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DEPARTMENT OF THE INTERIOR
WAR RELOCATION AUTHORITY
GRANADA PROJECT

HIGHLIGHTS OF THE FARM PROGRAM
FISCAL YEAR 1944

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Reports Officer

September 15, 1944

GRANADA RELOCATION CENTER
AMACHE, COLORADO

FARM PROGRAM FOR 1944

GENERAL

Specific details of the 1944 farm program for the Granada Relocation Center were studied during the summer and fall of 1943 by the Farm Section, the Operations Division, the Administrative Management Division, and the Project Director. In addition, the plans were submitted to the Amache Block Managers and Community Council through their agricultural committees. These groups not only approved the plan but presented it to the center as a whole and asked for the cooperation of all evacuees in reaching the production goals set.

The final program was submitted by the Project Director to the Washington Office on December 17, 1943. It called for 590 acres of vegetables with an estimated total production of 3,750,000 pounds; 600 acres of corn for grain and silage; 150 acres of barley; 400 acres of grain sorghum; 250 acres of forage sorghum; 675 acres of alfalfa; 150 acres of winter wheat--making a total of 2225 acres of feed crops. In addition there were 2,100 acres of bottom-land pasture, 1,000 acres of high-land pasture, and 600 acres of reseeded pasture, or a total of 3,700 acres of pasture land.

The program also included livestock production as follows: additional purchases of cattle to bring the total herd to 1,290 head an increase of 460 head over estimated January 1, 1944 inventory; purchase of 748 additional hogs in addition to the 1,050 on hand January 1, 1944; the

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The final program was submitted by the Project Director to the Washington Office on December 17, 1943. It called for 500 acres of vegetable production with an estimated total production of 3,750,000 pounds; 800 acres of corn for grain and silage; 100 acres of barley; 400 acres of grain sorghum; 200 acres of forage sorghum; 275 acres of alfalfa; 150 acres of winter wheat--making a total of 2225 acres of food crops. In addition there were 2,100 acres of bottom-land pasture, 1,000 acres of high-land pasture, and 600 acres of wooded pasture, or a total of 3,700 acres of pasture land.

The program also included livestock production as follows: additional purchase of cattle to bring the total herd to 1,200 head and increase of 450 head over estimated January 1, 1944 inventory; purchase of 743 additional hogs in addition to the 1,000 on hand January 1, 1944; the



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purchase of 30 brood sows; the purchase of 8,000 chicks for egg production and 10,000 chicks for meat production; maintaining the present flocks of 3,000 meat birds and 4,000 laying hens.

Consumption of livestock or livestock products was estimated at 367,604 pounds of beef for consumption at Granada and 36,000 pounds per month for Heart Mountain, 295,860 pounds of pork, 54,000 pounds of chicken, and 38,300 dozen eggs. On January 11, 1944, C. H. Powers, Acting Chief of the Operations Division in the Washington Office, wrote regarding the proposed 1944 program suggestion minor modifications of the program after consultation with the project Mess Steward. On April 24, 1944, Dillon S. Myer wrote the Granada Project approving the farm program for 1944.

The program was carried out during 1944 essentially as proposed in the approved plan, despite labor problems and other difficulties during the year.

LEASING OF PROJECT FARM LAND

As early as December 29, 1942, the Granada Farm Supervisor advised the Project Director that leasing of 3,000 acres of the Koen ranch was the best method of assuring that it be farmed. Mr. Lindley suggested this procedure to the Washington Office in a letter dated January 7, 1943. A letter from Mr. Utz on February 6, 1943, suggested that:

"If you are unable to secure sufficient permittees (leasees) to farm the American Crystal lands north of the railroad, I would like to suggest that additional feed crops be planted on this area and the numbers of beef cattle increased to utilize the extra feed. These cattle, when fattened, could then be

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shipped to other relocation centers to help supply the meat requirements on those centers and would further reduce the necessity of our buying meat in the open market."

During the 1943 cropping season some 1,656 acres of the Project farm land were leased to outside farmers. It was planned by the Project that at least this same amount of land would again be leased to outside farmers during the 1944 crop season.

Mr. Utz, after a visit to the Granada Project, wrote on August 19, 1943, as follows to Project Director Lindley:

"After looking over the lands which had been turned over to private operators under permit for this crop season, it would seem advisable for the project to attempt to farm as much as possible of this additional thousand acres that is either not being farmed or poorly farmed this year, rather than to issue permits or leases again. I recognize that some additional equipment will be required. This equipment for the most part, however, will not be needed until spring, and I believe that arrangements can be made between now and that time to adequately equip you to handle the additional acreage. While I do not think the issuing of permits on this land to private operators this year was entirely bad, I believe it would be a mistake to issue permits or leases to most of them for another year."

On December 17, 1943, the Project wrote to Mr. Myer advising that:

"It has been determined that the Center will be unable to farm all the lands for the 1944 season included in the project. We must, therefore, prepare lease arrangements covering approximately 1,656 acres of land which was operated under cropping permits last year. Of this amount, 828 acres involving four of the permit tracts, will require new tenants this year. The other acreage will be operated by the same tenants who are now on the land."

It was suggested in this letter that the land be leased to the American Crystal Sugar Company, or to some individual representing them, to be sub-leased by them to evacuee farmers.

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On December 31, 1943, the suggestion for such leasing was turned down by the Washington Office as follows:

"We have Mr. Halliday's letter of December 17, relative to leasing of land on the Koen Ranch to the American Crystal Sugar Company or others. This has been considered in much detail in the Washington Office, and our opinion is that this land should not be leased."

The letter further stated that with a limited supply of irrigation water it would be best to use this water for vegetable production for the center, and in all probability there would not be sufficient irrigation water for sugar-beet crops that the American Crystal Sugar Company wished to have planted on the land to be leased. It was suggested that the Project produce feed crops on the excess acreage of the Koen ranch and thus release land on the X-Y ranch where it had been planned to plant feed crops. Then the X-Y land could be leased.

In regard to subleasing to evacuee farmers, the letter continued:

"Relative to the proposal that this land be subleased to relocated evacuees, it is our belief that evacuees should not be relocated on land which is under the supervision of the Authority. Such a policy would, in our judgement, be bad from a public relations standpoint."

The following letter, which is copied herewith in full, was written by Project Director Lindley to Director Myer on January 13, 1944, to provide further information in connection with the leasing problem:

"We have received your letter of December 31 pertaining to the leasing of land on the Koen Ranch. In this it is suggested that all lands on the Koen be farmed by the center, that if land is available in excess of center requirements it be leased from the XY acreage, and that leased lands not be sub-leased to relocated evacuees.

On December 31, 1943, the suggestion for such leasing was turned

down by the Washington Office as follows:

"We have Mr. Haliday's letter of December 19, relative to leasing of land on the Koon Ranch to the American Crystal Sugar Company or others. This has been considered in much detail in the Washington Office, and our opinion is that this land should not be leased."

The letter further stated that with a limited supply of irrigation water it would be best to use this water for vegetable production for the center, and in all probability there would not be sufficient irrigation water for sugar-beet crops that the American Crystal Sugar Company wished to have planted on the land to be leased. It was suggested that the beet produce feed crops on the excess acreage of the Koon Ranch and thus release land on the K-Y Ranch where it had been planned to plant feed crops. Then the K-Y land could be leased.

In regard to leasing to evicted farmers, the letter continued:

"Relative to the proposal that this land be subleased to evicted farmers, it is our belief that evictions should not be relocated on land which is under the supervision of the Authority. Such a policy would, in our judgment, be based from a public relations standpoint."

The following letter, which is copied herewith in full, was written by Project Director Lindsay to Director Myer on January 13, 1944, to provide further information in connection with the leasing problem:

"We have received your letter of December 31 pertaining to the leasing of land on the Koon Ranch. In this it is suggested that all lands on the Koon be farmed by the center, that the land is available in excess of center requirements it be leased from the K-Y acreage, and that leased lands not be sub-leased to evicted farmers."



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"We believe that we have failed to give you a clear picture of the situation in regard to these lands, their relation to our 1944 cropping program, our irrigation water supply problem, and the public relations angles involved. We shall attempt to outline the situation as we see it, and we request you reconsider in light of the following amplification of our conditions:

- "(1) It is unnecessary to farm all of the project lands in order to meet the center's requirements for vegetables and meats as set forth in the 1944 farm program. Our plan calls for an increase in area of land farmed by us amounting to 1,124 acres. 624 acres of this land are north of the Santa Fe railroad tracks on the Keen; the balance is XY lands which were prepared for planting last summer and fall. Alfalfa hay is essential to successful livestock operations. Practically all of the alfalfa acreage on the project is included in the lands to be farmed by the center.
- "(2) The center has experienced one year of farming operations. Because of this fact we can more accurately judge the limitations of such operations than would have been possible a year ago. Limitations caused by shortages of labor, machinery and transportation will prohibit expansion of farming operations to include all of the farm land on the project. The number of well qualified farm workers is bound to be greatly reduced next spring. A high percentage of farm workers have indicated their intention to leave the center on either seasonal or indefinite leave. Continuation of present seasonal leave policies conceivably could prevent the harvest of a crop as large as that grown in 1943. Restrictions on number of hours of work per day create a machine shortage in spite of the fact that the project possesses a large inventory of farm machinery. Training of machine operators is another problem which must be considered. For three weeks last spring, during the busy planting season, it was impossible to train tractor operators as rapidly as they left the center.
- "(3) Leasing of XY ranch lands would be undesirable and perhaps impossible. Most of the good farm land on this place has been prepared for spring planting. To lease such land would result in considerable loss to the project. The canal and laterals have been cleaned, making more probable an early supply of irrigation water. None of the uninhabited dwellings on the XY is suitable for tenant houses. The headquarters buildings are needed by the farm as a location for cattle feeding and pasturage operations. All pas-

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"(1) It is unnecessary to farm all of the project lands in order to meet the center's requirements for vegetables and meat as set forth in the 1944 farm program. Our plan calls for an increase in acres of land farmed by us amounting to 1,124 acres. 224 acres of this land are north of the center, railroad tracks on the south; the balance is 900 acres which were prepared for planting last summer and fall. Alfalfa hay is essential to successful livestock operations. Practically all of the alfalfa raised on the project is included in the lands to be farmed by the center.

