rig arrives. The plant propagators are collecting and preparing soil for the hot beds for raising young plants, and also constructing hot beds.

An adjustment committee was organized, composed of the key members of the Agricultural Division, whose object is to endeavor to justly make decisions and recommendations that will improve working conditions, moral and efficiency within the Division, and attend to any other matter that may be brought to their attention in order to increase the quantity and quality of production. This committee in so sense replaces or interferes with the Manzanar Fair Practice Committee.

Plans were laid to start a chicken and a hog project since last summer, but due to the lack of materials for both projects, neither have been started.

Farm Superintendent

11.312 B

MANZANAR WAR RELOCATION AREA
Manzanar, California

Agricultural
Division

June 30, 1943

MEMORANDUM TO: Office of Reports
(Roy Takeno)

SUBJECT: Quarterly Report Covering Period From
April 1, 1943 to June 30, 1943

The fourth quarter of the Fiscal Year 1943-1944 was probably the busiest quarter of the year, due to the activities of preparing land for planting, irrigating and dependent types of work.

The weather was exceptionally good during April. The minimum thermometer reading was 34° (F.) and the maximum reading was 87° (F.). Spring winds that usually start early in April and continue through a good part of the month were not so severe as was expected. A total of only two and one half days of field work was lost due to wind and dust. Warm weather in the Sierra Nevada Mountains started the snow pack melting about thirty days ahead of schedule. Planting of crops was started early in April. A considerable amount of personnel shifting was necessary within the Division during April due to a considerable number of workers going out on seasonable work, relocation and into the armed forces. The average number of workers in April was one hundred fifty two.

Planting activities were increased during May. Temperatures for the month were recorded with a low of forty and a high of ninety nine. On May seventh a severe north wind blew for approximately one day and one night. This wind was very cold and exceeding dry. Moisture was drawn out of plants so rapidly that it could not be replaced fast enough to prevent damage to new growth. Ten acres of green peas were wind burned which caused them to stop growing and start to produce blossoms. Approximately one fifth of a normal crop was produced by this field. Due to workers leaving the Agricultural Division during April the average number of

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personnel for May was reduced from one hundred fifty two in April to one hundred thirty two in May. With the increased planting activities this caused quite a severe labor shortage. No additional male workers could be found by the employment office for this Division so plans were started to recruit female field workers to overcome the shortage.

The high low temperature recordings for June were as follows. High 99 degrees, low 44 degrees.

Personnel numbers were as follows. Male, one hundred twenty four, female thirty five. Total workers during June was one hundred fifty nine. This number included all Evacuee personnel, office, warehouse, nursery, equipment men, supervisors and field workers.

On June 1st, a sand and wind storm lasting about ten hours caused the following damage.

Crop	Estimated	
	Complete Loss	Est. Average Crop Damage
Green Peas	10 acres	100%
Peppers, Bell	20,000 plants	90%
Peppers, Chili	9,000 plants	90%
Beans, Snap	None	50%
Tomatoes	2,500 plants	40%
Potatoes, Irish	7 acres	30%
Egg Plant	1,000 plants	15%
Potatoes, Yam	5,000 plants	10%
Vegetables, bunch	None	10%
Melons	None	10%
Cucumbers	None	5%
Squash	None	5%
Dry Onions	None	None
Balance of Crops	None	Slight

As a result of this severe storm it is expected that the total yields will be smaller than originally estimated and that harvest dates will be delayed from two to four

weeks. As soon as the storm was over irrigation water was applied to all fields that looked like they could be saved and replanting on those past saving was commenced. It was not possible to replace all plants destroyed as the pepper and egg plants left in the seed beds were not enough to replace those killed. Also, no more Irish Potato seed was available. Plenty of tomato and sweet potato plants were available and these were planted as soon after the storm as possible.

Leveling lands for the hog and chicken projects was started during the later part of June.

Excavation for vegetable storage pits was started June 29th.

Arrangements were made to receive four hundred head of beef cattle from Gila about September 1, 1943. In order that feed for these cattle will be available when they arrive, wild hay lands were irrigated in June and work was also started on repairing and constructing pasture fences.

H. R. McConnell
Farm Superintendent

7- AGRICULTURAL PRODUCTION DIVISION

Quarterly Progress Report

First Quarter Fiscal Year 1943

081, 142

H. 312B

Narrative

Agricultural activities at the Manzanar Relocation Center were considerably handicapped during the months of July, August, and September due to a serious shortage of needed agricultural equipment at the beginning of the quarter, and an improvised irrigation system during the full quarter. Irrigation water is now available in sufficient quantity and as soon as an adequate distribution system is constructed, our present difficulties in irrigation will be eliminated. Our average amount of growing crop during the quarter was one hundred and twenty acres of vegetables, and approximately four hundred neglected pear trees and six hundred apple trees which were in fair and poor conditions.

At the beginning of the quarter, both the Guayule and the Propagating nurseries were under the supervision of the Agricultural Division. During the quarter, however, the guayule nursery was transferred from the Agricultural Division to the Education Section and placed under the supervision of Dr. G. Carter. Jackrabbits caused a great amount of damage to the growing crops during the summer, especially to young plants in the new fields. It has been estimated that at least \$5,000 worth of damage to crops has been done by these rabbits. Three drives were held during the summer which eliminated over two hundred rabbits. Approximately two hundred more were killed by

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shooting. Poisoned grain was first tried but due to so many green vegetable fields the rabbits did not eat much of the grain. Doves, quails, and other game birds did eat it, so this method was discontinued. Arrangements have been made to obtain several greyhound dogs with which we hope to partially control this type of pest.

Only about one third of the available acreage was utilized due to the shortage of farm implements and the belated planting. This partial planting of available land has worked out very well as our present makeshift irrigation system would not have taken care of more acreage during our period of low gravity water.

Japanese agricultural workers, including field foremen, nursery men, office workers, and warehouse men during the quarter averaged one hundred and thirty-six. All workers in this Division are very satisfactory, are very interested in their work and all are more or less competing with their respective fields for quantity and quality production. No strikes or labor shortages have occurred in this Division. Difference of opinions have arisen between Japanese foremen and crew members but have been quickly and satisfactorily settled at regular and special meetings held for this purpose.

Plans were laid to start a chicken project and a hog project during this quarter but due to the lack of materials for both projects and the lack of approval for the hog project, neither have been started. All requisitions for materials for both projects were submitted by the Agricultural Division during June of this year.

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Statistical

(Approximate)

Acreage cleared -- 185

Acreage plowed --- 140

Acreage leveled -- 140

Acreage planted -- 120

Number of fruit trees receiving care--1000

Acreage planted to Melons -----20

Acreage planted to Vegetables -----84

Acreage planted to Tomatoes -----16

Total -----120

Financial

Returns based on Los Angeles

Local Market Reports-----Melons-----\$6,139.15

Vegetables-----15,683.95

Tomatoes----- 1,412.25

Fruit-----1,871.65

\$25,107.00

It was estimated as of September 30, 1942, that approximately \$8,935.00 worth of vegetables remained in the fields and that most of these will be harvested if freezing weather holds off another ten days.

Four carloads of Melons and Vegetables were raised for shipment to other centers during the quarter.

WAR RELOCATION AUTHORITY
Manzanar, California

11.312 B

March 25, 1943

MEMORANDUM TO: Office of Reports
(Roy Takano)

SUBJECT: Quarterly report covering period from
January 1, 1943 to March 31, 1943

Activities of the Agricultural Division during the 1943 Fiscal Year, 3rd Quarter, were chiefly concerned with leveling additional agricultural lands and constructing rock masonry lined irrigation canals and ditches. Approximately four (4) miles of ditches were lined, eighty concrete head gates were constructed and three (3) miles of open ditches completed. Over two hundred (200) acres were leveled and four hundred acres were plowed and prepared for planting.

Both commercial and barnyard fertilizers were ordered and delivered which will take care of our fertilizing program as planned for the 1943 growing season. All seeds for the 1943 season were ordered and delivered. Extreme difficulty was encountered in obtaining Daikon, sweet potato, Irish potato and dry onion seeds. Six states were contacted for sweet potato seed, but no bids were received. These potatoes were finally received through the Manzanar Mess Steward and planted in hot beds about March 15th. Enough sweet potato plants are expected for thirty (30) acres of field planting. The following plants were started in hot beds and cold frames during March, sweet potato, egg plants, tomatoes, chili peppers, and bell peppers. Seed plantings in fields were started during March. First plantings were green peas, followed by carrots, spinach and other of the hardier types of vegetables.

Planting of twenty five (25) acres of alfalfa was started to assist in supplying stock feed.

Approval for starting a hog project and a chicken project was received from Washington during the quarter with authorization to purchase necessary materials for construction of buildings, yards, etc. The Public Works Division, who's responsibility it is to obtain materials and construct the required buildings, etc., have promised to obtain materials and complete construction work as soon as they are able.

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The snow pack was slightly above normal during March which will add materially to our supply of irrigation water diverted from the streams for field use. However, as these streams become very low in the late summer, it will be necessary to supplement this stream water by an additional supply pumped from wells.

Approximately one hundred (100) workers were carried on the agricultural payroll during the quarter.

On March fourteenth a grass and brush fire started from an undetermined origin approximately one half mile south of the Center, and burned over about three hundred (300) acres of grass and tree land. No damage was done by the fire to the Agricultural Project other than the loss of about two hundred acres of pasture grasses.

During the quarter a substantial number of agricultural workers left for relocation and several more transferred from the Agricultural Division to other Divisions and Sections within the Center to replace workers who have left Manzanar. By the time the growing and harvesting season gets into full swing it may become necessary to place some women on the payroll in order to properly harvest the crops. At present only four women are on the Agricultural payroll. These women are engaged in thinning and transplanting young plants now in the nursery, being raised for field planting later.

H. R. McConnell
Farm Superintendent

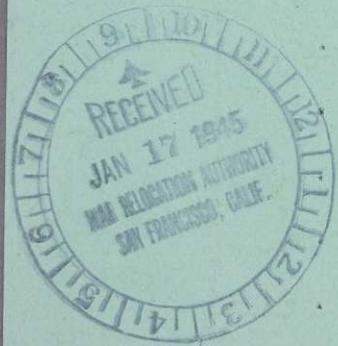
WAR RELOCATION AUTHORITY
Yearly Summary Report - Crops

For Year Ending DECEMBER 31, 1944

MANZANAR RELOCATION 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)
Alfalfa	(22) 16	Cover Crop 6	32	176,000	15,500	176,000	0	0	.01
Asparagus	1½	0	00	0	0	0	0	0	0
Beans, Table	10	0	10	46,753	4,675	46,753	0	0	.042
Beets, Table	3	0	3	56,260	18,753	56,260	0	0	.02
*Cabbages	27	0	17	134,520	7,913	134,520	0	0	.017
*Carrots	(6) 22½	0	16	246,006	15,375	131,958	34,048	80,000	.018
Corn, Sweet	12	0	12	52,840	4,403	52,840	0	0	.024
Corn, Milo	10	0	10	10,000	1,000	10,000	0	0	.04
Cucumbers	7	0	7	74,210	10,601	74,210	0	0	.02
*Daikons	13	0	9	112,421	12,491	112,421	0	0	.015
Eggplants	6	0	6	69,634	11,605	69,634	0	0	.04
*Gobo (Burdock)	(1½) ½	0	1½	23,550	13,457	23,550	0	0	.032
*Karashina	5	1	3	22,925	7,642	22,925	0	0	.018

* Harvest not finished.

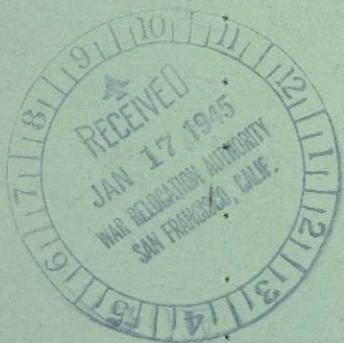


WAR RELOCATION AUTHORITY
 Yearly Summary Report - Crops
For Year Ending DECEMBER 31, 1944MANZANAR RELOCATION Center

Page 2

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)
Lettuce	14	5	9	53,055	5,895	53,055	0	0	.02
Melons, H. B.	10	0	10	88,100	8,810	88,100	0	0	.03
Melons, H. D.	10	0	10	63,750	6,375	63,750	0	0	.035
*Nappa	(1) 8	0	6	115,770	19,295	115,770	0	0	.017
*Onion, Green	(1½) 6½	2½	3½	66,841	19,097	66,841	0	0	.013
Onion, Dry	(4) 22	0	26	249,601	9,600	249,601	0	0	.018
*Parsley	½	0	¼	885	3,540	885	0	0	.04
Pepper, Bell	2	0	2	18,334	9,167	18,334	0	0	.04
Pepper, Chile	4	0	4	30,177	7,544	0	0	30,177	.05
Potato, Irish	45	0	45	561,720	12,483	561,720	0	0	.02
Potato, Sweet	8	0	8	9,618	1,202	9,618	0	0	.026
Peas, Green	16	0	16	38,357	2,397	38,357	0	0	.07
Radish, Icicle	8	0	8	74,070	9,259	74,070	0	0	.023

* Harvest not finished.



WAR RELOCATION AUTHORITY
Yearly Summary Report - Crops

For Year Ending DECEMBER 31, 1944MANZANAR RELOCATIONS Center

Page 3

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)
Rutabagas	(4)	0	4	13,950	3,488	13,950	0	0	.015
Shinkiku	$\frac{1}{2}$	$\frac{1}{2}$	0	0	0	0	0	0	0
Spinach	8	$3\frac{1}{2}$	$4\frac{1}{2}$	29,246	6,499	29,246	0	0	.022
Squash, Kabocha	3	0	3	9,090	3,030	9,090	0	0	.03
Squash, Banana	5	0	5	55,188	11,038	55,188	0	0	.02
Squash, Hubbard	5	0	5	19,456	3,891	19,456	0	0	.03
Squash, Italian	2	0	2	1,965	983	1,965	0	0	.016
Squash, Summer	1	0	1	1,330	1,330	1,330	0	0	.018
Swiss Chard	1	0	1	4,800	4,800	4,800	0	0	.02
Takana	2	0	2	4,170	2,085	4,170	0	0	.02
Tomato	12	0	12	169,720	14,143	169,720	0	0	.025
*Turnip	($2\frac{1}{2}$) 9	0	$9\frac{1}{2}$	103,215	10,864	67,965	35,250	0	.018
Uri	4	0	4	37,045	9,261	37,045	0	0	.016

* Harvest not finished.



RECEIVED
JAN 17 1945
WMA RELOCATION AUTHORITY
SAN FRANCISCO, CALIF.

WAR RELOCATION AUTHORITY
Yearly Summary Report - Livestock

For Year Ending DECEMBER 31, 1944

MANZANAR RELOCATION

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. lb.
No.	Av. Wt.	No.	Av. Wt.	No.	Av. Wt.	No.	Av. Wt.	No.	No.			
290	150	0	0	1,484	89	0	0	0	0	1,217	184	17
Death Loss						Closing Inventory						
Under 6 wks.			Over 6 wks. old			Feeders		Breeding Stock				
No.	No.	Av. Wt.	No.	Av. Wt.	No.	Av. Wt.	No.	Av. Wt.	No.	Av. Wt.		
0	101	95	456	150	0	0						

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.
0	5,964	0	5,963	9,000	0	0	0	53430	37½	9,248	3	29
Death Loss						Closing Inventory						
Under 6 wks. No.		Over 6 wks. No.		Chicks No.	Pullets No.	Hens No.	other No.					
1,078	2,110	0	1,000	7,491	0							

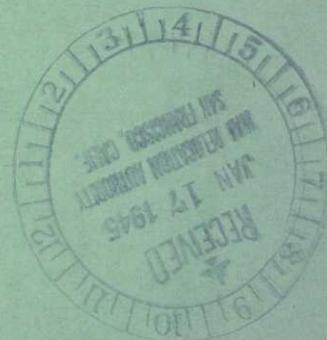
(Up and over)

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.	Av. Dr. Wt.	Av. Pr. pr. lb.	No.	Av. Wt.	Av. Pr. pr. lb.	No.	Av. Wt.	No.	Av. Live Wt.
196	900	95	820	76	Cows 285	447	16 $\frac{3}{4}$	0	0	0	6	820	-	-
					Calves 76	137	19							

OTHER



Manzanar, California
January 5, 1945

Agricultural Section
Annual Report
Calendar Year 1944

Narrative

The 1944 calendar year was a very satisfactory agricultural year for this district. Spring weather came at about the expected time and fall frosts were delayed by several weeks after the time they were expected to arrive. Severe damaging winds which are the greatest drawbacks here in the growing of vegetables usually occur so frequently during the spring months that considerable damage results from them. In 1944, although winds were frequent they did not reach a damaging velocity, which was very advantageous to the Manzanar farm. A high temperature recording of 108 degrees was reached on August twelfth but due to careful and efficient handling of irrigation water, all heat damage to field crops was avoided, with the exception of a few fields of lettuce, green peas and varieties of other vegetables that were intentionally planted at the wrong time of the year, on the gamble that at least part, if not all of a crop could be produced for Center consumption. Very few acres of these off season plantings resulted in crop failures but several acres produced light yields that would not have been profitable in commercial farming.

The irrigation water available during the year was ample to care for all crops by the rationing of water used within the Center.

Feed crops consisting of alfalfa and milo maize were grown and average yields resulted. Due to the high cost of irrigation water these crops did not show a profit. They did however, produce food for livestock, which was very essential to the operations of the projects in general and the chicken project in particular.

No vegetables or feed crops went to waste here during 1944. Surpluses of vegetables were small and all such surpluses were either shipped to other Centers or sold on the open market. All cull vegetables were fed, either to cattle, hogs or chickens.

Of the three livestock projects conducted during the year, the hog project was most successful and the

cattle project the least successful. Comparative ratings of the three projects would read as follows: hog project very good, chicken project good, cattle project poor.

A cattle project at Manzanar, which would show a profit, was a debatable subject for the first year that the Center was in operation. Mr. Walter Emerick, at that time in charge of livestock operations and assigned to the San Francisco Regional Office, was very optimistic regarding a cattle project here. Mr. Utz, of the Washington Office, did not agree with Mr. Emerick's opinions. We, here at Manzanar, after considering opinions of both San Francisco and Washington office representatives, and after obtaining opinions of several local cattle raisers, were undecided about the possibility of showing a profit with a feeder cattle project. Consequently no action was taken to open a project until a letter was received from the Washington Office, in the summer of 1943, advising that a beef, meat shortage was anticipated for the late winter and early spring of 1943 and 1944. In November and December of 1943, two hundred head of feeder cows were purchased. In March of 1944, one hundred head of cows and steers were purchased, and money requested for the purchase of two hundred head in June and two hundred head in August. The proposed purchase of the last four hundred head was cancelled before June of 1944, due to the poor gains that were being made by the cows already on hand. In the early spring, the native grasses here have a tendency to badly scour beef cattle, causing them to lose weight and putting them in poor condition for butchering. In May, June and July, native feed is in excellent condition and in June and July, cattle are fat and in good condition. By August, feed is dry and cattle start to show signs of becoming alkali by the latter part of that month. During September, October and November, cattle show the effects of alkali and lose weight very rapidly, which puts them in poor shape for slaughtering and in a weakened condition to start the cold winter months. After trying the four seasons here with approximately three hundred head of feeder cattle, it can definitely be stated that a feeder program where it is necessary to butcher every month in the year, cannot be made to pay out. If it were possible to carry cattle throughout ten months of the year without slaughtering, and do all slaughtering in the months of June and July, the results would be much better. Even then however, supplemental feeds would be necessary for fall feeding, to counteract the

heavy alkaline content of native grasses. During the fall of 1944, in order to hold the weight of cattle up to butchering standards, Manzanar fed alfalfa hay, cull potatoes, cull carrots and cottonseed cake in large quantities. Local cattle men do not hold cattle in the Owens Valley the year around. All local cattle are moved out of the valley into the mountains about May 15th and are brought back into the valley about October 1st. This practice of grazing cattle in the mountains during the summer and in the valley during the winter, seems to work out very well and very little trouble with alkali is noticeable. The high alkaline content of fall grasses does not seem to bother horses or mules.

The chicken project was very successful during the year with good egg production, many thousands of pounds of meat chickens, very little diseases and a mortality rate below the average for the state of California.

The hog project was the most profitable, for the amount of money invested of all the stock projects. One of the reasons for a successful year was the fact that an excellent source of supply of feeders was maintained in the state of Nevada, with one man supplying all feeders purchased from that state. Of the 1,484 head of feeders purchased in Nevada during 1944 only three head were lost in transit.

No difficulties with labor were encountered during the year. Due to a heavy migration of furlough workers last spring and summer, a large proportion of women field workers were employed. When the fall harvest started it became necessary to work school children in the fields on Saturdays and Sundays, in order to properly harvest and store all of the crops.

The first heavy fall frost arrived on November twelfth. On the following night, temperatures dropped to 25 degrees above zero. This cold snap stopped production of such crops as tomatoes, peppers, eggplants, cucumbers, etc. However, due to a late fall, most of the above varieties of vegetables were reaching the end of their productive period and a very low tonnage was lost due to freezing.

H. R. McConnell
Chief, Agriculture



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The first heavy fall frost arrived on November 22nd. On the following night, temperatures dropped to 25 degrees above zero. This cold snap stopped production of such crops as tomatoes, peppers, eggplants, cucumbers, etc. However, due to a late fall, most of the above varieties of vegetables were reaching the end of their productive period and a very low tonnage was lost due to freezing.

H. R. McConnell
Chief, Agriculture



Mr. H. R. Mc Connell
Farm Superintendent

WAR WORKS DIVISION
Main Office, Whse. #24
Manzanar Relocation Center
Manzanar, California

~~Alfred Haber~~
Director

Justus G. Sato
Asst. Director

Plant Propagation

Monthly Report
ending
July, 31, 1942

11.312C

I. Work Attempted

A. Germination of Tree Seeds.

1. Pine
2. Catalpa
3. Elm
4. Cypress
5. Cedar
6. Pittosporum

B. Germination of Shrub Seeds.

1. Pyracantha
2. Cotoneaster
3. Ligustrum
4. Arolia
5. Wisteria
6. Prunus
7. Froxinus

C. Distribution of Annuals.

D. Transplanting of Seedlings.

E. Collecting of Seeds, soil, and leafmold.

II. Work Accomplished.

A. Plotting of Trees.

1. 1000 Catalpa trees potted.
2. 500 Prunus (catalina cherry tree) potted.

B. Potting of Shrubs and flower plants.

1. 800 Wisteria Vines.
2. 1,600 Chrysanthemum plants
3. 700 Fremontia (Calif. native plant)

C. Transplanting of seedlings into flats of 100 each.

1. 20 flat of Monterey pine.
2. 20 flat of Black pine.
3. 15 flat of miscellaneous flower plants.

D. Plant Distribution.

1. 15 flats of annuals were used by Mr. Wada in landscaping the Administration Building.
2. 10 flats of annuals were used by the gardener of Children's village.

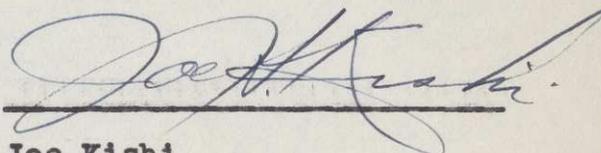
E. Additional 10,000 pines and cypress trees have been sown for germination.

Plant Propagation Monthly Report ending
July 31, 1942

11.312C

Page 2.

- III. Future plans of the nursery are to pot up and care for the shrubbery which have germinated during July, 1942. A large percentage will be taken care of in August.



Joe Kishi
Propagating Nursery Section

HOG PRODUCTION

57.102

Needs:

Consumption of pork here in Manzanar amounts to ten thousand pounds of fresh pork and the use of ham and bacon comes to five thousand pounds per month.

The cost of pork to the mess division at the present is 27 cents per pound, and by our department undertaking this project the only cost will be the initial expense, the feed being completely supplied from the garbage.

How Produced:

A buyer will purchase young feeder pigs at about an average of 75 pounds per each that have already been changed to a garbage diet, which will eliminate the process in the period of gradually changing from a grain to garbage diet.

The cost per pound will be approximately 17 cents f.o.b. which is a few cents higher than the cost of sucklings but will bring down the mortality rate which occurs during the period of feed change and will eliminate the expense of feeding grain. The herd will be fed a complete garbage diet which will come from the kitchens enough to accommodate 400 heads of swine.

The waste in the kitchen will produce approximately 350 pounds of pork a day. At this rate the camp can have pork on their menu three days out of the week or two days and the third day will be converted into ham and bacon.

Equipment:

Ten hog pens.
Each pen having a cement feeding floor. Dimensions about 24' x 9'. The yard will cover 960 square feet per pen surrounded completely by a fence. Construction of these pens will be com-

PRODUCTION DIVISION

Warehouse #24
Manzanar Relocation Center
Manzanar, California

57.102

HOG PRODUCTION

pletely erected by construction department in
the personnel of the hog division.

Personnel:

The Maeda Brothers here in Manzanar will be in
charge of this division

The other farm hands will be trained to assist
these two men.

Arthur Hiraga
Livestock Planning Section

Production Division
Project -- Hog Production
Foreman - S. Maeda
Ass't. Foreman - T. Maeda

57.102

REPORT ON HOG PRODUCTION

Running water, the most important item to the well being of a hog, remains in question. Through observation, we suggest the possible solution through a cement ditch, approximately one foot in width with continuous running water, tapped from the nearest stream. Inasmuch as a pipe line would freeze during the cold spell, and water being essential, this trough would well serve its purpose. Sanitation would also be taken care of easily through this method. The approximate cost of the ditch would depend on further plans, which would be a small item in contrast to the project.

A feeding trough of the following measurements would be built easily of concrete and metal:

8 foot in length
2 foot in width
1 foot slope to one end
Concrete of 4" thickness
6 inches high curved sideways

The ideal season for young hogs is recommended as June and July. Hogs require the minimum of expense and care through this period. 200 Head of hogs could be purchased for approximately 17¢ per pound or a total cost of approximately \$1000. We recommend the California Commission Co. of the L. A. Union Stockyards as a possible dealer. Mr. Warren, a representative, is reputed to be the largest hog dealer in southern California.

The initial cost and upkeep for the first five weeks, the breaking in period, would be the only expense involved in the project. Upkeep would include cholera injections of hogs, approximate cost per head -- 40¢, raw barley and grain, 16 sacks per day, cost 2.50 per sack and 10 gals. of disinfectant at \$20.00.

PRODUCTION-DIVISION

57.102

H. R. Mc Connell
Superintendent

Warehouse #24
Manzanar Relocation Center
Manzanar, California

Aiji Hashii
Supervisor

Justus G. Sato
Ass't. Supervisor

REPORT ON HOG PRODUCTION

With 10,000 persons here at the Center, it is estimated enough feed for 500 hogs is derived from the kitchen left-overs.

With hogs breeding two times a year, seven hogs to a litter, it is easy to foresee a stock of 500 hogs with a years time. Brooder pens and heaters will of course be necessary, depending on the construction of the pens. Pens of approximately 7 foot square are satisfactory. Due to different elematic conditions here at the Center, it is necessary for us to use actual experiments for further construction.

We predict a large net income from the Hog Raising Industry with a minimum expense. Excess hogs marketed (400) would net a profit of \$10,000 at a market price of \$25. to \$30. per head.