"(2) The center has experienced one year of farming operations. Because of this fact we can more accurately judge the limitations of such operations than would have been possible a year ago. Limitations caused by shortages of labor, machinery and transportation will prohibit expansion of farming operations to include all of the farm land on the project. The number of well qualified farm workers is down to the greatly reduced next spring. A high percentage of farm workers have indicated their intention to leave the center on either seasonal or indefinite leave. Continuation of present seasonal leave policies consequently would prevent the harvest of a crop as large as that grown in 1943. Restrictions on number of hours of work per day create a machine shortage in spite of the fact that the project possesses a large inventory of farm machinery. Training of machine operators is another problem which must be considered. For three weeks last spring during the busy planting season, it was impossible to train tractor operators as rapidly as they left the center.

"(3) Loading of 90 ranch lands would be undesirable and perhaps impossible. Most of the good farm land on this place has been prepared for spring planting. To leave such land idle would result in considerable loss to the project. The cost and labor have been cleaned, making more profitable an efficient supply of irrigation water. None of the unimproved dwellings on the 90 is suitable for tenant houses. Headquarters buildings are needed by the farm as a location for cattle feeding and pasturage operations. All



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tures on this ranch will be utilized by the project herds. Few prospective tenants would want land--sorghum and corn land, the type available on the XY--unless they could be assured of some pasturage.

- "(4) Apprehension lest the releasing of land to relocating evacuees might create an unfavorable public reaction would seem far less likely than the unfavorable local reaction which has existed, and might continue to exist, due to improper utilization of Koen farm lands. Public opinion will undoubtedly be severely adverse to poor farming of Koen crop land or the utilization of these lands north of the railroad exclusively for the production of feed and pasture crops. Koen ranch land is considered to be the most productive land in this section of the Arkansas Valley. This land has been used for many years to produce sugar beets and other intensively farmed crops in proper rotation with small grain, hay and corn. Farmers living on these lands always produced large vegetable gardens, poultry, pork and milk, which production was utilized in Granada and Holly. Loss of this source of farm products has been keenly felt. So critical were the local people of the situation on the leased lands this year that they had pictures taken of the weedy fields. From the local standpoint we can be assured of favorable public reaction to the leasing of Koen land to tenants--regardless of race--who will produce good crops of vegetables, hay, and grain.
- "(5) Proper consideration will be given to cropping plans and water requirements on all leased tracts prior to execution of a lease. The amount of each crop to be grown will be dictated to the end that the acreage of high water requirement crops (beets, onions, etc.) will balance with crops requiring less water such as sorghum, broom corn, corn, and wheat. When this is done there should be little difficulty as regards the allocation of water; in other words, a cropping plan will be made a part of each lease.
- "(6) Apparently some misunderstanding exists regarding the distribution of irrigation water. All of the lands proposed for lease on the Koen ranch are located at the lower extremity of the farm's water distribution system. Crops grown by the center have first access to all flows coming from the main canals. It would, therefore, be very difficult for anyone living on leased lands to steal

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water. Perhaps the situation on the Koen has been confused with the XY where outside water users all live at the head of the ditch. In a number of instances private land owners have been caught taking XY ditch water which belonged to the Government.

"(7) How critical is the irrigation water supply situation at the present time? Recent heavy snowfall has greatly improved the prospect of summer irrigation water. It is believed that the water supply situation is as favorable as it was at this time last year. Residual soil moisture content is much less than a year ago; however, the project in anticipation of a drought has winter irrigated most of the hay land.

"(8) Other than the Government, the largest water right on the Lamar ditch belongs to the American Crystal Sugar Company whose properties are all located above the Government lands on the Lamar canal. Leasing of land to the American Crystal Sugar Company might have exactly the opposite effect of that mentioned in your letter; in other words, if the company is interested in a crop growing on the Koen ranch, they will be anxious to see that the Government receives the necessary water needed for the development of such crop.

"The time for making leases, advantageous to the Government, is growing short. Good tenant farmers in this vicinity make their arrangements for leasing land prior to February 1. Delay of approval from Washington for leasing these lands last year resulted in our being forced to lease to draft evaders and poor farmers, since the better type of tenants had already located places elsewhere. Therefore, an early favorable reconsideration of our proposal will be much appreciated."

Further discussions regarding the leasing of land were carried on between the Project and the Washington Office by telephone. Finally, about 1,100 acres of land were leased by the Project to outside farmers during March, April, and May of 1944. A total of 190 acres could not be leased at that late date and were not farmed by the Project. Lack of labor made it impossible for the Project to take care of this idle land

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and it grew up to weeds during the summer.

CATTLE PRODUCTION

The original plans for beef-cattle production at the Granada Relocation Center were based on supplying only this center with beef. In the summer of 1943, however, the project was requested to reconsider the possibility of supplying beef to the Heart Mountain Project as well. This would have involved the purchase by Granada of an additional 1,000 head of feeder cattle in order that both centers could be supplied with an adequate amount of beef. Feed for this beef was to be produced on the Granada Center farm, both on the Keen Ranch and on the X-Y Ranch. All available land on the project would be in cultivation and no land would be leased to outside farmers.

The feed and cattle-production program was adjusted on this basis, and authorization was obtained from the Washington Office to purchase an additional 500 head of feeder cattle immediately. The actual purchase of these cattle had much to do with later revision of the Center's beef-production plans.

The first step in the revised feeding program was the building of feed pens. One of these pens was completed on December 15, 1943, at the Rule Ranch headquarters, and was sufficient to take care of 125 feeder cattle.

Before the feed pens were ready, plans were under way to purchase the 500 additional head of feeder stock needed. Early in August contact

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was made with a cattle company near Phoenix, Arizona, through a livestock broker in Trinidad, Colorado. On August 1, a member of the Project Farm Section went to inspect these 500 cattle with authority to purchase them if the price and quality were satisfactory. About a week later, he phoned the project and suggested that the cattle be purchased.

The cattle were represented to be barren cows with not more than 10 percent bred; feeder stock with very few really old cows; 500 were to be picked from a herd of 650; the average weight was supposed to be about 800 pounds. Authority to purchase was given by the Project and 498 head were bought. The price paid was \$78.00 per head. The same day this purchase was made by the Project, the Washington Office wrote a letter to the Project suggesting that these cattle not be bought.

The cattle arrived at Granada the middle of August and were found to be in very poor condition. The trip had been long and the cattle had received poor attention enroute. Although the cattle were never weighed either at the shipping station or when received at Granada, estimates here were that the average weight would be about 675 pounds. Many were very old and toothless; some had already dropped calves in the railroad car. It was later found that about 70 percent of these cows were carrying calves; these calves were dropped from the time the cattle reached Granada until the following April. The general condition of the cows was poor; members of the project staff classed them as canner and cutter cattle rather than feeder stock.

As the cows were in no condition to be placed in feed lots, a

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change in the entire livestock-production program at the center was necessary. Silage which had been stored with the idea of using it entirely to fatten beef had to be used to feed these cows with calves during the winter. About half of this feed went into the cows rather than into feeder stock. The number of cattle that could be fattened during the winter was reduced about 50 percent.

However, most of the calves dropped during the next few months were saved and will be used as beef on the Project at a later date. About 280 head of these calves are now doing very well and will furnish cheap beef to the Center later on. In addition, the old cows have been taken care of and are being put into condition for butchering this summer and fall. They will all be butchered by the end of the 1944 season.

Despite these handicaps, one carload of 30 head of cattle was shipped to the Heart Mountain Center on February 11, 1944. However, due to the fact that in order to continue shipments to Heart Mountain, the Granada center would have to buy feeder stock in the regular markets, and due also to the fact that the proposed program of slaughtering cattle at Heart Mountain did not work out there as hoped for, the entire program was cancelled. The Granada Center then returned to the original program of producing only enough beef cattle for its own needs, approximately 1,000 head instead of the 2,000-head herd under the two-center program. Thus feed crops, produced on the basis of 2,000 head of cattle, became surplus during the summer. Additional information regarding these crops will be included in this report under the heading of Sale

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of Farm Products. As the season progresses it is apparent that much surplus forage and corn crop will be grazed because of the project's inability to either use the feed, find workers to harvest it, or to secure a reasonable offer to sell in the field.

HOGS

The 1944 Hog program was based on two objectives: (1) to furnish an adequate supply of pork to the Granada Project and (2) to fully utilize all garbage from the Center. It was planned to keep the hog herd at approximately 1200 head during the year.

In order to give a complete picture of what happened in the hog program for 1944, some events of 1943 must be reviewed. In the summer of 1943 an epidemic of necro and other related diseases hit the center hog pens. While it is difficult to point to any one factor as causing the outbreak, a statement of facts regarding the hog program at that time should be of assistance.

In the first place, early in 1943 there were no facilities for handling a large number of hogs. Feed pens had to be built with materials at hand. No hog pasture was available. Feeding of garbage was carried on under poor conditions. As a result, pens were crowded and not too sanitary. In the spring of 1943, a small pasture was provided near the feeding pens and large numbers of hogs turned into it. A mud puddle under a group of trees did not help the sanitary conditions of the entire hog-feeding set-up, and with other handicaps the epidemic of necro rapidly developed into a very serious situation.

Unfortunately, at the time, record-keeping activities of the hog program were sadly neglected. The greatest death loss of hogs undoubtedly

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was experienced in June, 1943, and should have been recorded at the time. If this had been done, the loss would have been taken into account in the 1943 fiscal year. However, only 66 hogs were reported as lost during June of 1943 and even this amount was not recorded until after the start of the 1944 fiscal year. No actual-count inventory was taken until January 1, 1944. At that time it was found that the records kept by the hog project and the actual inventory showed a discrepancy of several hundred hogs. These had to be charged against the 1944 hog program and the final determination was not made until May of 1944. The adjustment raised the cost of the hogs during 1944 to about \$29.00 per head. Every hog, regardless of weight or age, was charged off at a flat uniform price.

An effort was made to determine what had happened to the missing hogs. The member of the WRA staff Farm Section in charge of the hog program, who had in June of 1943 reported only 66 hogs as having died during the month because of the epidemic of negro, in May, 1944, charged that the hogs had been stolen by evacuees and sold in Lamar. Two auditors from the Washington Office, who were on the Project in June, 1944, also made similar charges. A report dated June 24, 1944, made by Harlow M. Tomlinson, Chief of Internal Security at the Granada Relocation Center, who investigated these charges, is as follows:

"About 1:30 p.m., Thursday, June 22, John Spencer asked me to come with him to the Auditor's office. At the entrance of the Auditor's office, Mr. Utz told me that he would like to talk with us before we went inside. He told us that it had been reported that a Government truck (stake) was seen going to

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the Auction Pavilion on or about the first of May. It was reported to Mr. Shay, the auditor who had seen the truck, by the two Military Police, who were with him, that the WRA evidently sold a lot of stuff at the Auction House.

"Mr. Spencer and I talked to the Auditor. Mr. Shay told his part of this incident. He stated that he was sick and was going into Lamar. Just about the auction place, they passed the alleged green government truck with hogs on it. As he was sick, he did not pay much attention to the incident but that evening one of the other auditors came to his room and was telling him about the report of the hogs. Mr. Shay reported this truck incident to the other auditor.

"Mr. Delp, when asked by Mr. Spencer why he did not report this to someone of authority who could make the proper investigation and if the case warranted to have the man arrested, Mr. Delp stated that he was not going to make a report to anyone but Mr. Barrows or Mr. Myers.

"I asked Mr. Delp if he made any attempt to make any investigation from the Commission Company or the Auction Company in regards to evacuee selling hogs. He stated that he did not. I told him that it was not a very logical report or method of handling the procedure. Mr. Spencer told him that he was very lax in his government procedure, as he did not try to apprehend or notify some one who could apprehend the culprits if there was any.

"I contacted Mr. Hunter, Internal Security Officer, who lives next door to Mr. and Mrs. Kaiser who have an interest in the Company and owns the Sales Pavilion. He has it leased out to Mr. Augustine. Mrs. Kaiser is the bookkeeper. Today she checked over her books and stated that they had not bought any hogs from any evacuee or any other Japanese as far back as last fall. This sales, she stated, was made to a Japanese farmer who lives just east of Lamar. That is the only sales or transaction that she states the Auction Pavilion has made with any Japanese."

It seems quite evident that the missing hogs were lost during the 1943 season, partially in the fiscal year 1943 and partially in the fiscal year 1944. The evacuee worker in charge of the hog program from its beginning, an old man of some 60 years, has stated that he is very

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sure the hogs died. Despite the fact that only 66 were reported as having died in June of 1943, this man says he remembers many days during the epidemic when 25 to 30 small pigs were buried.

At present, the hog project is under the supervision of another member of the WRA Farm Section appointed personnel. Complete records are kept and the hogs are counted every 30 days and losses certified immediately. Major problems during 1944 have been lack of sufficient labor, both appointed personnel and evacuee. During part of the fiscal year 1944, there was in reality only two appointed-personnel members on the Farm Section of the Granada Project. It was impossible to give adequate supervision to all activities, and it was also impossible to provide adequate evacuee labor.

POULTRY

The 1944 poultry program was handicapped, as in 1943, by lack of equipment and supplies, labor shortages, and insufficient supervision by appointed personnel members of the Project Farm Section staff. Cold wet weather throughout the winter and spring brought high death losses of baby chicks due to lack of proper heating and associated problems. Later the growing flock had high death losses from coccidiosis. A total of 2,679 baby and growing chicks died during the first 7 months of 1944. In addition, 989 laying hens died during this period, due to overcrowding and associated problems.

The lack of evacuee labor made proper care of poultry, either chicks

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or laying stook impossible. In August 1944, it was decided to liquidate the poultry project entirely during the fall and winter of 1944-45.

FARM LABOR SHORTAGE

Of the many problems experienced during the 1944 farm program at Granada, the gravest and most perplexing by far has been the problem of labor. In the first place, the appointed-personnel staff of the Farm Section has been inadequate, making proper supervision of the many activities that make up the entire farm program impossible.

The evacuee labor situation was even worse. Practically every monthly report of the Farm Section lists labor shortages as the number one difficulty. Early in the year, unfavorable weather conditions retarded planting operations. When the weather cleared and planting was begun in earnest, lack of tractor operators and other farm laborers retarded the work. A great deal of the planting was done by appointed-personnel members, working evenings, nights, and Sundays to keep tractors and farm machinery in operation.

The February farm report stated:

"Relocation has taken a disproportionately heavy share of farm workers. Especially young men trained in the operation and maintenance of power machinery."

In the March report, it was stated:

"We had early anticipated difficulties in securing trained agricultural workers. Our fears are developing into reality especially as regards tractor drivers and machine operators. There is also a dearth of supervising personnel, especially those who can take over and operate reasonably large acreage of

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land. . . "

Again, the April report stated:

"Well qualified supervisory personnel is needed now more than ever before. . . "

In May the report of labor troubles continued:

"The worker problem continues to be of major importance. During the interval between the close of winter school session and the opening of summer school there were sufficient workers on the farm and the farming program progressed satisfactorily. With the opening of summer school, the farm lost 150 employed persons and the results appear drastic. The hay is lying in the field. Weeding has almost stopped. A number of tractors are standing idle. Many fields are drying up for need of irrigation. If this condition continues, it will be necessary to drastically reduce farming activities to the end that only those most essential to the center welfare be continued. In order to handle the hay crop which is now past its prime state of maturity, bids have been secured for the sale of such hay to outside interests."

The June report included the following:

"The highlight of the farm situation is lack of workers. Between 800 and 900 farm people have left the center on seasonal leave. This represents most of the farm population. The weedy condition of some crops, burning of others from lack of irrigation, failure to harvest the hay crop are part of the visible results of this lack of competent farmers. The farm had one hopeful period during the time when the situation was called an emergency and it was possible to secure a large number of overtime workers for evening, Saturday afternoon and Sunday operations. Discontinuation of this alternative ended most of the overtime work. Only 30% of the first cutting of alfalfa has been mowed to date. The entire crop should have been harvested the first week in June. About 400 acres of grain will be ready to cut within another week. The supreme effort put forth by a limited number of workers made possible the planting of most of the acreage planned in the 1944 program. Lack of workers to attend the crop has, however, caused rapid deterioration north of the railroad and has been sold to the Denver Alfalfa Mills. Yields are unusually heavy. The contractor has made very little progress in harvesting the crop. Approximately 80 acres of alfalfa south of the railroad

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has been sold to local farmers who will stack the hay on the Project, and pay for same at the time it is removed this fall. Bids have been let for sale of 150 acres of barley and wheat. If the Project continues to lose farmers at the present rate, it will be necessary to dispose of all of the grain crop in order to insure harvest."

In the July report, labor problems were mentioned again:

"Labor shortage continues to be the most serious deterrent to farm operations. The total number of workers are comparable with the total number employed on the farm at this time last year. However, the majority of workers are children or inexperienced adults. This situation has placed an extremely heavy load on the few remaining experienced farmers and farm supervisors. This handful of key workers deserve great credit for the way they have responded to the crisis. Most of them are working many hours of overtime in an effort to secure reasonably satisfactory crop yields and to harvest the crops that are grown. At this instance, there are fields of cabbage, cucumber, string beans, beets, squash, potatoes, swiss chard and chinese cabbage which are rapidly passing their prime for lack of adequate harvest crews. The farm organization is keeping in close touch with the center's governing bodies in an effort to secure needed workers. The governing groups have given strong backing to the Center's agricultural program."