Foreman - J. Maeda

Ass't. Foreman - T. Maeda

57.102

PRODUCTION DIVISION

H. R. Mc Connell
Superintendent

Warehouse #24
Manzanar Relocation Center
Manzanar, California

Aiji Hashii
Supervisor

Justus G. Sato
Ass't. Supervisor

ITEMIZED ESTIMATED COST

HOG FARM PROJECT

PROD. DIVISION

Wood Fence for 100 Hogs: 3000 board feet (No. 2 lumber) @ 60. per 100	\$120.00
Hog Shed 1500 board feet	90.00
Feeding Floor - Cement 1000 sq. ft. 4 unit thickness - contract price 12¢ per sq. ft.	130.00
Watering Trough - Cement 4 in. thick 300 sq. ft.	36.00
Pen Posts 4" x 4" x 6' - 100 pieces - approx. cost	50.00
8 Rolls Roofing Paper (shed cover) @ 2.50 per roll	20.00
Sheep Dip - (disinfectant) 10 gals. \$20.	20.00
1 Ton - sandust or straw \$15. ton	15.00
100 Young Hogs (Hampshire) 11.00 or 12.00 each	1200.00
Total Initial Cost	1200.00
	<hr/> \$174 1.00
Later Needs: 30 Brooder houses will be needed.	
Cost of 1 brooder house: 250 bd. feet - 60. per 1000 ft.	\$15.00
Cement floor water trough 70 sq. ft. (4" thick)	9.00
	<hr/> \$24.00

PRODUCTION DIVISION

57.102

H. R. Mc Connell
Superintendent

Warehouse #24
Manzanar Relocation Center
Manzanar, California

Aiji Hashii
Supervisor

Justus G. Sato
Ass't. Supervisor

ITEMIZED ESTIMATED COST

HOG FARM PROJECT

PROD. DIVISION

Recommend alfalfa for newborn hogs could project
50 acres alfalfa for this purpose. All labor for project
to be done, carpentering, cementing, etc., will be taken
care of by Mr. Maeda and Crew.

S. Maeda
Project Foreman

T. Maeda
Ass't. Foreman

Approved:
Henry S. Ishizuka
Planning Section

57.102 ~~XXX~~

PIG FARMING

SHOTARO MATSUMURA
221

FOREMAN 'B'

PIG FARMING

Pig farming was one of the most interesting experiences I've had. I could write a complete volume about pigs but am giving the following brief points about pig farming.

TYPES OF PIG

One of the best kind of pigs known in the market at the present time is Portland China. This type of pig is easy to raise. Within six to seven months it will attain the weight of around one hundred seventy to two hundred pounds.

BREEDING PIGS

The male pig is called a boar and the female, a sow. The selection of these breeding pigs is very important because it makes a large difference in rate of breeding and the number in the litter and also in their temper. Consanguineous breeding will also lower the standard of quality and the growth of the young born.

FEEDING

Pigs when released on alfalfa ranches are the easiest to raise and the mortality rate is very low. The conditions and situation here do not permit such raising in the above method, however, the plan and method submitted in raising of these pigs are just as suitable as raising on alfalfa ranches. The type of food fed the pigs is an important factor. In study of the mess hall garbage here, this garbage is found to ^{be} excellent pig food-- much better than that found in city garbage. The utilizing of this garbage in feeding will prove to be an excellent factor in the growing of the pigs. Experience has proved that this kind of garbage to fatten these pigs quite rapidly and keep their mortality down.

Shutaro Matsumura

Foreman 'B'

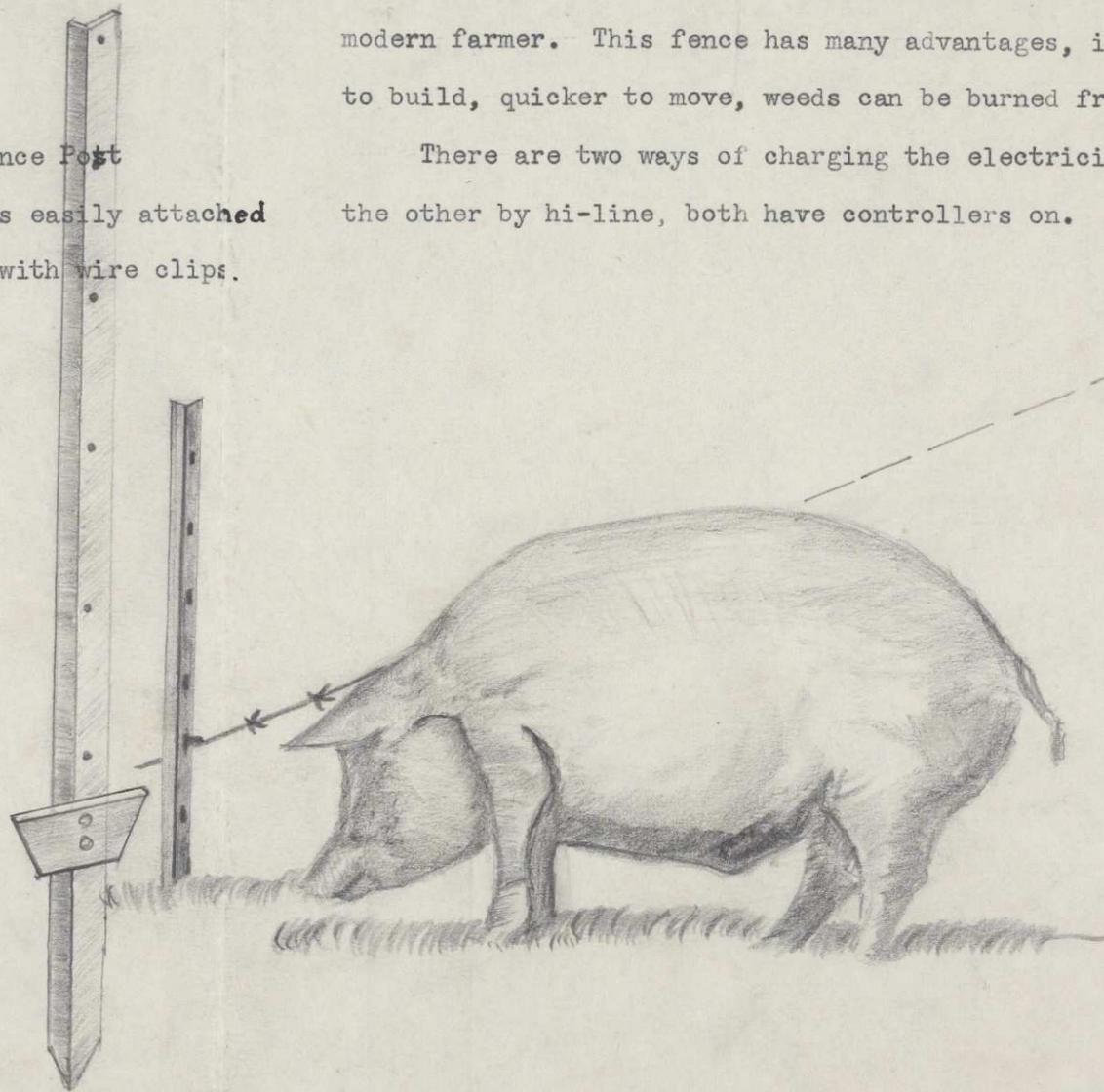
ELECTRIC FENCE

Electric fence is relatively modern fence. which has been used among modern farmer. This fence has many advantages, inexpensive, fences easier to build, quicker to move, weeds can be burned from under fence.

Electric Fence Post
insulators easily attached
to posts with wire clips.

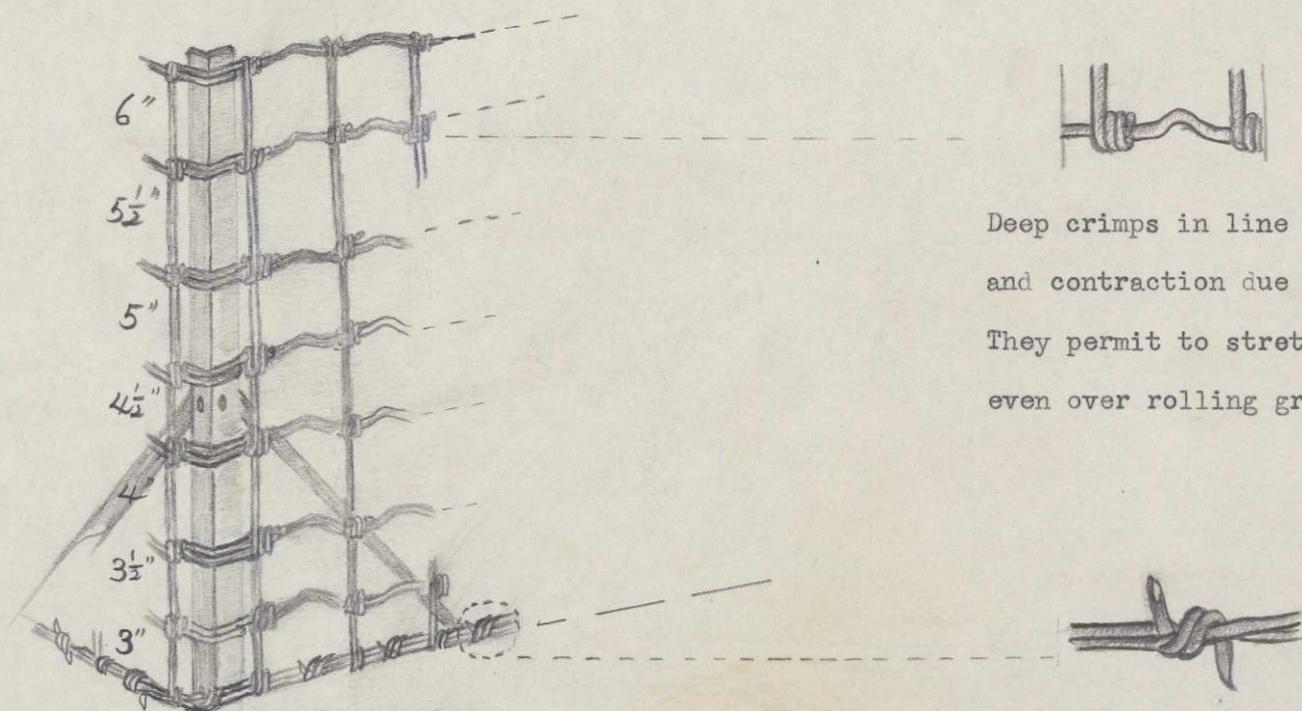
There are two ways of charging the electricity. One is by battery and the other by hi-line, both have controllers on.

SHUTARO MATSUMURA
FOREMAN 'B'



HINGE-JOINT BARBED-BOTTOM HOG FENCE

SHUTARO MATSUMURA
FOREMAN 'B'



Deep crimps in line wires allow for expansion and contraction due to temperature changes. They permit to stretch the fence tight, even over rolling ground.

Built to take hard use. Will "give" when crowded against and return to normal position when pressure has been released. Ends are flattened down so as not to injure animals.

Egg Plant

Report Agriculture Green Onion

August

<u>Date</u>	<u>Box</u>
16	1
24	1
29	2

September

2	2
6	1
9	3
10	2

Total 12

Squash

July

<u>Date</u>	<u>Box</u>
16	4
17	1
19	2
22	2
24	2
26	2
28	2
30	3

August

2	2
4	2
6	3
10	2
12	2
14	1
17	2
19	3
22	1
24	2
26	1
29	1

Total 42

July

<u>Date</u>	<u>Crate</u>
26	1
27	1
28	1
29	1
31	1

August

2	1
3	2
4	1

Total 9

Beets

July

<u>Date</u>	<u>Crate</u>
20	2
21	1
22	2
26	2
27	3
28	2
29	2
31	1

August

2	1
3	1
5	2

Total 19

Beans

July

<u>Date</u>	<u>Box</u>
12	4
16	2
20	3
24	2
28	2

August

2	1
10	1

Total 15

CornAugust

<u>Date</u>	<u>Box</u>
16	6
18	2
24	3
27	4
28	5
31	5

September

1	6
3	5
4	7
6	6
9	4

TOTAL	53
-------	----

WatermelonJuly

<u>Date</u>	<u>Each</u>
25	7
26	2

August

2	2
4	3
5	2
9	9
10	45
11	5
12	8
14	10
16	6
17	8
18	10
19	4
22	6
23	5
24	7
25	6
26	4
29	3
31	6

September

2	4
4	5
Total	167

CarrotsAugust

<u>Date</u>	<u>Crate</u>
1	2
5	4
9	2
10	1
11	2
12	1
13	2
17	2
19	3

Total	19
-------	----

Chile PepperAugust

<u>Date</u>	<u>Box</u>
17	1
24	1
26	1

September

2	1
4	1
9	1
Total	6

TomatoesAugust

17	1
24	1
25	2
31	2

September

3	2
4	1
7	2
10	2
Total	15

Swish Chard

Lettuce

July

<u>Date</u>	<u>Crate</u>
17	1
20	1
21	1
22	1
23	1
24	1
27	2
28	1
29	2
30	1
31	1

August

2	1
3	1
5	1
7	1
9	1
10	1
11	1
12	1
13	1
14	1
16	1
19	1
22	1
24	2
26	1
29	1

September

1	1
2	1
4	1
6	1
9	1

TOTAL

35

July

<u>Date</u>	<u>Crate</u>
16	3
17	4
20	2
21	2
22	3
23	2
24	2
26	3
27	4
28	2
29	2
30	2

August

1	<u>1</u>
Total	32

Turnip

July

<u>Date</u>	<u>Crate</u>
16	2
17	1
18	1
21	1
23	1
28	1
29	3
30	2
31	2

August

2	<u>3</u>
TOTAL	17

Radish

August

<u>Date</u>	<u>Crate</u>
19	1
22	1
24	1
26	1
26	1
28	2
30	1

September

1	1
2	1
4	3
6	1
9	1
	<hr/>
	1 5
1st crop	<hr/>
	25
TOTAL	40

51,110

WAR RELOCATION AUTHORITY

MANZANAR, CALIFORNIA

AGRICULTURAL DIVISION

* Enough Seeds on Hand
 ** As Needed for Wind Break.

	Acre- age	No. of Plant- ings	Plant- ing Date	Type of Fertili- zer	Per Acre	Total Tons	Seed s or Plants / Acre	Total Seeds or Plants
1 Beans Green	6	2		Brown Seed Bush	8-10-6	500	1.5	50#
2 Bee ts Table	2	1		Detroit Dk.Red	8-8-6	500	.5	12
3 Cabbage	10	2		Flat Dutch	8-8-4	400	2.0	1
4 Carrots	20	4		Chantenay	8-8-6	500	5.0	5
				Danvers				50
5 Corn Field	25	**		Early Adams	8-10-6	500	6.5	15
6 Cucumber Pickle	5	2		Boston Pickle	8-10-6	500)	2.5	2
7 Cucumber Long	5	2		Klondyke	8-10-6	500)		10
8 Egg Plant	2	1		Black Beauty	8-10-6	600)	1.5	1
	2	1		N. Y. Purple	8-10-6	600)		1
9 Gobo	2	2			8-8-6	500	.5	
10 Melon H. B.	15	2		Hales Best	8-8-4	400	3.0	2
11 Melon Honey Dew	10	2		Green Meat	8-8-4	400	2.0	2
12 Water Melon	15	2		Rattle-snake	8-8-4	500)	6.0	4
"	10	2		Klondike	8-8-4			4
13 Nappa	10	4		Chihili-Chinese	8-8-4	400	2.0	1 1/2
				Cabbage				15
14 Onions-Green	3	3		Hardy-Wh-Bunchg.	8-8-4		1.0	5
15 Parsley	1	1		Champion Moss	8-8-4			3
16 Pepper-Bell	1	1		China Giant	8-10-6		1.0	1
17 Pepper-Chilie	1	1		Anaheim	8-10-6		.5	1
18 Potato-Sweet	10	1			8-8-6	400	2.0	300
19 Potato-Yam	30	1			8-8-6	400	6.0	300
20 Radish-Sm.Red	4	4			8-8-4	400	1.0	12
21 Radish Daicon	20	4			8-8-4	400	4.0	6
22 Squash-Bana na	15	1			8-8-4	200	1.5	2
23 Squash-Hubbard	15	1			8-8-4	200	1.5	2
24 Squash-Italian	2	1		Dark Green	8-8-6	500)	1.0	3
25 Squash-Summer	2	1			8-8-6	500)		3
26 Swiss Chard	10	1			8-8-4	500	.5	10
27 Tomato	10	1		Earliana	8-10-6	500	2.5	3
	30			Norton Stone	8-10-6	500	7.5	
28 Turnips	15	3		Lg. Wh. Globe	8-8-4	400	3.0	2

300#

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11.312C

H.R. McConnell
Farm Superintendent

Agricultural Section
(War Works)
Main Office Whse 24
Manzanar, Calif.

Y. Sugihara
Ass't. Sup't.

July 2, 1942

Monthly Report
FARM PROJECT

Planting during the month of June has been rather delayed, due to the lack of seeds. Bunch vegetables such as carrots, spinach, turnips, beets, etc., do not seem to grow well in this valley because of the dry soil and weather conditions - especially windstorms.

Planted during June

Field #1
(completed)

Watermelon
Cantaloupe

Tip Top Melon
Shisso (failed)

Field #2

Spinach
Spanish Onion
Cabbage
Okra
Watermelon
Banana Squash
Hubbard Squash
Lettuce (replacing endive)

Japanese Radish (replacing turnips)
Red Radish (replacing turnips)
China Nappa
Melon: H. B. Melon
Honey Dew
Tip Top
Japan

Field #5
6.63 acres

Striped Klondike Watermelon

Field #6

Beans
Summer Squash
Corn (failed)
Italian Squash
White Long Radish

Banana Squash
Cucumber (failed)
H. B. Melon
Japanese Melon

Production Report

Red Radishes planted May 18 and 23 in Field #1, are now being harvested. The first and second pickings have been

11.312C

FARM PROJECT

completed with 74 crates being harvested.

Carrots planted May 30 in Field #2, have failed to sprout. Another attempt may be made at replanting carrots in this same patch (2 2/5 acres).

A very small percentage of the potatoes planted in Field #4 (12.2 acres) have sprouted. This is due mainly to the lack of proper equipment at the start of the Farm Project.

Both H. B. Melon patches in Field #6 have virtually been eaten by rabbits. Banana and Hubbard Squash have been replanted where the melons have been destroyed.

Rabbits are the chief menace to the fields and have already destroyed several patches of vegetables. Lime is now being put on plants to keep the rabbits away. It has proven to be very effective.

New Work Planned

25 acres of alfalfa is to be planted behind the new administration building. Ground is now being cleared and will be cultivated in a few days.

Personnel Changes

Mr. Y. Sugihara has replaced Mr. A. Hashii as assistant superintendent of the Farm Project. Mr. Sugihara came into office on June 9, 1942. He is very efficient and is well liked by his fellow workers.

Mr. Aoki, foreman of fields 3, 4, 5, 6, left for work in the sugar beet fields. Johnny Fukazawa has been left in charge until Mr. Aoki's return.

List of New Equipments

Potatoe Digger (McCormick Deering)	Leveler (Everman's)
Plow (Hillside)	Flows
Middle Busters	Cultivator
Subsoiler (Dyers)	Dyer, Chisel
Seeders	Scrapers
Ditchers (Martin)	Disc, 4 gauge
	10 Mules

This equipment will add greatly to the success of the Farm Project which has been, up to now, greatly hampered by the lack of proper equipment.

Respectfully submitted,

Paul Ohi, Statistician

11.312C

H.R. McConnell
Farm Sup't.

Agricultural Section
(War Works)
Manzanar, Calif.

Y. Sugihara
Ass't. Sup't.

July 3, 1942

Monthly Report
of
FARM SECTION

Field #1
(complete)
16.43 acres

<u>Planted</u>	<u>Date</u>	<u>Acreage</u>	<u>Rows</u>
Watermelon	6/5/42	1/5	10
Cantaloupe	6/6/42	1/8	7
Cabocha	6/12/42	1/50	1/2
Shisso	6/12/42	1/50	1/2
Watermelon (TipTop)	6/13/42	1/10	4

Field #2
57.12 acres

Spinach	6/1/42	1 1/3	35 1/2
Spanish Onion	6/2/42	2/3	19 1/2
Cabbage	6/3/42	1/4	6
China Nappa	6/3/42	1/3	8
Okra	6/3/42	3	40
Spinach	6/4/42	1/13	2
Watermelon	6/4/42	10	61
Banana Squash	6/7/42	2 1/2	22
Hubbard Squash	6/7/42	2 1/2	22
Melon: Tip Top	6/10/42	5	60
Honey Dew	6/11/42		
H. B.	6/12/42		
Japan	6/13/42		

11.312 C

FARM PROJECT

<u>Planted</u>	<u>Date</u>	<u>Acreage</u>	<u>Rows</u>
Green Onion	6/12/42	1/5	5
Lettuce	6/12/42	2/5	11
Lettuce	6/12/42	2 $\frac{1}{2}$	55
Japanese Radish	6/25/42	1 1/5	31
Red Radish	6/25/42	4/5	19

Field #5
6.63 acres

Watermelon (Striped Klondike)	6/3/42 6/3/42	6.63	23
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Field #6
Approx. 45 acres

Beans (Black Eye)	6/1/42	1 1/3	34
Summer Squash (Early White Bush Scallop)	6/1/42	2 1/3	32
Corn	6/3/42	1/5	5
Italian Squash	6/3/42	1 1/3	17
White Long Radish	6/4/42	1/5	5
H. B. Melon	6/4/42	1 5/7	23
Japanese Melon	6/4/42	1/9	1
Hubbard Squash (replacing H.B. melon)	6/25/42	1 5/7	23
Banana Squash (Filled in empty H.B. Melon patches)	6/25/42		

Acres planted	46 $\frac{1}{2}$
Acres planted last month	76
Total acreage of fields	152

Production Report

Red Radishes in Field #1 are now being harvested. First and second pickings have been completed with 74 crates being picked.

Paul Ohi, Statistician

12-15-43

H. R. McConnell
Farm Superintendent

Agricultural Section
(War Works)
Main Office Whse. 24
Manzanar, Calif.

Y. Sugihara
Asst. Field Supt.

Monthly Report
FARM PROJECT

11.312C

Aug. 1, 1942

Planting during the month of July has been more successful due to the knowledge the farmers have gained from the previous months concerning the soil, water and climatical conditions. Most of the crops planted in June and those that have been planted in July is coming along fine.

All vegetables planted here grow well with the help of a little fertilizer. What little we have been able to get have helped a great deal.

Our biggest problem has been the Rabbit menace. Through the suggestion of our field foremen and with the cooperation of the community we have staged three Rabbit Drives, which have been very successful.

Several of the farm machinery and equipment that had been anticipated was received during the month. They have helped tremendously towards the progress of the Farm Project.

Machinery and Equipment Received

- 2 Tractor Caterpillars RD-4
- 1 Tractor International TD-35
- 1 Tractor International TD-9
- 4 Tractor Case-Small
- 1 Tractor Massey-Harris
- Disc, Seeder Plows, Cultivators,
Harrows, Planter, Eveners, Sub-
soilers, and Brush cutter.

Planted during July

Field #1

July 22, 25, 28.	56 rows turnip (2 1/3 acres)
July 25	12 rows Cucumbers (1/2 acre)

11.312C

Field #2

July 3	25 rows Cucumbers	(1 acre)
July 22	27 rows Daikon	(1 acre)
July 23	18 rows Carrots	(3/4 acre)
July 24	18 rows Chinese Cabbage	(3/4 acre)
July 24	16 rows Gobe	(2/3 acre)
July 26	31 rows Daikon	(1 1/4 acres)

Fields #3, #4, #5, #6

Nothing planted.

Potatoes on Field #4 has been discontinued due to poor stand and water shortage.

Beans and Melons on Field #6 have been practically ruined by the rabbits.

25 acres of Barley have been planted behind the new Administration buildings. Alfalfa was intended, but due to the alkali, Barley was planted instead.

CROP HARVEST

Field #1

Red Radish	11 crts.	(8 doz. to crate)
Chinese Radish	111 crts.	(3 doz. to crate)
Turnips	160 crts.	(6400 lbs.)
Cucumbers	139 lugs	
Young Beets	46 crts.	

Field #2

Red Radish	70 crts.	(8 doz. to crate)
China Nappa	53 lugs	
Turnips	25 crts.	(1000 lbs.)

Field #6

Summer Squash	139 lugs
Italian Squash	87 lugs

11.312C

At present there are 125 men and one stenographer employed in the Farm Project.

ORCHARD REPORT

The pear and apple orchard have been well taken care of under the supervision of Mr. Cummings. Picking will be started about the 15th of August.

Sept. 1, 1942

Planting during the month of August has been light. All planting has been done on fields that was harvested in August.

According to the last five years weather chart concerning this area frost is expected during the month of September. With this in consideration planting was done mainly as an experiment to see how the vegetables will stand under fall conditions here.

Planted in August

Field #1

August 5, 1942	20 rows Cabbage	(1 acre)
August 5, 1942	13 rows Nappa	(5/8 acre)
August 9, 1942	38 rows Turnips	(2 acres)
August 21, 1942	19 rows Daikon	(1 acre)

Field #2

August 24, 1942	16 rows Radish	(1 acre)
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Field #3

August 5, 1942	72 rows Nappa	(3 1/6 acres)
August 17, 1942	83 rows Radish	(4 acres)
August 18, 1942		
August 21, 1942	34 rows Daikon	(1 1/3 acres)

11.312C

Production Report

Most of the commodities planted in May and June and a few planted in July were harvested in August. Some commodities will be finished in September.

Crop Harvest

Field #1

Beets	151 crts.	Crop unfinished
Corn	944 doz.	Crop finished
Cucumbers	2400 lgs.	Crop Unfinished
Turnips	244 crts.	Crop finished

Field #2

Daikon	128 crts.	Crop finished
Nappa	179 crts.	Crop finished
Nappa	60 crts.	Crop finished
Turnips	62 crts.	Crop finished
Okra	1730 lbs.	Crop Unfinished
Tip Top	27 crts.	Crop unfinished
H. B.	3 crts.	Crop unfinished

Field #3

Tomatoes	59 lgs.	Crop unfinished
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Field #6

Italian Squash	594 lgs.	Crop unfinished
Summer Squash	752 lgs.	Crop unfinished
Corn	222 doz.	Crop finished

Orchard

Pears	438 lgs.	Crop unfinished
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Personnel

2 Frank Shimoda, research chemist and soil analyser has been added to the Farm Project. It is anticipated that he will help greatly to the success of the project.

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Oct. 1, 1942

Due to anticipation of frost and future weather conditions, planting during the month of September was suspended with the exception of three acres of cabbage which was planted September 15, on Field #6.

Crop progress was hampered to a certain extent due to shortage of water from the creeks. Through the cooperation of the City of Los Angeles, water for the irrigation of Field #6 is being supplied by Well #95.

Production Report

The month of September was the peak of our harvesting.

Our records up to September 30, 1942 shows that the Agricultural Division has made a commendable success under the supervision of H. R. McConnell.

Due to the surplus supply of watermelons, two cars were shipped to other Relocation Centers; one to Tule Lake on September 14, and one to Poston on September 17.

Anticipating shortage of certain seeds for the coming year, 33# of Nappa seeds was produced from the Nappa crop that was planted May 29, on Field #2.

Crop Harvest

Field #1

Beets	137 crts.	Crop unfinished
Cucumbers	1755 lgs.	Crop unfinished
Pickles	80 lgs.	Crop unfinished
Nappa	84 crts.	Crop unfinished

Field #2

Pickles	728 lgs.	Crop unfinished
Daikon	218 crts.	Crop unfinished
Green Onion	54 crts.	Crop finished
Nappa	110 crts.	Crop finished
Okra	6848 lbs.	Crop unfinished
Watermelon	60 tons	Crop unfinished
H. B. Melons	765 crts.	Crop unfinished
Tip Top	210 crts.	Crop unfinished
Honey Dew	61 crts.	Crop unfinished
Hubbard Squash	2 tons	First picking

11.3/2C

Field #3

Tomato 876 lbs. Crop unfinished

Field #5

Watermelons 56 tons Crop finished

Field #6

Summer Squash	550 lbs.	Crop unfinished
Italian Squash	514 lbs.	Crop unfinished
White Radish	920 lbs.	Crop unfinished
Nappa	23 crts.	Crop unfinished

Orchard

Pears 18,160 lbs. Crop finished

Personnel

At present there are 101 men in the Division. 20 men have left for furlough work and 5 men have transferred to other departments.

Future Plans

A conference between Mr. McConnell, Mr. Sugihara, and all of the field foremen was held to draw up tentative plans for the next year. As soon as our crop harvest is finished, detailed plans for the year, 1943, will be started.

Nov. 1, 1942

Due to anticipated future weather conditions, planting during October was suspended. No planting will be done for the balance of the year, 1942.

Frost damage to part of the crops was done on the morning of October 29 when the temperature dropped to 31°. The following crops were completely lost: Cucumbers (Field #1 and Field #2), Okra (Field #2), and Melons (Field #2A).