It was not only a matter of losing farm laborers; the greatest loss was farm supervisors. It has been the supervisors who have made possible the farming operations at Granada. It was the supervisors who rallied the farm workers together and kept them on the job. It was the supervisors who formed the backbone of the entire farm set-up here. When good supervisors left, the Project lost more than just good workers; it lost the mainspring of the entire farm labor setup. So, when in May 1944, 29 of the 42 farm supervisors left the Project Farm in order to sign contracts for coming agricultural work on the outside under the seasonal-leave program, it was a blow that was hard to overcome. Many of

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these men will return to the Project Farm in the fall or winter of 1944; they have had to be replaced in the meantime with less efficient farm workers.

The Block Managers Assembly and the Community Council have both been of considerable assistance in recruitment of workers for the farm. They have understood the problem and have cooperated with the Farm Section and with the Project Administration all during the season. But with all the labor drives and recruitment programs, the farm labor supply has never been steady nor entirely adequate except for few week's periods. With relocation taking much of the labor supply from the center, other jobs are open to people who used to be farmers, and who have not yet relocated. With seasonal leave open for farm work exclusively, there has been little left in the center in the way of qualified farm workers.

To the high school students and to the many women and older men of the center, Amache owes a debt of gratitude. But at Amache, as in many other parts of the nation, farming work was done during the 1944 season mostly by inexperienced workers. To the farm supervisors who stayed on the job or came in to take someone else's place, should go special commendation for services rendered to the people of Amache. It can be said without contradiction that many of the farm supervisors worked day and night, Saturdays and Sundays, to help produce Amache's farm crops and livestock products.

It should not be inferred that the labor supply broke down completely and that very little farm work was accomplished. Production re-

Farm Program For 1944

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cords of the Project for the 1944 season will show this to be untrue. But the fact remains, as shown by monthly reports, and as experienced by Project Officials at Granada, that the labor problem was acute during the entire season. Time after time crisis developed. The number of farm workers fell off alarmingly and work began to pile up. Each time some new measure, or a renewal of some old measure had to be put into effect to solve the problem.

Block Managers were constantly called on to assist in labor recruitment for the farm. They would go to their respective blocks and either request or demand that residents go to the farm to work. And each time, some way or other, the labor was forthcoming. But the labor supply did not stay constant, and soon it would be necessary to repeat the recruiting program to find new workers to replace those who left the Center or who left the Farm Section for work elsewhere. Never during the entire year could it be said that the labor problem was settled and that the labor supply would be sufficient for the remainder of the season.

SALE OF FARM PRODUCTS

By the end of May, 1944, it was apparent that there would be surplus crops on the project farm. It was evident that the evacuee labor situation would not improve during the summer sufficiently to fulfill harvest needs. In order that some crops would not be left on the field unharvested, it was decided that they must be sold in the field to outside buyers, the buyer to take care of harvesting and removing the crops.

Farm Program For 1944

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On June 4, 1944, the farm section advised the property section that approximately 1000 tons of the 1944 alfalfa crop would be surplus to WRA needs. On June 6, invitations to bid on 800 to 1500 tons of alfalfa were sent out to 12 firms and copies were posted in the post offices at Granada, Lamar, and Holly, Colorado. The project received only one bid--that from the Denver Alfalfa Milling Company of Lamar, Colorado. As the bid was deemed to be fair and equitable, it was accepted and a contract drawn up on June 10.

The contract was for 800 to 1500 tons of first, second, and third cutting of alfalfa grown on the project farm. The project was to cut the alfalfa, rake it in windrows and turn it once. All other labor and machinery was to be furnished by the buyer, with the exception of one buck rake and tractor. The price to be paid for the alfalfa was \$16.00 per ton for grade No. 1, providing that the project furnished the driver for the tractor and buck rake; and \$15.00 per ton for grand grade No. 1, if the buyer furnished the driver. No. 2 grade alfalfa was priced at \$13.00, with the buyer furnishing the tractor driver and all other equipment and labor.

The buyer agreed to move at least 15 tons of alfalfa daily, if cut and windrowed, and weather permitting.

The buyer planned to start taking care of the alfalfa on June 15, but due to equipment problems, did not arrive until June 22. In the meantime, the project cut 44 acres of alfalfa for the buyer as arranged. It took the buyer until July 1 to put up the hay from the 44 acres. The

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delay was due to the buyer's difficulty in keeping his equipment running and in obtaining necessary labor. Much of the labor was Mexican Nationals, and considerable difficulty was experienced in keeping them on the job.

On June 30, the project cut an additional 55 acres for the buyer. However, the buyer did not start on this field until July 5 despite the fact that the first 44 acres were finished on July 1. Work had just begun on the second field of 55 acres when a series of hard rains started. Most of the 55 acres of alfalfa then cut was ruined by these prolonged rains.

It was agreed between the project and the buyer that the loss in quality of hay would be divided between the two parties. About half of the spoiled hay was taken by the buyer at the full \$13 per ton rate; the remainder was taken by the buyer at \$5.00 per ton on a new contract. The original contract remained in effect for all other alfalfa as first contracted for.

The new contract with the Denver Alfalfa Milling Company was signed on July 20, 1944, and involved 39.64 tons of the first-cutting off-grade alfalfa damaged by the rains. The price was \$5.00 per ton and the buyer agreed to furnish all labor and equipment. Also, this contract included 80 acres of first cutting sample-grade alfalfa at \$8.00 per ton to be cut and raked by the project, with the buyer furnishing all labor and all equipment except one tractor and buck rake.

Another contract was made with the Denver Alfalfa Milling Company

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on July 5, 1944, for an unspecified amount of second-cutting alfalfa for dehydration purposes. The price was \$15.00 per ton with all equipment and labor furnished by the buyer. As a high-protein content was necessary, this alfalfa was cut by the buyer earlier than it would be for other uses, but this loss in weight was offset by the fact that the buyer did the cutting and as well as furnishing all other labor and equipment.

On June 23, invitations to bid on 300 to 900 tons of alfalfa were sent to 14 individuals and firms. No one answered.

On June 28, 1944, invitations were sent to 14 persons or firms and posted in the post offices of Granada, Lamar, and Holly, to bid on 140 acres of over-ripe alfalfa hay in the field. Four bids were received and all were rejected, the highest being \$6.00 per ton.

On July 5, 1944, James O. Robinson and Floyd H. Ross contracted for 83.5 acres of first-cutting alfalfa that was over-ripe. All labor and equipment was to be furnished by the buyer and the price was \$8.00 per ton.

On July 7, 1944, a contract was entered into between the project and Rito Rangel for 52 acres of alfalfa. All cuttings for the 1944 season were included, and the buyer agreed to take care of all labor including necessary irrigations and to furnish all equipment. The price was \$8.00 per ton.

A contract was made with Harry Higbee on July 17 for 44.2 acres of alfalfa. Of this, 15 acres of first-cutting over-ripe alfalfa in poor condition was priced at \$5.00 per ton with the buyer furnishing all labor

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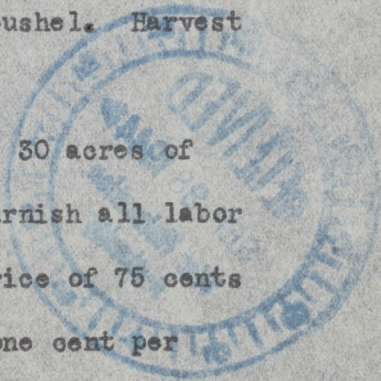
and equipment. First cutting on the remainder of the 44.2 acre field had already been removed. The contract also called for the sale of all other cuttings from the entire 44.2 acres at \$8.00 per ton, with the buyer furnishing all labor and equipment and all necessary irrigations.

On June 28, invitations were sent to seven individuals and posted at the post offices at Lamar, Granada and Holly, to bid on 160 acres of alfalfa land for use as pasture. The one bid received was rejected as it was too low.

On June 30, the project sent out to six firms or individuals and posted in the post offices in Lamar, Granada and Holly, invitations to bid on some 150 acres of grain crops, to be harvested by the buyer. Only one answer was received; a bid of 56 cents per bushel. As this was deemed to be too low, it was rejected.

On July 11, 1944, a contract was made with L. L. Good for 50 acres of a rye-wheat mixture (approximately 50 percent of each) and for 102 acres of barley. The buyer agreed to take care of all combining and hauling, furnishing all labor and equipment. The price was set at 60 cents per bushel for all the grain, the wheat-rye mixture being figured at 58 pounds per bushel and the barley at 48 pounds per bushel. Harvest was to start by July 13, 1944.

On July 27 a contract was signed with L. L. Good for 30 acres of winter wheat at 75 cents per bushel. The buyer was to furnish all labor and equipment and begin harvest by July 28, 1944. The price of 75 cents per bushel was for No. 1 wheat and was to be reduced by one cent per



and equipment. First cutting on the remainder of the 44.3 acre field had already been removed. The contract also called for the sale of all other cuttings from the entire 44.3 acres at \$8.00 per ton, with the buyer furnishing all labor and equipment and all necessary frictions.

On June 28, invitations were sent to seven individuals and posted at the post office at Laramie, Wyoming and Holly, to bid on 180 acres of alfalfa land for use as pasture. The one bid received was rejected as it was too low.

On June 30, the project sent out to six firms or individuals and posted in the post office in Laramie, Wyoming and Holly, invitations to bid on some 150 acres of grain crops, to be harvested by the buyer. Only one answer was received; a bid of 50 cents per bushel. As this was deemed to be too low, it was rejected.

On July 11, 1944, a contract was made with L. I. Good for 50 acres of a rye-wheat mixture (approximately 50 percent of each) and for 100 acres of barley. The buyer agreed to take care of all combining and hauling, furnishing all labor and equipment. The price was set at 80 cents per bushel for all the grain, the wheat-rye mixture being figured at 88 pounds per bushel and the barley at 48 pounds per bushel. This was to start by July 18, 1944.

On July 27 a contract was signed with L. I. Good for 30 acres of winter wheat at 75 cents per bushel. The buyer was to furnish all labor and equipment and begin harvest by July 28, 1944. The price of 75 cents per bushel was for No. 1 wheat and was to be reduced by one cent for



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bushel for each pound that the wheat weighed less than sixty pounds per bushel.

A license to graze sheep on some 40 acres of old alfalfa and weeds was granted to Clark Tuck on July 31, to expire September 20, 1944. The buyer was to pay 30 cents per head per month for the permit.

On August 15, 1944, Floyd H. Ross purchased by contract 83.5 acres of second cutting 1944 alfalfa crop at \$8.00 per ton. The buyer was to furnish all labor and all machinery except one hay stacker which was to be loaned to him if he stacked the alfalfa hay. The alfalfa was over-ripe.

SUMMARY

Despite the many acute problems that made farming difficult at the Granada Relocation Center during 1944, it must be remembered that certain successes were attained. Weather conditions were good during the growing season. In the face of serious labor shortages, crops were planted, taken care of, and harvested. Center mess halls were furnished with more beef and pork than had been originally planned. More vegetables were made available to this Center than the needs required. Shipments to other centers will be made during the fall and winter months of 1944. Large amounts of feed crops were sold to outside buyers because of changes in the livestock-feeding program made them surplus to Center needs.

At the writing of this report, it is not possible to include actual production figures. These will be available when the 1944 cropping sea-

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son is completed and will show the accomplishments of the year's program,
both in crop and livestock production.



Form Program for 1944
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son is completed and will show the accomplishments of the year's program,
both in crop and livestock production.



WAR RELOCATION AUTHORITY
GRANADA PROJECT
Amache, Colorado

April 17, 1943

QUARTERLY REPORT

AGRICULTURAL DIVISION

January 1, 1943 to March 31, 1943

1. BEEF CATTLE

Plans are now complete for the purchase of 50 head of Beef Steers to be pastured on pasture areas of the Project. Sufficient summer pasture to carry these steers through until Fall is available. Plans call for the purchase of additional stocker and feeder steers early next Fall to utilize the grass on the river-bottom pasture. The best fleshed steers will be drawn from the pasture areas and placed in feed-lots for finishing.

2. DAIRY CATTLE

During the latter part of January, approximately half of the dairy herd was shipped to the Gila River Project. Tests for Bangs Disease and Tuberculosis showed about 50% of the cows and the herd-bull to be reactors to Bangs Disease. Only one tuberculin cow was discovered in the herd. All reactor cattle were promptly slaughtered and the meat was utilized in the Center mess halls. Most of the dairy equipment also was transferred to the Gila River Project.

3. HOGS

The number of hogs has increased during this period from approximately 70 head to over 500 head. A considerable number of small pigs were purchased and these will be grown out on alfalfa pasture before placing on garbage ration. Considerable constructions and improvements of hog facilities was completed. These were done by the Agricultural Section and included the construction of shelters, pens, feeding floors, and improvements of the watering system. The hog unit, also, includes alfalfa for pasture and approximately 100 acres for corn production.

4. POULTRY

Chick brooding got under way early in March. 7,000 chicks of the Rhode Island Reds and Plymouth Rock breeds were used exclusively. Brooding was done under 14 oil brooders, each with the 500-chick capacity. In addition an electric battery brooder and growing battery were acquired and are being used successfully. Two additional oil brooders were acquired and will be used in subsequent operation.

Quarterly Report
Agricultural Division
Jan. 1, 1943 to March 31, 1943

April 17, 1943

Buildings formerly used to house laborers at the Koen Ranch were used for brooding chicks with practically no reconstruction required. Larger Buildings are used for storing the feed and equipment. Plans are under way to further expand operation, by the construction of an electric lamp brooder and to construct range shelters to accomodate pullets during the summer months. Practically all lumber used in the building program will be salvaged material.

5. VEGETABLES

The acreage devoted to vegetables as reported in the previous quarter remains almost the same. During this quarter all 450 acres of land was prepared for planteing vegetables and by the end of the period 11 acres of peas has been planted.

6. FIELD CROPS

During this period most of the land to be seeded to barley was plowed and prepared for seeding. A considerable proportion of the alfalfa was cultivated with a spring tooth harrow prior to irrigation. Acreage of land to be planted to corn and sorghum feed crops was plowed during this period.

7. PASTURE AREAS

Approximately 20 miles of 4-barbed wire fences was rebuilt during this period. This includes over 2,000 acres of bottom pasture land adjacent to the Arkansas River as well as the upland pastures. Approximately 800 head of steers are being grazed for an outside cattleman. These cattle will leave the project pasture about May 1. Wells, pumping equipment and water storage facilities were renovated in the several pastures. Conditions during this period were ideal for grazing for beef cattle on the pasture areas. There was an abundance of grass and ample supply of wate . The weather, except for a cold spell in January, was generally mild and favorable.

8. LABOR

The number of farm workers in the Agricultural Section increased substantially during this period until approximately 100 workers were employed at the end of this period.

9. SURPLUS FARM LAND

Early in this period it was determined to offer 2500 acres of land to outside farmers. Cropping permits for 2049 acres have been issued to eleven different farmers for the 1943 season. Four hundred twenty acres remains without definite plans for operation.

WAR RELOCATION AUTHORITY
GRANADA PROJECT
Amache, Colorado

August 5, 1943

QUARTERLY REPORT of the AGRICULTURAL DIVISION

GENERAL DISCUSSION

The period April 1st to June 30th marks one of increasing activity on the Farm. The number of farm workers was trebled during this period. Lands which had been previously prepared were planted; a large area of additional land was plowed, prepared for planting, and planted; the poultry plant came into production of eggs and meat; and the hog herd grew to the point that the Hog Farm was able to supply all pork requirements for the Center; thousands of pounds of early vegetables including spinach, radishes, lettuce, green onions, peas, and chongi were harvested; harvest of a good alfalfa crop was begun. A food preservation program was instigated for the purpose of handling vegetable surpluses; and shipment of surplus produce from this Center to others and to the Army was started. A considerable number of farm unit supervisors and foremen were moved out on the land where they could more efficiently operate their units; and plans were instigated for the future operation of the Farm.

VEGETABLE PROGRAM

The future for a vegetable production program is encouraging. However, it became obvious during this period that some vegetable are not adapted to the climatic and soil conditions existing on the Farm. Such crops as early leaf vegetables of the spinach and beet type, onions, early planted potatoes, and melons showed encouraging prospects for good yields. On the other hand, it may be difficult to successfully produce such crops as lettuce, broccoli, cabbage, and sweet potato. Slow germinating small seed crops like carrots and parsnips are extremely difficult to start because of the tendency of the soil to bake and become alkaline following irrigation.

Vegetables have never been grown extensively in this area. People accustomed to farming here did not realize that vegetables must have much more water and far more care than that required for production of the feed and forage crops usually grown in this Valley.

Our farmers, though excellent technicians in their individual field of endeavor, were not acquainted with these conditions. Because of the absence of local guidance they have been forced to undergo a period of trial and error in order to determine procedures of cropping adapted to their new surroundings. Considering these handicaps, the vegetable fields have been far more encouraging than was first anticipated. Undoubtedly, the yields will be better in future years as Project farmers become better accustomed to existing soil, water, and climatic conditions.

FIELD CROPS

The corn and sorghum crops got off to a good start. A somewhat larger acreage than anticipated was planted. The alfalfa crop on this Farm was better than that on most surrounding tracts.

Lack of irrigation water appears to be the only handicap to satisfactory feed crop yields. The small grain crops were generally a failure due to serious insect infestation. The one exception was the crop of rye which produced a better than average yield.

LIVESTOCK

Cattle which were purchased in May made excellent gains on the river-bottom pasture. Some steers had conditioned to the point where they were ready for slaughter by July 1st. 50 head of very thin cows were purchased as barren cows. A number of these have produced calves and more will calve later.

The Hog Project has reached a stable proportion where the available feed and the number of hogs are balanced in such a way that the Hog Farm can now produce all of the pork needs by the Project. Some difficulty was experienced on the Hog Farm during the month of June. An alfalfa-garbage combination of soft feed brought on an attack of necrosis which was successfully overcome without extremely serious losses.

Considerable headway was made toward the establishment of a 16,000-bird flock of laying hens. High feed costs and lack of housing facilities present difficult problems which will be overcome as rapidly as a coordinated farm program of feed production and building construction will permit.

PLANS FOR THE FUTURE

Each passing week has brought improvement in the farm organization. Farmers are becoming better acquainted with their land. They are working closer together in the common interest of producing the maximum amount of food for use on the Center.

In spite of the indefinite nature of the W.R.A. program it has been deemed necessary by both the administrative and the evacuee farm personnel to prepare a plan for the future in order that the many obstacles which confronted the farm program this year might be overcome another year.

It is believed that much of the land which was leased to outsiders can be farmed next year. The future farm program will give more emphasis to feed, meat, and egg production and somewhat less emphasis to the production of vegetables. Assuming that the lands not farmed this year will be farmed hereafter, it is planned that such lands be used for the production of feed crops, alfalfa, small grain, corn, and sorghum. Several hundred

acres of river-bottom land will be seeded to pasture mixtures as a means of increasing the quality of the existing pasture.