Anticipating frost, the Tomato crop was mostly saved by picking them green. Hubbard and Banana Squash was also saved since it was harvested prior to the frost.

Crop Harvest

Field #1

Beets	190 sacks	Crop finished
Cucumbers (Pickling)	102 lugs	Crop finished
Cucumbers	642 lugs	Crop finished

Field #2

Cucumbers (Pickling)	374 lugs	Crop finished
Daikon	936 crts	Crop finished
Nappa	95 crts.	Crop finished
H. B.	492 crts.	Crop finished
Honey Dew	120 crts.	Crop finished
Tip Top	105 crts.	Crop finished
Watermelons	9½ tons	Crop finished
Green Onion	77 lugs.	Crop finished
Okra	5600 lbs.	Crop finished
Hubbard Squash	33465 lbs.	Crop finished
Banana Squash	55305 lbs.	Crop finished

Field #3

Tomato	2482 lugs	Crop finished
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Field #6

Italian Squash	268 lugs	Crop finished
Summer Squash	150 lugs	Crop finished
Hubbard Squash	13475 lbs.	Crop finished
Banana Squash	17500 lbs.	Crop finished
Nappa	2511 crts.	Crop finished

Total amount of harvest for the month of October , \$14,075.56.

Total amount of harvest up to and including October 31, 1942, \$39,182.56.

During the month of October, due to surplus supply of Nappa crop on Field #6, three carloads of Nappa were shipped to other Relocation Centers: two cars (504 crts. Oct. 19, 1942), (449 crts. Oct. 27, 1942) to Poston and one car (541 crts. Oct. 20, 1942) to Gila.

New Work Planned

Clearing of land on the north side of the center has been started. 200 acres north of the center has been planned to be put under cultivation for 1943. Land will be cleared and plowed and irrigation ditches constructed during the ensuing months. Acreage is also to be expanded on the south side. About 15 acres were cleared during October, adjoining Field #1B and Field #2B. The south side fields will comprise about 200 acres. For the year 1943 the total area to be cultivated will be approximately 400 acres.

Equipments

Most of the laboratory equipments and chemicals for soil analyses were received on October 20. These will help greatly to the success of our Farm Project for the ensuing year under the supervision of our chemist, Mr. Frank Shimoda.

Nov. 14, 1942

Starting Nov. 1, work has begun clearing new land, discing and plowing of harvested area on the south fields. Clearing of approximately 200 acres of new land on the north side of the center has been started.

With the exception of $2\frac{1}{2}$ acres of Carrots, 1 acre of Turnips, and 3 acres of Japanese Green Onion, all crop have been harvested up to Nov. 14. Outside of these commodities, 1 acre of Daikon has been harvested and stored in the field. This was buried in the ground as a precautionary means against frost and to preserve freshness.

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Crop Harvest

Field #1

Turnips	28 sks.	Crop finished
Turnips	424 sks.	Crop unfinished
Nappa	276 cts.	Crop finished

Field #2

Nappa	231 cts.	Crop finished
Lettuce	9 cts.	Crop finished
Green Onion	77 lugs	Crop finished

Field #3

Tomatoes	314 lugs	Crop finished
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Field #6

Nappa	129 cts.	Crop finished
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Total amount of harvest up to and including Nov. 14 is \$40,955.56.

Through the suggestion of Mr. McConnell, Supt. of Agricultural Division, an Adjustment Committee was organized in the Division composed of Mr. Sugihara (Chairman); Frank Tabuchi (Recording Secretary); Mr. Amamoto, representing Office Force; Mr. Goishi, Mr. Takata, Mr. Higashida, Mr. U. Matsumoto, Mr. H. Fukazawa, Mr. Shimooka, and Mr. S. Hasegawa, representing the farm and orchard crews.

The object of the Adjustment Committee is to endeavor to justly make decisions and recommendations that will improve working conditions, moral, and efficiency within the Agricultural Division, and attend to any other matters that may be brought to their attention in order to increase the quantity and quality of production. This Agricultural Adjustment Committee in no sense replaces or interferes with the Manzanar Fair Practice Committee.

11.312C

WAR RELOCATION AUTHORITY
Agricultural Section
(War Works)

H. R. McConnell
Farm Superintendent

Main Office Whse 24
Manzanar, Calif.

Y. Sugihara
Asst. F. Supt.

Sept. 1, 1942

Monthly Report

FARM PROJECT

Planting during the month of August has been light. All planting has been done on fields that was harvested in August.

According to the last five years weather chart concerning this area, frost is expected during the month of September. With this in consideration planting was done mainly as an experiment to see how the vegetables will stand under fall conditions here.

Planted in August

Field #1

August 5, 1942	20 rows cabbage (1 acre)
August 5, 1942	13 rows nappa (5/8 acres)
August 9, 1942	38 rows turnips (2 acres)
August 21, 1942	19 rows daikon (1 acre)

Field #2

August 24, 1942	16 rows radish (1 acre)
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Field #3

August 5, 1942	72 rows nappa (3 1/6 acres)
August 17, 1942	63 rows radish (4 acres)
August 18, 1942	
August 21, 1942	34 rows daikon (1 1/3 acres)

Production Report

Most of the commodities planted in May and June and a few planted in July were harvested in August. Some commodities will be finished in September.

Very Good *APM*

11.312C

FARM PROJECT

Crop Harvest

Field #1

Beets	151 crts.	crop unfinished
Corn	944 doz.	crop finished
Cucumbers	2400 lgs.	crop unfinished
Turnips	244 crts.	crop finished

Field #2

Daikon	128 crts.	crop finished
Nappa	179 crts.	crop finished
Nappa	60 crts.	crop finished
Turnips	62 crts.	crop finished
Okra	1730 lbs.	crop unfinished
Tip Top	27 crts.	crop unfinished
H. B.	3 crts.	crop unfinished

Field #3

Tomatoes	59 lgs.	crop unfinished
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Field #6

Italian Squash	594 lgs.	crop unfinished
Summer Squash	752 lgs.	crop unfinished
Corn	222 doz.	crop finished

Orchard

Pears	438 lgs.	crop unfinished
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Personnel

Frank Shimoda, research chemist and soil analyser has been added to the Farm Project. It is anticipated that he will help greatly to the success of the project.

James K. Shimokawa
Marketing Supervisor

11.312C

WAR RELOCATION AUTHORITY
Agricultural Division
(War Works)

H. R. McConnell
Farm Superintendent

Main Office Whse. 24
Manzanar, Calif.

Y. Sugihara
Field Superintendent

Oct. 1, 1942

Monthly Report

FARM PROJECT

Due to anticipation of frost and future weather conditions, planting during the month of September was suspended with the exception of three acres of cabbage which was planted September 15, on Field #6.

Crop progress was hampered to a certain extent due to shortage of water from the creeks. Through the cooperation of the City of Los Angeles, water for the irrigation of Field #6 is being supplied by Well #95.

Production Report

The month of September was the peak of our harvesting.

Our records up to September 30, 1942 shows that the Agricultural Division has made a commendable success under the supervision of H. R. McConnell.

Due to the surplus supply of watermelons, two cars were shipped to other Relocation Centers; one to Tule Lake on September 14, and one to Poston on September 17.

Anticipating shortage of certain seeds for the coming year, 33# of Nappa seeds was produced from the Nappa crop that was planted May 29, on Field #2.

Crop Harvest

Field #1

Beets	137 crts.	crop unfinished
Cucumbers	1755 lbs.	crop unfinished
Pickles	80 lbs.	crop unfinished
Nappa	84 crts.	crop unfinished

Field #2

Pickles	728 lbs.	crop unfinished
Daikon	218 crts.	crop unfinished

FARM PROJECT

Green Onion	54 crts.	crop finished
Nappa	110 crts.	crop finished
Okra	6848 lbs.	crop unfinished
Watermelon	60 tons	crop unfinished
H. B. Melons	765 crts.	crop unfinished
Tip Tip	210 crts.	crop unfinished
Honey Dew	61 crts.	crop unfinished
Hubbard Squash	2 tons	first picking

Field #3

Tomato	876 lbs.	crop unfinished
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Field #5

Watermelons	56 tons	crop finished
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Field #6

Summer Squash	550 lbs.	crop unfinished
Italian Squash	514 lbs.	crop unfinished
White Radish	920 lbs.	crop unfinished
Nappa	23 crts.	crop unfinished

Orchard

Pears	18,160 lbs.	crop finished
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Personnel

At present there are 101 men in the Division. 20 men have left for furlough work and 5 men have transferred to other departments.

Future Plans

A conference between Mr. McConnell, Mr. Sugihara, and all of the field foremen was held to draw up tentative plans for the next year. As soon as our crop harvest is finished, detailed plans for the year, 1933, will be started.

James K. Shimokawa
Marketing Supervisor

#93-A

11.3/2C

Agric. Div.

MONTHLY REPORT FOR NOVEMBER, 1942

FARM PROJECT

Starting November 1, work has been begun clearing new land, discing, and plowing of harvested areas on the south fields. Since the latter part of October, the clearing of approximately 200 acres of new land on the north side of the center has been started. We cleared about 50 acres this month, making a total of 145 acres developed to date. We anticipate about 50 acres of land development for December.

With the exception of Carrots and Daikon, all crops have been harvested up to November 30. Owing to a poor start, cold weather, and poor condition, part of the Carrot crop and the Cabbage crop were a total loss. One acre of Daikon has been already harvested, but it was stored in the field, as we are planning to use it for New Year's Day. It was buried in the ground as a precautionary means against frost and to preserve freshness.

11.312C

Crop Harvest

Field #1

Turnips	28 sacks	Crop Finished
Turnips	319 sacks	Crop Finished
Turnips	1167 lugs	Crop Finished
Nappa	276 crates	Crop Finished

Field #2

Nappa	318 crates	Crop Finished
Lettuce	9 crates	Crop Finished
Green Onion	40 lugs	Crop Finished
Carrots	153 crates	Crop Unfinished
Carrots	5002 lbs.	Crop Unfinished

Field #3

Tomatoes	211 lugs	Crop Finished
Gr. Tomato	2675 lbs.	Crop Finished

Field #6

Nappa	382 crates	Crop Finished
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Total amount of harvest for the month of November, \$3,062.00. Total amount of harvest up to and including November 30, 1942, \$44,017.56.

Miscellaneous

Through the suggestion of Mr. H. R. McConnell, Superintendent of the Agricultural Division, an Adjustment Committee was organized in the Division. The ob-

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ject of the Adjustment Committee is to endeavor to justly make decisions and recommendations that will improve working conditions, moral, and efficiency within the Agricultural Division, and attend to any other matters that may be brought to their attention in order to increase the quantity and quality of production. This Agricultural Adjustment Committee in no sense replaces or interferes with the Manzanar Fair Practice Committee.

Our Soil Chemist is now ready to make soil analyses of the newly developed lands and these tests will help greatly to the success of our farm project for the ensuing year.

At present there are 105 men in the Division, as follows: Office and Warehouse staff, 9; Tractor Drivers, 6; Plant Propagation, 8; Orchard, 21; and Farm Labor, 61.

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WAR RELOCATION AUTHORITY
Agricultural Division
(War Works)
Main Office Whse 24
Manzanar, Calif.

H. R. McConnell
Farm Superintendent

Y. Sugihara
Field Superintendent

Nov. 1, 1942
October

51.000

Monthly Report
FARM PROJECT

Due to anticipated future weather conditions, planting during October was suspended. No planting will be done for the balance of the year, 1942.

Frost damage to part of the crops was done on the morning of October 29 when the temperature dropped to 31°. The following crops were completely lost: Cucumbers (Field #1 and Field #2), Okra (Field #2), and Melons (Field #2A). Anticipating frost, the Tomato crop was mostly saved by picking them green. Hubbard and Banana Squash was also saved since it was harvested prior to the frost.

Crop Harvest

Field #1

Beets	190 sacks	Crop Finished
Cucumbers	642 lugs	Crop Finished
"(Pickling)	102 lugs	Crop Finished

Field #2

Cucumbers		
(Pickling)	374 lugs	Crop Finished
Daikon	936 crts.	Crop Finished
Nappa	95 crts.	Crop Finished
H. B.	492 crts.	Crop Finished
Honey Dew	120 crts.	Crop Finished
T&p Top	105 crts.	Crop Finished
Watermelons	9½ tons	Crop Finished
Green Onions	77 lugs	Crop Finished
Okra	5600 lbs.	Crop Finished
Hubbard		
Squash	33465 lbs.	Crop Finished
Banana		
Squash	55305 lbs.	Crop Finished

Mary

11.312c

FARM PROJECT

Field #3

Tomato 2482 lugs Crop Finished

Field #6

Italian Squash	268 lugs	Crop Finished
Summer Squash	150 lugs	Crop Finished
Hubbard Squash	13475 lbs.	Crop Finished
Banana Squash	17500 lbs.	Crop Finished
Nappa	2511 crts.	Crop Finished

Total amount of harvest for the month of October, \$14,075.56.

Total amount of harvest up to and including October 31, 1942, \$39,182.56.

During the month of October, due to surplus supply of Nappa crop on Field #6, three carloads of Nappa were shipped to other Relocation Centers: two cars (504 crts. Oct. 19, 1942), (449 crts. Oct. 27, 1942) to Poston and one car (541 crts. Oct. 20, 1942) to Gila.

New Work Planned

Clearing of land on the north side of the center has been started. 200 acres north of the center has been planned to be put under cultivation for 1943. Land will be cleared and plowed and irrigation ditches constructed during the ensuing months. Acreage is also to be expanded on the south side. About 15 acres were cleared during October, adjoining Field #1B and Field #2B. The south side fields will comprise about 200 acres. For the year 1943 the total area to be cultivated will be approximately 400 acres.

Equipments

Most of the laboratory equipments and chemicals for soil analyses were received on October 20. These will help greatly to the success of our Farm Project for the ensuing year under the supervision of our chemist, Mr. Shimoda.

James K. Shimokawa
Marketing Supervisor

11.3120

WAR RELOCATION AUTHORITY
MANZANAR RELOCATION CENTER
MANZANAR, CALIFORNIA
OPERATIONS DIVISION
AGRICULTURAL SECTION

FINAL REPORT

Fore-word

We, in the Agricultural Section, are glad to present our final report which is made possible by the relocation, back into normal living conditions, of most of the Japanese and Japanese Americans who were evacuated from the West Coast Area in March of 1942 and who have resided within the various Relocation Centers a majority of the time since evacuation took place.