Carrying out of this plan will necessitate moving twenty-five or thirty families into houses located on the Farm. This arrangement will insure better operation of the land as well as proper maintenance of farm improvements.

The irrigation water supply which has been inadequate this summer will be supplemented by an increase in the number of wells and pumps and the repair and operation of existing pumps.

Additional equipment, especially haying machinery, soil tillage equipment, and power units will be needed to operate the increased acreage. However, this increase in equipment will not be in direct proportion to the increase in the area to be farmed.

REPORT OF OPERATIONS BY AGRICULTURAL DIVISION

PRESENT STATUS OF FARM OPERATIONS

VEGETABLE CROPS

Approximately 350 acres of vegetables have been planted. Of the originally-planned acreage of vegetable crops, 189 acres still remain to be planted and it is hoped that these may all be in the ground before June 10th, with the exception of crops which will be planted following the harvest of the original vegetable crop. The condition of the crops is generally good to excellent. Growth has been slow because of the extremely cold, windy spring. However, a few warm days should rapidly correct this situation. Water supply for vegetables has been adequate.

The acreage of vegetables originally planned has been increased by 65 acres. This increase will be mostly sweet corn, lima and snap beans, mung beans, and tomatoes.

LIVESTOCK

The livestock count of today is as follows: Cattle--167 head; hogs--900 head, chickens--6,900 birds. The livestock objectives call for a cattle herd of 600 head, a hog herd of 1,000 to 1,200 head, and a poultry flock of 16,000 birds.

The condition of the livestock is generally satisfactory. Some losses of poultry have occurred. According to veterinary analysis this was due to a sudden change in water when the pumping plant at the Poultry Farm failed. Water from the Center was believed to have caused the formation of chlorine salts which was fatal to about 265 young chicks.

There exists an abundance of feeder pigs in close proximity to the Center. If requested to do so, the Farm could arrange to purchase hogs for shipment to other centers.

FEED CROPS

The total acreage of feed crops amounts to 2,164 acres. The acreage of alfalfa is 515 acres. Five hundred forty-one acres of corn have been planted to date. It is planned that 400 additional acres of corn will be planted before June 5th. None of the cane has been planted to date. However, the Farm plan calls for 519 acres of milo and cane. Small grains, oats and barley, have been planted on 187 acres. The condition of the feed crop is fair. Green bug (aphid) has attacked grain fields throughout the Valley with resulting moderate to severe damage to growing plants.

The first cutting of alfalfa hay on this Farm will yield more than the alfalfa on farms within a twenty-five mile radius. However, a late cold spring has naturally reduced the perspective alfalfa hay yields. The early planting of corn is coming up. Stands appear to be good.

A weed problem resulting from poor farming practices in previous years will make difficult the growing of corn and small grains on some of the X-Y Ranch lands. It is the present intention to summer fallow the worst fields and to plant them to alfalfa and winter wheat this fall.

PASTURE

The total area of pasture amounts to 2,894 acres. The farm plan calls for the planting of over 100 acres of land on the X-Y Ranch in sweet clover-wheat grass mixture to be used as pasture this summer and fall. Pasture condition is fair to good.

MACHINERY

It is hoped that farm machinery requested from other centers will be made available to this Project. The Project has asked for two Farnall-H tractors from Tulalake and four potato diggers from Minidoka. None of the latter machines are in stock on the Farm. It is, therefore, imperative that a reply be received as soon as possible as to whether or not we will receive the machines from Minidoka. The Farnall-H tractors are badly needed to replace four large tractors which are tied up at the present time awaiting repair. These tractors were in poor condition at the time they were received on the Project.

ORGANIZATION OF FARM OPERATIONS

The farm lands and the various farm enterprises such as, vegetable crops, livestock, and food preservation have been broken down into a number of operating units. Each unit is headed by an evacuee supervisor who understands that he is responsible for his particular phase of the program. Success of the venture will be fully credited to him.

An evacuee general supervisor coordinates all unit operations in accordance with the established farm-management plan. Changes in the plan are brought about by group discussions, usually led by the General Supervisor or the Chief of the Agricultural Division. Unit supervisors and administrative personnel are always present at such meetings. Once every ten days there is an evening meeting with the unit supervisors and led by the General Supervisor at which time each current problem is brought forth and a solution proposed. These meetings usually require from two to three hours.

Attached are two farm bulletins which set forth the worker requirements for operating the farm and a basis for recruiting farm assistance. Also, a current issue of the local paper, "The Granada Pioneer", which gives some idea of the publicity which the farm program has received.

FARM PROBLEMS

The problems of operating this farm like those on any other farm present an ever-changing pattern. Problems that seem serious barriers to progress one day may be solved or forgotten the next. However, there are several problems which are more or less chronic and which present continual hazard to the realization of the primary farm goals. The most serious one, shortage of workers, has been and continues to be an obstacle to maximum success. A peculiar paradox of conditions must by necessity exist in an organization such as ours. Once a man becomes well-trained in the operation of farm machinery, especially tractors, or he becomes a qualified irrigator, he immediately is in demand on the outside. Therefore, the farm is required to continually train new men and to suffer the usual inefficiencies of untrained personnel.

It is urgently requested that careful consideration be given to moving competent farmers from other projects to Granada immediately.

It appears that this will be the only possible way of insuring personnel to carry out the extensive operations on the X-Y Ranch. For example: Our loss in farm personnel today was so heavy that X-Y operations must be practically suspended until a new force of tractor operators can be secured and trained. A number of experienced and ambitious evacuee farmers would be a tremendous asset to our farm program.

OTHER PROBLEMS ARE:

1. The Difficulty Of Successfully Operating A Farm On An 8-hour Day Basis

Existing arrangements for meals and lack of gasoline and transportation facilities make it impossible for farm supervisors to put in the time before and after regular working hours, which they feel is necessary to adequately care for their projects. This problem is being overcome to some extent by an attempt to locate supervisory personnel and farm workers in the vacant houses scattered over the Farm. It is believed, also, that completion of the mess hall on the Koen Ranch will react favorably in this regard.

2. The weedy condition of some of the farm land on the X-Y Ranch combined with the lack of equipment and workers and further aggravated by the inadequacy of irrigation water, pending enlargement of the X-Y Ditch, will necessitate summer fallowing of some lands, which were originally intended to be used for production of feed crops. It is believed that this practice will result in yield increases which will offset the crop loss this season.

*Note: The cattle herd has been increased to 217 head.

NARRATIVE

A complete fiscal inventory has been made of all farm products on hand as of December 24, 1943. Previous monthly reports have been based on estimates with resulting carry-over of accumulated book errors. It was deemed advisable to make an accurate balance of all books in order that the errors which have occurred in the past will not be carried on into the next calendar year.

The most serious differences were found to exist in ~~the~~ livestock; particularly poultry and hogs. In the case of the hog account, all items of purchase, sales to the Mess Division, and natural increase were analyzed in order to determine true losses. This analysis revealed errors in book account between purchases and sales amounting to 131 head of hogs. The unaccountable difference between the present fiscal inventory and the November estimate is believed to be due to inaccuracies in reporting pig and hog losses as they occurred and accumulated throughout the year. It is possible that the most serious error was made during June, July, and August when the losses were heavy because of an epidemic of necro and when the supervisor of the hog farm was away from the farm due to illness. The unaccounted losses amount to 273 head.

The death loss of baby chicks immediately after their arrival was extremely heavy. This loss was due to delays in shipment and overheating. It was difficult to accurately record the amount of such loss because of the rapid turnover among personnel working at the poultry plant. An unsuccessful attempt was made to secure chick replacements from the contracting companies.

Another instance of severe poultry loss, which was difficult to account for, occurred during a torrential rainstorm and flood early in July.

Accumulated errors in book inventories amounted to a deficit of 587 birds. The total unaccountable loss is 956 birds. It is believed that poultry loss hereafter will be much less because of improved poultry facilities now in operation or under construction. It is recognized that large book account errors should not occur; however, the very rapid turnover in office personnel made extremely difficult the keeping of accurate accounts. An improved method of accounting for death losses should overcome the inaccuracies of the past year.

Land preparation for spring crops has slowed down due to storms and freezing weather. Plowing has been possible only between the hours of 10:30 and 4:30 on the warmer days. Approximately two-thirds of the vegetable and feed crop acreage remains to be prepared for spring planting. If it is possible to secure the heavy offset discs immediately, timely preparation of the feed crop acreage will be assured.

Because of the unfavorable outlook for irrigation water supply, an effort has been made to fall irrigate alfalfa and cultivated lands. This procedure has been hampered by the freezing weather; however, an effort will be made to winter irrigate all alfalfa lands if the water supply and weather conditions permit.

The livestock feeding program is progressing satisfactorily. Approximately 600 head of cattle are on full feed; 500 head of these are being fed a fattening ration at the XY Ranch and 100 head are in a feed lot under the management of the Vocational Agricultural boys. About 100 head are being fed a maintenance ration of soybean meal cake supplemental to pasturage.

Granada Project
Amache, Colorado

GR:PD:DEH

February 4, 1944

Mr. Dillon S. Myer
Director
War Relocation Authority
Barr Building
Washington (25), D. C.

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

Dear Mr. Myer:

I am enclosing herewith in triplicate the YEARLY SUMMARY
REPORT OF CROPS for calendar year 1943.

Very truly yours,

D. E. Harbison
Acting Project Director

Enclosure

NARRATIVE REPORTCROPS

Factors Adversely Influencing Production

a. Inherent Factors

The experience of the past season indicates that the climate and soils of the Center Farm are not well adapted for extensive production of some crops grown last season. Specifically, broccoli, peas, and cabbage. In the case of the latter crop an attempt will again be made this year by planting earlier in the spring on fertilized land. Lettuce does not produce well when grown during the hot summer season. This year, lettuce will be planted in February, March and April, and again in the fall. Similarly, spinach will be planted in late winter and early spring in an attempt to extend the production period.

b. Factors Influenced by Administrative Action

It is believed that the yield of tomatoes can be greatly increased by earlier planting. Present plans call for the setting of tomato plants in the field from three to six weeks earlier than last year. A serious loss in production of snap beans was caused from the planting of seed infested with virus diseases. Poor quality of seed also resulted in low yields of sweet corn. Greater care has been exercised in the selection of this year's seed supply. Planting methods were factors which adversely influenced production, especially of carrots. An attempt will be made to overcome this difficulty.

Inventory of the supply of farm machinery might lead to the conclusion that machinery is adequate. However, such is not the case, especially in the line of land preparation machines. The short working day necessitates a larger amount of power equipment and implements than would be necessary on most farms. Similarly, it is highly important that the project have sufficient harvesting machines in keeping with the above circumstance and in order that crops may be harvested before they are damaged by early freezes. This is an important consideration in connection with the harvesting of potatoes, sweet potatoes, corn and sorghum.

Proposals for Better Utilization of Agricultural Products

The Center was very successful in securing maximum utilization of agricultural products this year. This was accomplished by shipment of surpluses to other centers. (A total of 16 cars of vegetables including spinach, potatoes, swiss chard, cucumbers and beets and onions were shipped to six centers) And by encouraging the people in the Center to consume certain surpluses outside of the regular mess. (Watermelon, cantaloupes, daikon and celery)

The period that edible products could be furnished to the Center can be extended if additional facilities for root storage and dry storage are provided. The canning plant which was brought into operation late last fall will also provide an outlet for surpluses and extend the period of consumptive use.

LIVESTOCK

The livestock projects have been confronted by many difficulties, most of which can be summed up as lack of proper facilities and inexperience of the people in livestock operations. These problems are being gradually overcome. The project should show much improvement in meat and egg production next year. Barring unforeseen contingencies the cost of livestock products should scale downward as the results of improved facilities and better management practices take effect.

Losses of hogs and poultry were high. In spite of these losses, the cost of meat and eggs was far below market price.

Poultry losses were mostly small chicks which died shortly after they were received. Overheating in transit and lack of adequate facilities can be charged for most of these losses.

The hog losses were mostly pigs weighing under 80 pounds each. This loss was due primarily to diseases such as necro and erysipelas. In spite of these losses, dressed pork has been produced at less than ten cents per pound and the present cost is slightly less than eight cents per pound.

WAR RELOCATION AUTHORITY
Yearly Summary Report - Crops

For Year Ending December 31 194 3

GRANADA

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)
Cabbage	25	13	12	28,050	2,335	28,050			.01
Lettuce	15	5	10	76,955	7,696	76,955			.019
Spinach	14	0	14	71,240	5,089	35,480	12,600	23,160	.023
Spinach*	10		3	7,470	7,490	7,470			.0189
Swiss Chard	11	3	8	92,530	11,867	60,670	31,860		.0141
Cabbage, Chinese	28	10	18	202,050	11,225	148,050	54,000		.0098
Beets	12	0	12	97,834	8,153	64,079	33,755		.0148
Cantaloupe	20	0	20	57,141	2,856	57,141			.02
Carrots	17	13	4	76,450	19,112	57,280			.014
Celery	4	11	3	60,618	20,206	57,690			.0176
Potatoes	77	0	77	649,400	8,434	334,400	315,000		.013
Potatoes, Sweet	17	7	10	16,800	1,680	16,800			.0291

* This spinach crop was planted late fall for intentions of harvesting early spring. But so far it is uncertain as yet its growth. This was done for experimental purpose.

WAR RELOCATION AUTHORITY
Yearly Summary Report - Crops

For Year Ending December 31 1945GRANADA

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)
Tomato	30	20	10	75,910	7,591	75,160			.02937
Onion, Green	1	0	1	480	480	480			.16
Onion, Dry	34	0	34	272,450	8,013	232,450	40,000		.0177
Cucumber	20	10	10	117,320	11,732	110,215	7,105		.0254
Daikon	4	0	4	145,890	14,589	14,589			.0051
Radish	20	0	20	53,233	26,616	53,233			.0176
Turnip	11	0	11	142,182	13,834	142,182			.0099
Watermelon	12	2	10	266,550	26,655	266,550			.0057
Corn, Sweet	40	33	7	15,566	2,224	1,556			.037
Egg Plant	5	0	5	None					
Squash	7	0	7	34,580	4,940	34,580			.0156
Pepper	5	0	5	28,466	5,693	28,466			.0518
Broccoli	14	11	3	6,460	2,183	6,460			.0409

WAR RELOCATION AUTHORITY
Yearly Summary Report - Crops

For Year Ending December 31 194 3GRANADA

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	675		678	2,152,200					.00136
Corn, field	550		550						.
Sorghum	200		200						
Silage, corn and sorghum				4,400,000					.000909
Fodder, corn and sorghum				1,600,000					.00068
Corn grain				540,000					.00499
Milo grain				180,000					.00499
Sorgo grain				12,000					.00499
Rye			53	45,000					.00045
Wheat Vol.			20	4,500					.00045
Barley	175	175	0	0					
Oats	30	30	0	0					
Winter Wheat	180		Will be harvested this coming season.						

WAR RELOCATION AUTHORITY
Yearly Summary Report - Livestock

For Year Ending December 31, 1943

ORAWADA

Center

TABLE I

HOGS

TABLE 1

NOVS

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.			
79	240	None		2471	69	None		11	77	997	152.2	\$.098

Death Loss			Closing Inventory			
Under 6 wks.	Over 6 wks. old		Feeders		Breeding Stock	
NO.	NO.	Av. Wt.	NO.	Av. Wt.	NO.	Av. Wt.
26	699	60	915	135	None	

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.
None		314	None	25461	None	None		6392	\$.219	11927	3 lbs.	.2217

Death Loss		Closing Inventory			
Under 6 wks. No.	Over 6 wks. No.	Chicks No.	Pullets No.	Hens No.	Other No.
8149	2035	None		3199	465

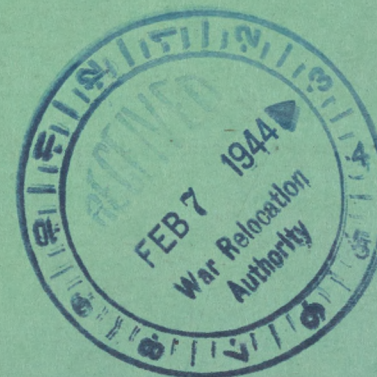
(Up and Over)

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.
None		880	634.96	57	189	427.8	\$.1734	None	None		12	810	736	770

OTHER



Vegetables	Proposed Acreage	Estimated Total Yield	Estimated Production By Months												
			July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
			THOUSAND POUNDS												
Celery															
Farm Production	14	70				35	35	(Storage Dec., Jan.)							
Mess Hall Needs			17	17	17	17	17	17	17	17	17	17	17	17	
Add. Needs or Surplus			-17	-17	-17	+18	+18	-17	-17	-17	-17	-17	-17	-17	
Chinese Cabbage															
Farm Production	10	120	5	25	50	40									
Mess Hall Needs			30	30	30	30									
Add. Needs or Surplus			-25	-5	+20	+10									
Cucumbers															
Farm Production	10	50			25	25									
Mess Hall Needs			36	36	36	36								36	
Add. Needs or Surplus			-36	-36	-11	-11								-36	
Lettuce															
Farm Production	20	80	20		15	15								30	
Mess Hall Needs			27	27	27	22	22	22	22	22	22	22	27	27	
Add. Needs or Surplus			-7	-27	-12	-7	-22	-22	-22	-22	-22	-22	-27	+3	
Onions (dry)															
Farm Production	22	176	5	40	60	50	21								
Mess Hall Needs			6	6	6	6	6	6	6	6	6	6	6	6	
Add. Needs or Surplus			-1	+34	+54	+44	+15								
Onions (green)															
Farm Production	4	8	4											4	
Mess Hall Needs			6	6	6	6	6	6	6	6	6	6	6	6	
Add. Needs or Surplus			-2	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-2	
Peas (green)															
Farm Production	14	70												70	
Mess Hall Needs			50	50	50									50	
Add. Needs or Surplus			-50	-50	-50									+20	
Potatoes (Irish)															
Farm Production	100	1000	250	200	200	200	150	(Storage Jan., Feb., Mar.)							
Mess Hall Needs			18	18	18	18	20	20	20	20	20	20	20	18	
Add. Needs or Surplus			-18	+232	+182	+182	+180	+130	-20	-20	-20	-20	-20	-18	

[illegible]

*Additional Needs (-)
Carry-over or Surplus (+)

Estimated Total Yield in 1000 lbs.