Transcending all obligations is to win the war, maintain freedom and keep faith with those who are trying to keep America free. Therefore, it has been the policy of the Agricultural Section to cooperate fully in the war effort by producing as much food as practical and practicable, and at the same time be tolerant towards those people of Japanese ancestry who, due to the bitterness and confusion caused by enforced evacuation have not always displayed a true patriotic attitude toward the United States, but who are at heart essentially American.

In the closing of the W.R.A. Relocation Centers we complete the nearly four years of time which started with the evacuation of people of Japanese ancestry in

March of 1942, extended through 1943, 1944 and 1945 when a great conflict of emotions ran riot through the heads and hearts of the evacuated people and finished with the complete relocation of the Evacuees and the closing out of the Relocation Centers early in 1946.

In order to insure an overall, comprehensive understanding of the activities of the Manzanar Agricultural Section during the period of the Manzanar Project's Operations, the following is being submitted.

The purpose of the Agricultural Section has been to produce as much food as possible for subsistence uses of the Evacuees at Manzanar, as economically as possible and to provide work for part of the Japanese and Japanese Americans who were detained at this Relocation Center. By producing as much food as practicable, for use at Manzanar, a much smaller amount of food to be shipped in was necessary. This allowed more foods to go to the armed forces and to the public than would otherwise have been possible. Also, it materially cut down the transportation problem of having foods delivered from Los Angeles, 250 miles away.

It has been the policy of the Section to produce only for Manzanar or other relocation Centers and not produce for outside sale in competition with private growers and producers. At times there have been small surpluses of some vegetable crops which were sold on the open market rather than have them go to waste. However,

these surpluses have been negligible and have in no way worked a hardship on any private grower.

It has also been the policy to allow the Evacuees to handle and supervise as much of the farming and livestock activity as possible without interfering with regulations and authorizations as prescribed by the Washington Office of W.R.A. This policy worked out very well at Manzanar by creating a better working and cooperative attitude within the Section. During the full period of farming activity here, no labor trouble of any consequence was had. In the Agricultural Section at Manzanar there have been no strikes, no work stoppages, very little loafing on the jobs and in general the complete labor program was successful.

Organizing of the Agricultural Section was started in March 1942 under the administration of the W.C.C.A. Mr. J. R. Harrison was placed in charge of the Section in the capacity of Farm Superintendent. Manzanar is located in the East Central portion of California, in the Owens Valley at an elevation of approximately 4,000 feet above sea level. The average yearly precipitation amounts to only about four and one half inches of rain and snow. The temperatures range from ten degrees below zero during some winters to a high of one hundred eight degrees above zero nearly every summer. Desert winds of high velocity blow a good part of the time from early March

until late June. These winds are very detrimental to the successful production of vegetable crops. The soil is of a very light sandy type and is lacking in nitrogen, potash and phosphoric acid in quantities great enough to produce good vegetable crops with out the aid of supplemental fertilizers. As this district is quite arid and as the soil is predominantly sandy it is necessary to regularly irrigate all crops such as have been grown on the project. Irrigation water was obtained from streams flowing down from the Sierra Nevada mountains and from two water wells located on the project.

During the spring of 1942 approximately one hundred acres of land were cleared and partially leveled with Evacuee hand labor. During the period from March 1942 until August 1942 the only powered equipment available for use by the Agricultural Section was one rented Ford tractor with one tractor plow and one cultivator.

On June 1, 1942 the War Relocation Authority assumed responsibility for the Manzanar Project. At this time Mr. Harrison, Farm Superintendent under W.C. C.A., was replaced by H. R. McConnell who assumed the duties and responsibilities of Farm Superintendent under the new Administration. As of June 1, 1942 the Agricultural Section had on its payrolls, one Farm Superintendent, five Senior Foreman of labor and approximately three hundred Evacuee workers. One hundred of these

Evacuee workers were separated from the Agricultural Section during June. The Senior Foremen of Labor were not experienced in Agricultural work but were used as escorts to conduct the Evacuee workers from the Center to the farm fields, stay with them during working hours and return them to the Center after the finish of the work day. This arrangement was not a satisfactory one to the W.R.A. in general nor the Agricultural Section in particular as it meant an added overhead to agriculture of \$9,000 per year for salaries and created resentment in the Evacuee workers.

Negotiations were immediately started with the U.S. Army to allow farm workers to go to the farm fields from the Center, put in a work day and return to the Center after the work day without being accompanied by Caucasian escorts. After several months the U.S. Army approved the W.R.A. request and soon after the Agricultural escorts were separated from the Section.

Farm equipment and machinery was ordered in June of 1942 and began arriving on the project about August 1, 1942. This did not give much assistance to the growing season of 1942. However, with the one rented Ford tractor and ten head of mules purchased in June, the farm was made to produce eight hundred tons of vegetables by the fall of the first growing season.

During the winter of 1942 - 43 practically all farm workers were retained by the Section. These men spent the winter clearing and leveling land, building irrigation canals and ditches and constructing diversion dams in the flowing streams. During the spring of 1943, four hundred acres of land were producing vegetable and stock feed crops. The second crop year, (1943) produced approximately two thousand tons of vegetable and feed crops.

Plans were started in the spring of 1943 for a hog project to consume the garbage from the Center kitchens and produce all the pork necessary for Center consumption.

An egg producing and meat chicken project was also planned and a feeder cattle project to utilize the native pasture grasses was being discussed.

With the anticipated expansion of the farm project it was deemed advisable to add an assistant farm superintendent to the staff as Mr. McConnell, Farm Superintendent, was the only Caucasian in the Section at that time. In July 1943 Mr. H. A. Hill was assigned to the Section as Assistant Farm Superintendent.

In August 1943 the construction was far enough along on the chicken project to allow for the purchase of 2,000 day old unsexed chicks. On August 31, 1943 authorization was received to start construction for a hog project. Work to clear land, build fences and

houses was started immediately.

By the end of September 1943, 7,000 chicks were on hand with deliveries continuing each week. During October 1943 the chicken project had 12,000 chickens on hand with an order for 8,000 day old chicks to be delivered in April, 1944.

The hog project was approved as a feeder project only, as, due to the uncertainty of the length of the project and opposition by the City of Los Angeles to a hog project at Manzanar, it was not deemed advisable to go into a breeding program.

The beef cattle project actually started operating in November of 1943 with the purchase of 30 head of cows. The following month 169 additional head were purchased.

A cattle feeding program was considered as being doubtful of being a profitable program. This was due to the fact that winter grasses were not of a quality to keep cattle fat. Slaughtering of beef, if to be successful for the Project must necessarily have been a continuous operation. After purchasing 300 head of feeder cattle and carrying them for six months it became quite evident that a beef herd could not be kept in slaughtering condition unless quantities of outside feeds were purchased. As stock feeds were very high during 1943 and 1944 it was deemed advisable to close out the beef herd and resume buying beef through the

Wuartermaster's Corp. of the U.S. Army.

Consequently no more feeders were purchased and the beef herd was liquidated in December of 1944.

Farm field acreages at the beginning of the W.R.A. program here were in a condition that could be called waste lands as they had not been farmed for about 15 years. Due to standing idle for such a long period the fields were covered with brush and badly hummocked with dunes caused by hard winds. Twenty years ago Manzanar was a small farming community consisting of about twenty farms and farm families. Products raised here at that time were apples, pears, vegetables, alfalfa and other general farm crops. Los Angeles City, located approximately 250 miles south, was facing a water shortage during the early part of the 1920's and in order to relieve the shortage practically all of the privately owned land in the Owens Valley was purchased by the City of Los Angeles in order to obtain the water rights that went with the property. This water was then taken from the land, turned into a large aqueduct and carried to Los Angeles. As the City was primarily interested in water for Los Angeles and not in farming in the Owens Valley, most of the farms and ranches in an area about 5 miles wide and 75 miles long were abandoned and went back to waste land. The Manzanar district was within this area and consequently was abandoned to grow up

with weeds, brush and other types of desert vegetation.

When the U.S. Army decided upon Manzanar as a site for a Japanese Assembly Center in 1942, the City of Los Angeles very emphatically registered its' opposition and was active in fighting the establishment of such an institution on their land. However, in the face of this opposition, the Army carried forward plans and erected buildings and other facilities for housing and caring for 10,000 Evacuees. When the City of Los Angeles found that the Army was going ahead with plans for moving in 10,000 Evacuees they started a newspaper campaign to sway public opinion to their side. In order to frighten the public into siding with the City of Los Angeles, the City used the Aqueduct as a weapon. Publishing the fact that the Aqueduct ran parallel with and adjacent to the Center, they frightened the people of Los Angeles into believing that the Evacuees might poison or contaminate the water or sabotage the Aqueduct. This quarrel between the City of Los Angeles, the War Relocation Authority and the U.S. Army had a very definite bearing on the freedom of activities of the Agricultural Section. To start with, difficulties were encountered with the manner in which the City wanted irrigation water handled. Second, complaints were lodged with the W.R.A. by the City, with the way

commercial fertilizers were handled on the farm fields, third, the City refused to approve a hog project even though W.R.A. agreed to locate it at least one mile from the Aqueduct. Prices charged by the City for irrigation water was exorbitant and after more than a year after Manzanar had been in operation, the Army condemned the land and water and set their own prices to the City for rent of land and purchase of water.

Vegetables were the primary crops grown at Manzanar. Thirty two varieties were finally decided upon as being the most desirable for Center use. These 32 varieties were selected in order to produce the most food value per pound of vegetables and at the same time come as close as possible to a well balanced diet. As the growing season at Manzanar only lasts from 120 to 180 days it was necessary to store in dry storage houses and root cellars, dehydrate and otherwise process vegetables in order that as large a tonnage as desirable could be held for winter use.

Some feed crops were grown for stock feeding. However, due to the high cost of water, stock feed growing was not a profitable venture.

Following are tonnages, values and disposition of vegetable and feed crops grown during 1942, 1943 and 1944.

Prices are based on 85% of Los Angeles wholesale market values at time of harvesting.

	1942	1943	1944
Vegetable Crops Number of Acres	120	440	310
Vegetable Crops Number of Pounds	1,434,000	3,332,647	2,980,554
Vegetable Crops Pounds Used at Center	1,276,890	3,181,272	2,801,079
Vegetable Crops Pounds Shipped Out	157,110	151,375	179,475
Vegetable Crops Los Angeles Market Value	\$43,496.00	\$105,965.00	\$67,765.00
Stock Feed in Acres	0	110	45
Stock Feed in Pounds	0	242,000	186,000
Stock Feed Value	0	\$2,420.00	\$2,130.00

The crop production program as a whole was very successful. Approximately 80% of the vegetables used at Manzanar during 1943 and 1944 were produced on the Center farm. Costs of producing vegetables were less than the costs of purchasing on the outside would have been. Vegetables were fresher and more desirable. Also, several kinds of vegetables usually eaten by the Japanese people but unobtainable on the open market due to war time conditions, were raised on the Manzanar farm. Root vegetables did well here with a good yield and a very good quality. Tomatoes, peppers, eggplant, cucum-

bers, melons, squash, string beans, cabbage, etc. did well. Lettuce, dry beans and sweet potatoes did not produce well due to the hot arid summer climatic conditions.

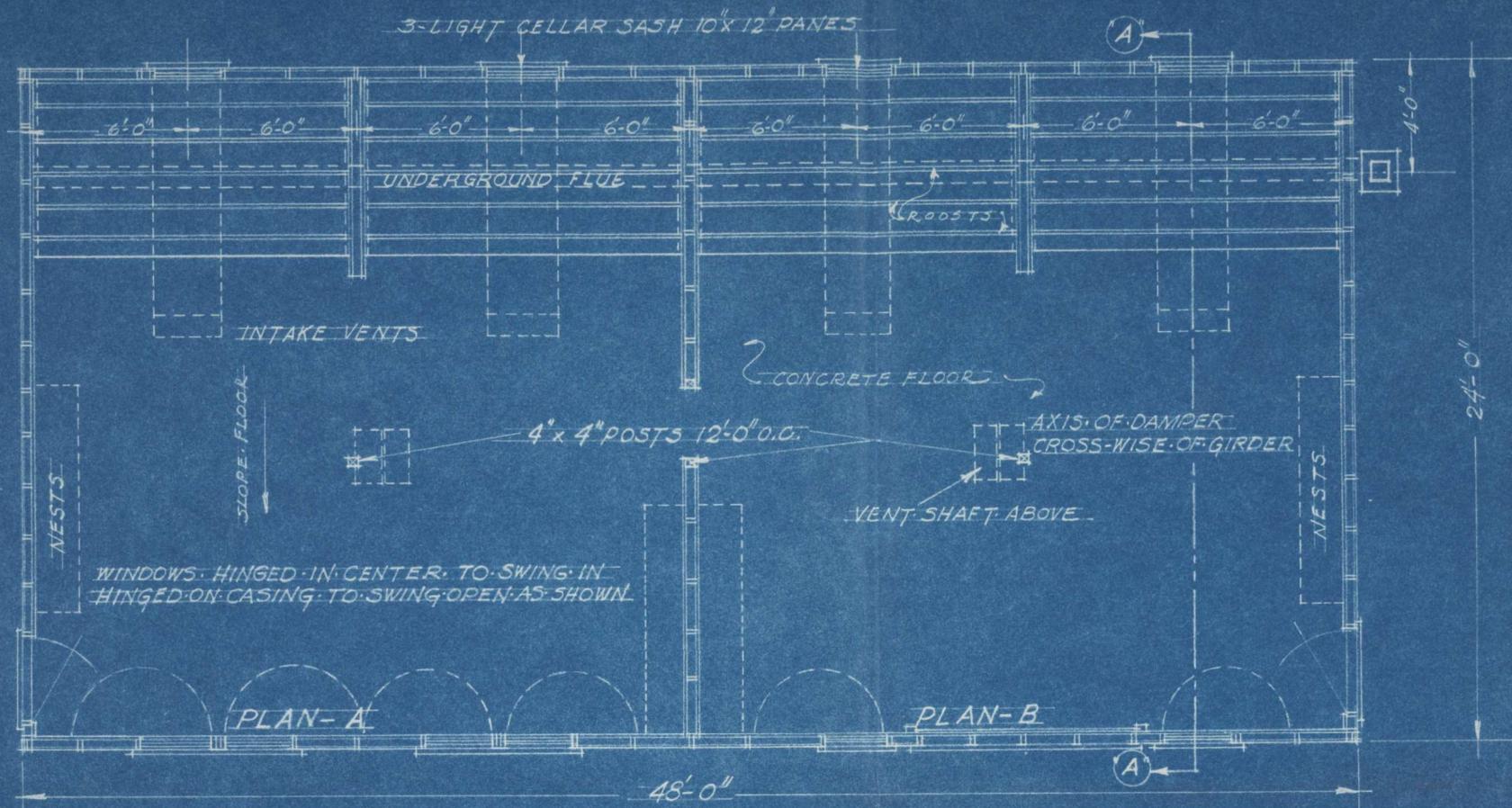
Farm equipment used consisted of ten head of mules and one Ford tractor during the spring and summer of 1942.

In the fall and winter of 1942 the following units of powered equipment was obtained. Four, thirty-five H. P. track tractors, (used), four small Case wheel tractors, (new) and five Ford wheel tractors, (new) all pulled farm equipment obtained for the track tractors was second hand, some in such poor condition that it was not usable. Pulled equipment for the Case and Ford tractors was new but only a very limited amount was obtainable. Three of the small wheel tractors were assigned to the hog and chicken projects.

Due to the relocation program for the calendar year 1945, no vegetable or feed crops were planted after January 1, 1945.

The hog and chicken projects continued to operate during 1945.

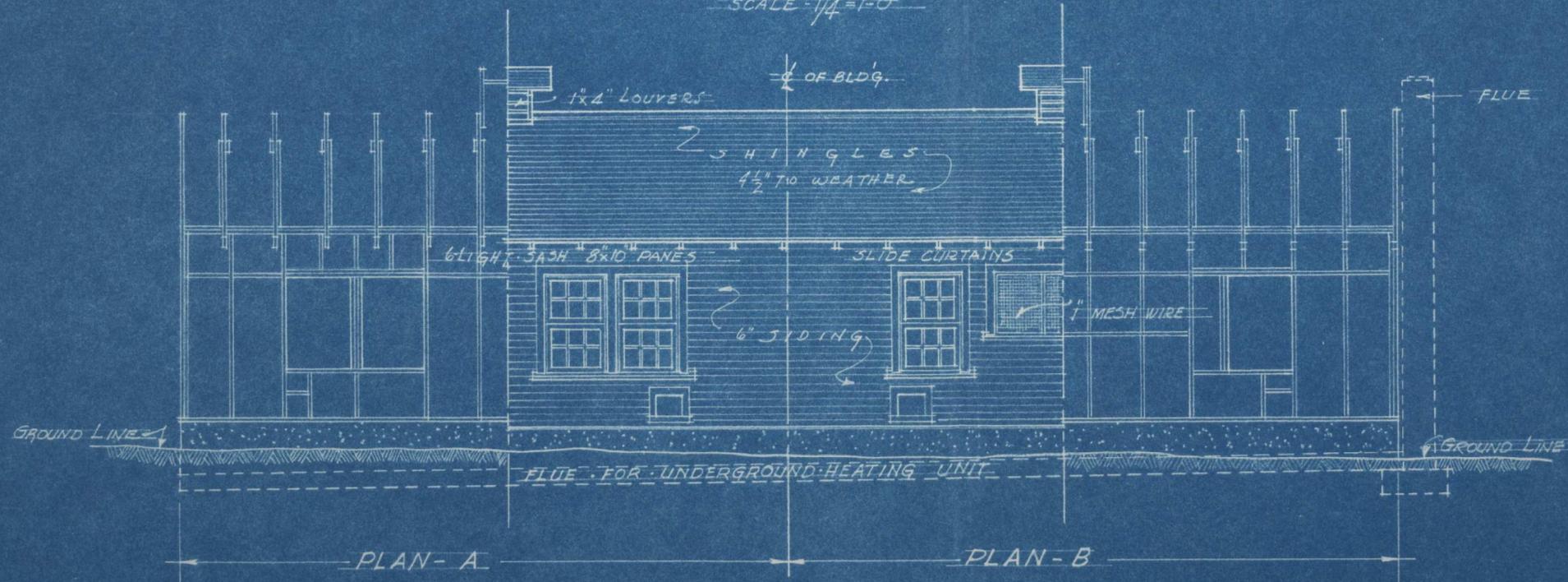
H. R. McConnell
Chief, Agriculture



NOTE-
 INCREASE HEIGHT OF WALL
 FOUNDATION TO 18" ABOVE
 FLOOR LINE & 18" EACH SIDE
 OF FLUE FOR FIRE PROTECTION

FLOOR PLAN

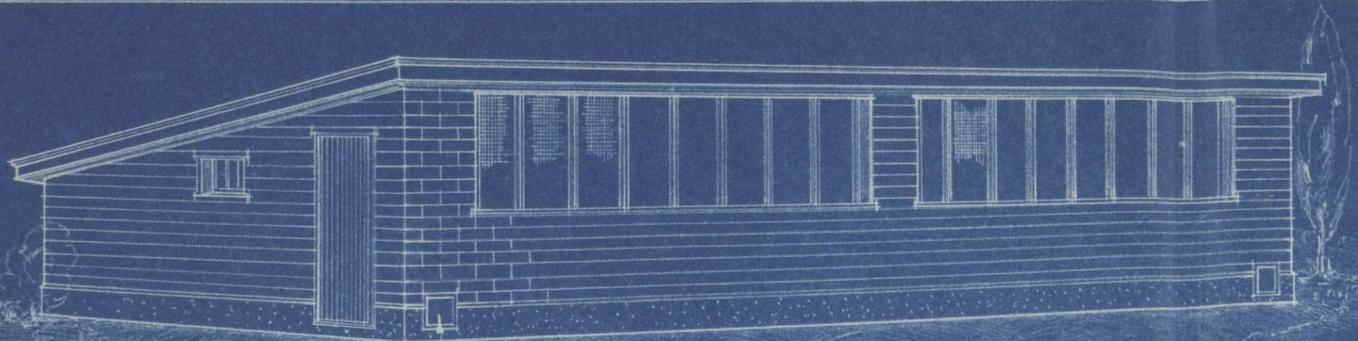
SCALE 1/4" = 1'-0"



FRONT-FRAMING-ELEVATION

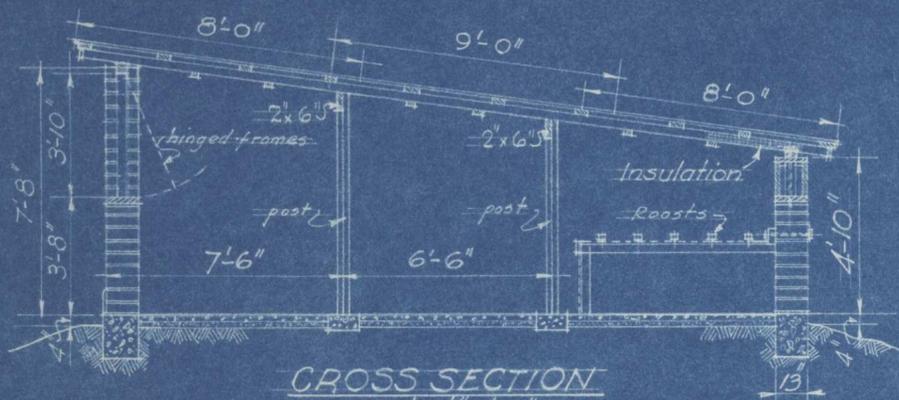
SCALE 1/4" = 1'-0"

POULTRY LAYING HOUSE			
WAR RELOCATION AUTHORITY			
D. S. MEYER		DIRECTOR	
SAN FRANCISCO REGIONAL OFFICE			
E. R. FRYER		REGIONAL DIRECTOR	
PUBLIC WORKS DIVISION			
SEC. CHIEF		ASST. REG. DR.	
DIV. CHIEF		REG. DR.	
DR.	TR.	CH.	DATE
	E. R. K.		7-18-42
			X-20

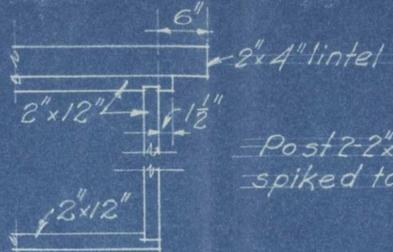


12x12 poultry door
2x12 plank frame

PERSPECTIVE

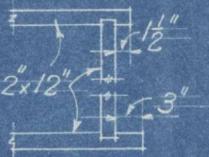


CROSS SECTION
Scale $\frac{1}{4}'' = 1'-0''$



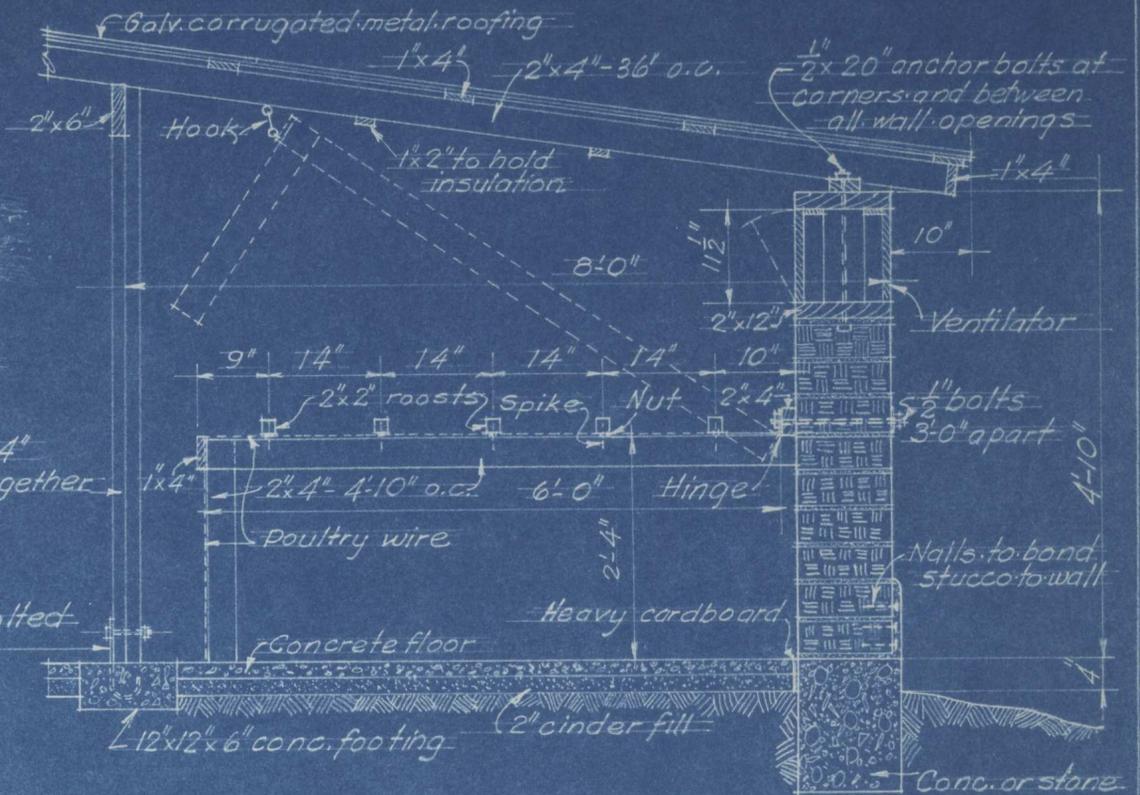
DOOR FRAME

Scale $\frac{3}{4}'' = 1'-0''$



VENTILATOR FRAME

Scale $\frac{3}{4}'' = 1'-0''$



REAR WALL AND ROOST DETAIL

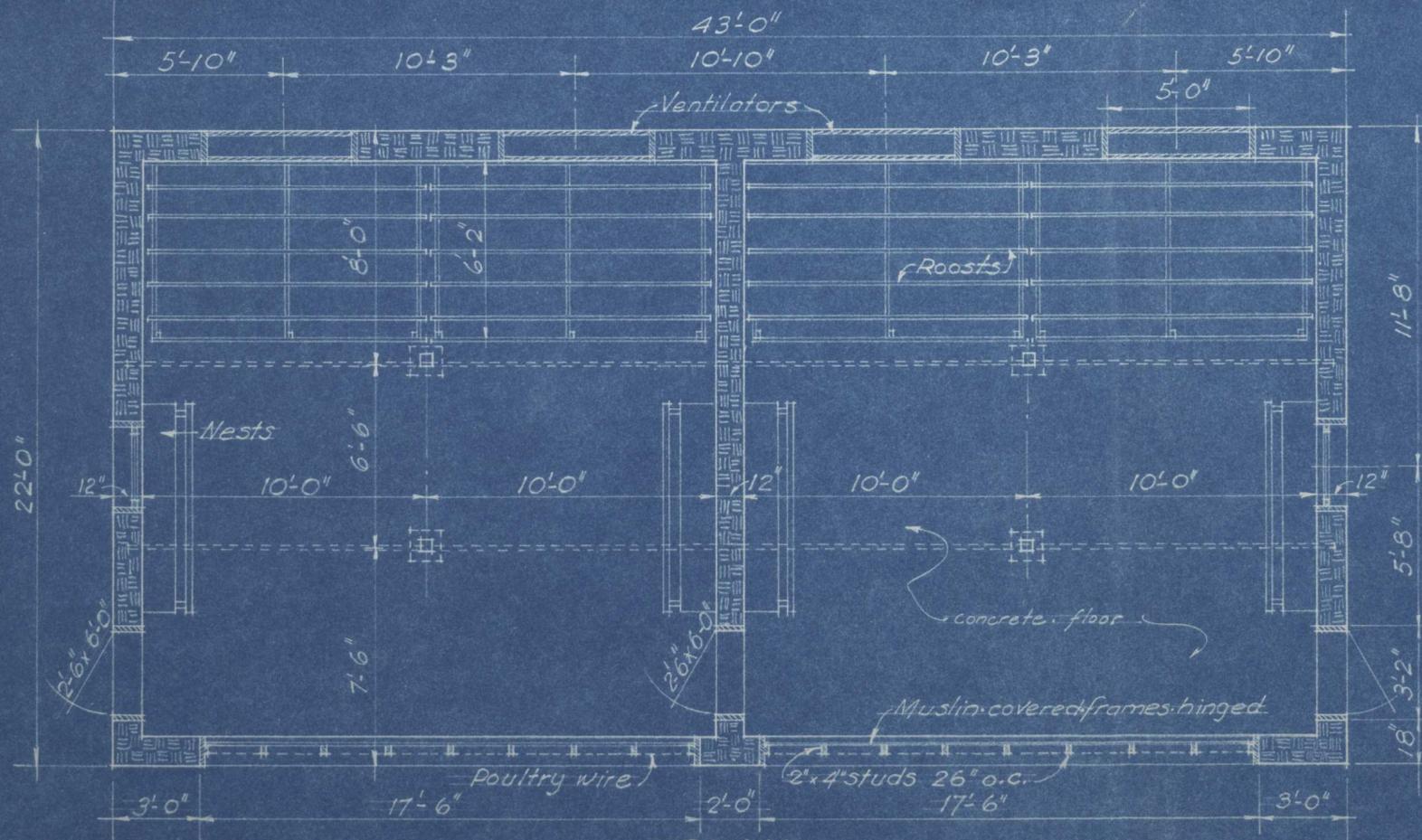
Scale $\frac{3}{4}'' = 1'-0''$

BILL OF MATERIALS

- CONCRETE-1:2 1/2:5 MIX**
 Foundation- 40 bags cement, 4 cu. yds. sand 7 cu. yds. gravel
 Floor- 25 " " 2 1/2 " " " 4 1/2 " " "
MORTAR 1:3 MIX.
 32 bags cement 3 1/2 cu. yds. sand
 870 adobe brick 4x12x18" 133 cu. ft. cinder fill
 5- 2x12x18' frames front openings 54- 1x4x12' roof girts, trim
 4- 2x12x14' ventilator frames 4- 1x12x10' ventilators
 6- 2x12x12' door & window frames 65 ft. B.M. T&G. boards-doors
 8- 2x6x12' girders 20- 2x2x10' roosts
 18- 2x4x16' rafters 300 lin. ft. 1x2' ceiling
 7- 2x4x14' plates, posts, roosts cleats, muslin frames,
 24- 2x4x12' studs, " and door stops.
 26- 2x4x10' plates, roost support
 2- windows 3 lights 10x12"
 44 sheets corrugated metal roofing 8ft lengths
 22 " " " " 9ft. "
 14- 1/2x20" anchor bolts. 14 1/2x14" bolts for roost support
 4- 3/4x1" strap iron post anchors 1/2x1x14" with 1/2x4 1/2" machine bolts
 480 sq. ft. poultry wire
 7- gate hooks
 21- 6" Tee hinges for roosts and doors
 36- 4" " " for ventilators, and hinged muslin frames
 Nails, paint and nests not included.

NOTE

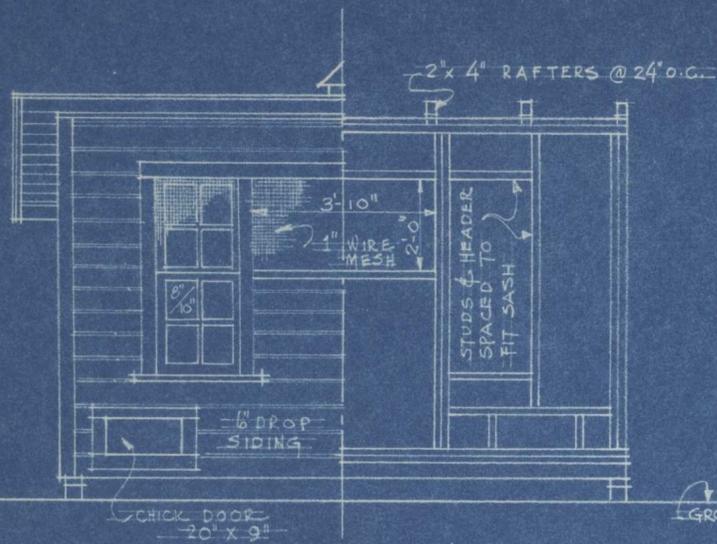
Reduce width of openings for front wall to 8'-10" where climate is cold.



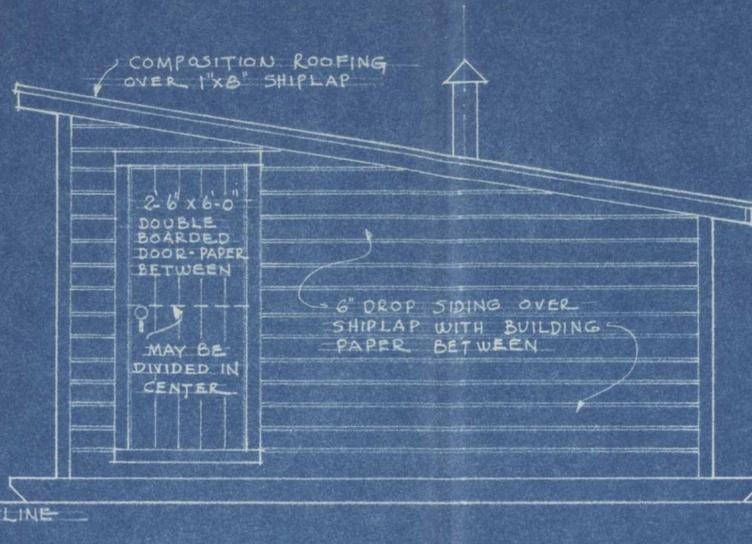
PLAN

Scale $\frac{1}{4}'' = 1'-0''$

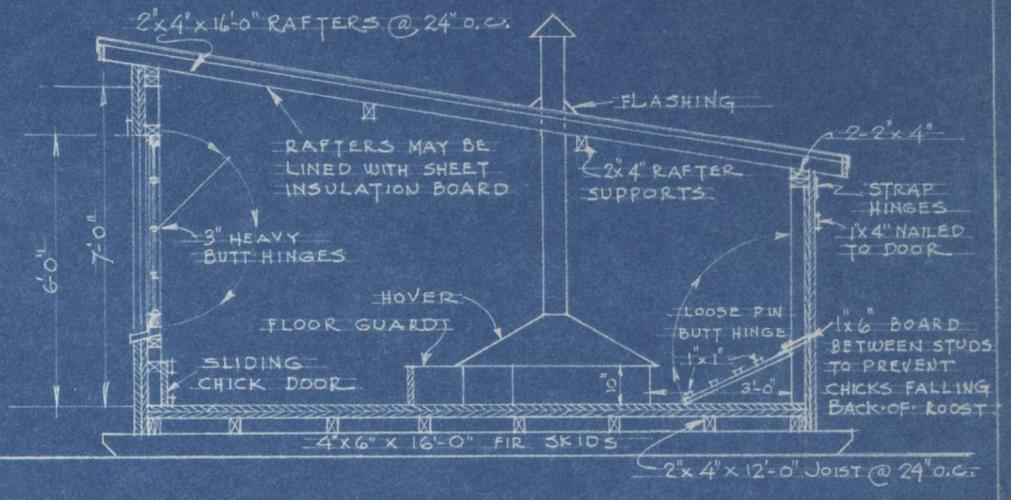
ADOBE LAYING HOUSE			
WAR RELOCATION AUTHORITY			
D. S. MEYER		DIRECTOR	
SAN FRANCISCO REGIONAL OFFICE		E. R. FRYER	
PUBLIC WORKS DIVISION		REGIONAL DIRECTOR	
SEC. CHIEF	ASST. REGR.	DR.	TR.
DIV. CHIEF	REG. DR.	CH.	DATE
E. R. K.	E. R. K.	7-18-42	X-19



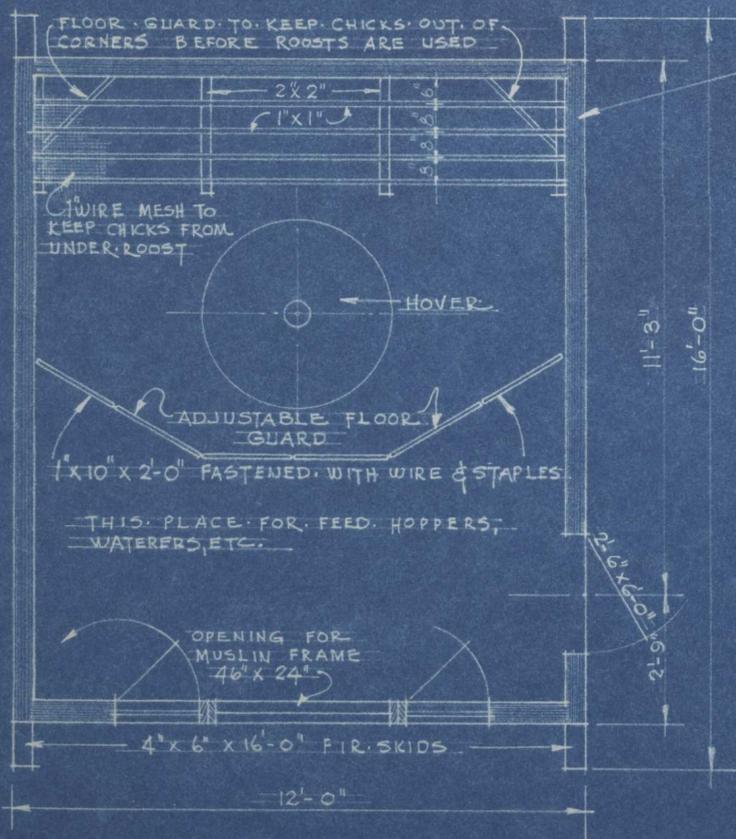
FRONT ELEVATION & FRAMING
 SCALE: 3/8" = 1'-0"



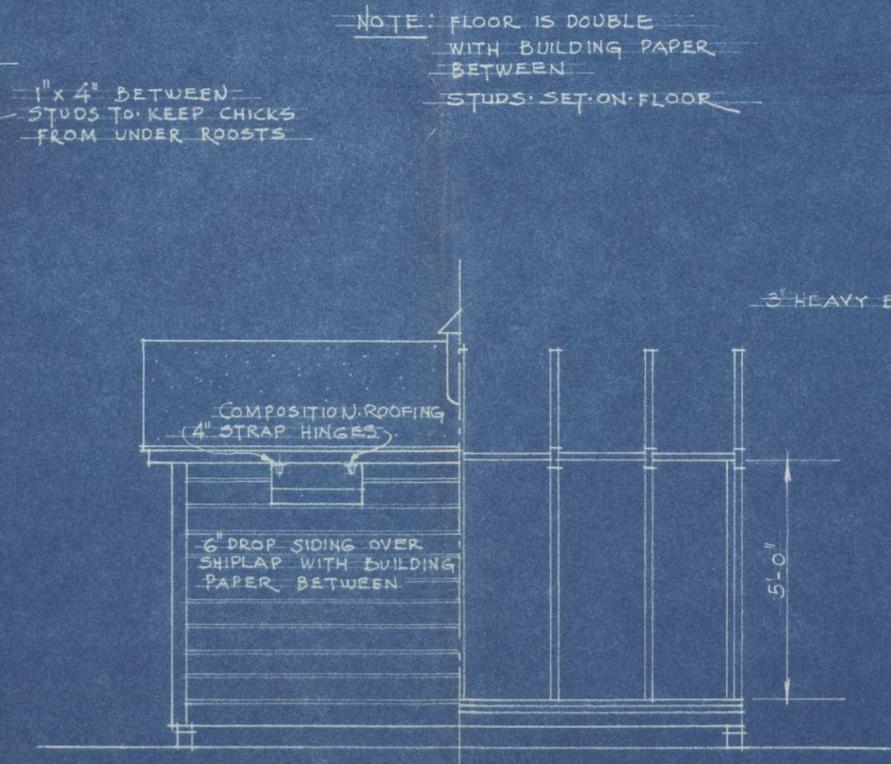
SIDE ELEVATION
 SCALE: 3/8" = 1'-0"



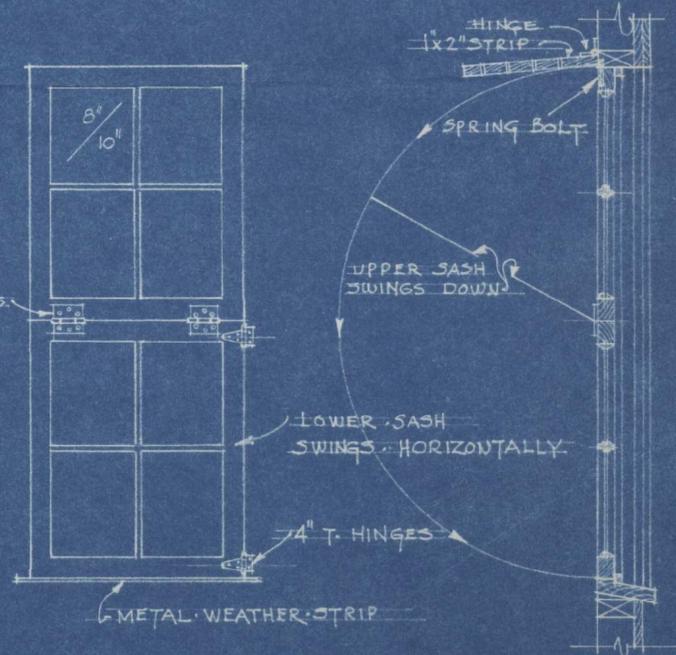
SECTION THRU WINDOW
 SCALE: 3/8" = 1'-0"



FLOOR PLAN
 SCALE: 3/8" = 1'-0"



REAR ELEVATION
 SCALE: 3/8" = 1'-0"



DETAIL OF WINDOW
 SCALE: 1" = 1'-0"

PORTABLE BROODER HOUSE

WAR RELOCATION AUTHORITY
 D. S. MEYER DIRECTOR
 SAN FRANCISCO REGIONAL OFFICE
 E. R. FRYER REGIONAL DIRECTOR
 PUBLIC WORKS DIVISION

SEC. CHIEF ASST. REG. DIR.

DIV. CHIEF REG. DIR.

DR. TR. E.R.K. CH. DATE 7-17-42 X-18

M^o Consett

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