Estimated

Estimated Production By Months

Vegetables	Proposed Acreage	Estimated Total Yield	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
thousand pounds														
Beans (dry)			Available late September											
Farm Production	100	120	6	6	6	6	6	6	6	6	6	6	6	6
Mess Hall Needs			6	6	6	6	6	6	6	6	6	6	6	6
Add. Needs or Surplus														
Beans (snap)														
Farm Production	14	56	10	30	11									5
Mess Hall Needs			12	12	12									12
Add. Needs or Surplus			- 2	+18	- 1									- 7
Beets (table)														
Farm Production	5	50	30											20
Mess Hall Needs			8.5	8.5	8.5	8.5	8	8	8	8	8	8	8	
Add. Needs or Surplus			+21.5	-8.5	-8.5	-8.5	-8	-8	-8	-8	-8	-8	-8	
Broccoli														
Farm Production	10	30		15	15									
Mess Hall Needs				12	12	12	12	12					12	
Add. Needs or Surplus				+ 3	+ 3	-12	-12	-12					-12	
Cabbage														
Farm Production	18	450	50	90	120	100	90	(Storage Dec., Jan., Feb.)						
Mess Hall Needs			20	20	20	20	25	25	25	25	25	25	25	27
Add. Needs or Surplus			+30	+70	+100	+ 80	+65	-25	-25	-25	-25	-25	-25	-27
Cantaloupe														
Farm Production	20	100		40	50	10								
Mess Hall Needs				40	40	10								
Add. Needs or Surplus					+10									
Carrots														
Farm Production	17	238	40	100	50	30	18	(Storage Dec., Jan., Feb.)						
Mess Hall Needs			12	12	12	12	12	12	12	12	12	12	12	12
Add. Needs or Surplus			+28	+ 88	+38	+18	+6	-12	-12	-12	-12	-12	-12	-12

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Vegetables	Proposed Acreage	Estimated Total Yield	Estimated Production By Months											
			July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
			THOUSAND POUNDS											
Celery														
Farm Production	14	70				35	35	(Storage Dec., Jan.)						
Mess Hall Needs			17	17	17	17	17	17	17	17	17	17	17	17
Add. Needs or Surplus			-17	-17	-17	+18	+18	-17	-17	-17	-17	-17	-17	-17
Chinese Cabbage														
Farm Production	10	120	5	25	50	40								
Mess Hall Needs			30	30	30	30								
Add. Needs or Surplus			-25	-5	+20	+10								
Cucumbers														
Farm Production	10	50			25	25								
Mess Hall Needs			36	36	36	36								36
Add. Needs or Surplus			-36	-36	-11	-11								-36
Lettuce														
Farm Production	20	80	20		15	15								30
Mess Hall Needs			27	27	27	22	22	22	22	22	22	22	27	27
Add. Needs or Surplus			-7	-27	-12	-7	-22	-22	-22	-22	-22	-22	-27	+3
Onions (dry)														
Farm Production	22	176	5	40	60	50	21	(Storage Dec., Jan., Feb., Mar.)						
Mess Hall Needs			6	6	6	6	6	6	6	6	6	6	6	6
Add. Needs or Surplus			-1	+34	+54	+44	+15	-6	-6	-6	-6	-6	-6	-6
Onions (green)														
Farm Production	4	8	4											4
Mess Hall Needs			6	6	6	6	6	6	6	6	6	6	6	6
Add. Needs or Surplus			-2	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-2
Peas (green)														
Farm Production	14	70												70
Mess Hall Needs			50	50	50									50
Add. Needs or Surplus			-50	-50	-50									+20
Potatoes (Irish)														
Farm Production	100	1000		250	200	200	200	150	(Storage Jan., Feb., Mar.)					
Mess Hall Needs			18	18	18	18	20	20	20	20	20	20	20	18
Add. Needs or Surplus			-18	+232	+182	+182	+180	+130	-20	-20	-20	-20	-20	-18

[illegible]

POTATOES RECEIVED DURING THE
MONTH OF NOVEMBER
AND DECEMBER

Jan 1, 1944

<u>DATE:</u>	<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>AMOUNT</u>
11/1/43	Potatoes	2 sk.	1.45	\$ 2.90
11/4/43	"	59 sks	1.00	59.00
11/8/43	"	203 sks.	.80	162.40
11/11/43	"	54 sks	1.00	54.00
11/16/43	" Irish	2 sks	1.00	2.00
11/17/43	" Irish	2 sks	1.00	2.00
11/17/43	" Irish	4 sk.	1.00	4.00
11/19,20/43	"	60 sks	1.00	60.00
11/22/43	"	8 sks	1.00	8.00
11/23/43	"	89 sks	1.00	89.00
11/24/43	"	87 sks	1.00	87.00
11/26/43	" Irish	58 sk	1.00	58.00
11/27/43	" Irish	7 sks	1.00	7.00
11/29/43	" Irish	18 sks	1.00	18.00
11/30/43	" Irish	46 sks	1.00	46.00

Total: 699 sks.

\$659.30

12/31/43	" Irish	4 sks	1.20	\$ 4.80
12/30/43	" Irish	147 sks	1.20	176.40
12/27/43	" Irish	11 sks	1.20	13.20
12/24/43	" Irish	8 sks	1.20	9.60
12/21/43	" Irish	2 sks	1.20	2.40
12/23/43	" Irish	2 sks	1.20	2.40
12/22/43	" Irish	94 sks	1.20	112.80
12/20/43	" Irish	5 sks	1.20	6.00

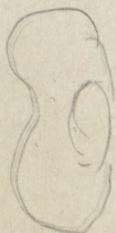
<u>DATE:</u>	<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>AMOUNT</u>
12/16/43	Potatoes, Irish	152 sks	1.20	\$ 182.40
12/14/43	" "	2 sks	1.20	2.40
12/13/43	" "	2 sks	1.20	2.40
12/11/43	" "	2 sks	1.20	2.40
12/10/43	" "	63 sks	1.20	75.60
12/9/43	" "	7 sks	1.20	8.40
12/7/43	" "	46 sks	1.20	55.20
12/6/43	" "	45 sks	1.20	54.00
12/4/43	" "	6 sks	1.20	7.20
12/3/43	" "	27 sks	1.00	27.00
12/2/43	" "	4 sks	1.00	4.00
12/1/43	" "	33 sks	1.00	33.00

Total: 662 sks.

\$ 781.60

1942-1943 SEED PURCHASES

VARIETY	DATE RECEIVED	KIND	QUANTITY
Spinach	8-31	Holland Variety	42
	9-6	Harlem Market	25
	5-21	Prickly Market	15
	4-22	Giant Nobel	68
	4-20	Northland	75
	3-11	Nobel, Giant Thick Leaf	60
		Total	285 lbs.
Beets	9-3	Early Wonder	25
	3-13	(Table) Detroit Dk. Red	35
	3-13	Early Wonder	35
		Total	95 lbs.
Cucumber	6-29	Taxpayer	10
	6-29	Colorado Shipper	10
	7-10	Boston Pickling Improved	10
	7-10	Burrell's Pickling	10
	7-10	National Pickling	5
	3-13	Black Diamonds	10
	3-13	Colorado Shippings	10
	3-13	Taxpayers	20
		Total	85 lbs.
Radish	6-29	Icicles	25
		Perfection White-lipped	25
	4-12	Early Scarlet	20
	3-13	Long White Japanese	50
	1-14	Icicle	36
		Total	156 lbs.
Turnips	3-13	White Globe	10
		Purple Top	25
	1-14	Purple Top White Globe	1 1/2
	Total	36 1/2 lbs.	
Tea	6-29	Habu Cha	Total 40 lbs.
Daiikon	7-30		Total 25 lbs.
Carrots	8-3	Red Core Chantney	10
	8-3	Imperator	10
	8-3	Streamliner	10
	8-3	Supreme Half Long	10
	3-13	Chantney Red Core	25
	3-13	Emperators	25
	3-13	Streamliners	25
		Total	115 lbs.



VARIETY	DATE RECEIVED	KIND	QUANTITY
Lettuce	9-16	Denver Market	10
	9-2	Imperial 847	5
	9-2	New Yorker #12	5
	9-3	New Yorker #515	5
	9-2	Grand Rapids	10
	3-13	#152	25
	3-13	Black Seeded Simpson	40
	3-13	Head, #247	25
			<u>Total 125 lbs.</u>
Beans		Wax	15
		Green	15
	3-15	Snap (Stringless gr. pod wax)	500
		Snap(Pencil Pod Wax)	500
			<u>Total 1030 lbs.</u>
		Dry, Pinto	1500
		Dry, Henderson Bush Limas	1000
			<u>Total 2500 lbs.</u>
Sunflower	5-12	Giant	<u>Total 10 lbs.</u>
Corn	5-12	Westland Maize	7080
	5-12	Norkan SoGo	3000
	6-7	Pioneer Hybrid #322 MF	4
		" " #340 SF	1
			<u>Total 5 Bushels</u>
Casaba	5-18		<u>Total 27 lbs.</u>
Celery (Plants)	6-22	Utah 66 Variety	20,000
	6-17	Utah 66 Variety	20,000
			<u>Total 40,000 lbs</u>
Celery (Seeds)	2-26	Giant Pascals	<u>Total 5 lbs.</u>
Mung	4-1	Green	200
	4-1	Green, Azuki	100
	5-5	Red, Azuki	100
			<u>Total 400 lbs.</u>
Sweet Potato Plants	6-5 -18	Porto Rican Variety	10,000
	6-18-21	" " "	20,000
	6-20-23	" " "	20,000
	5-5-15M, 5-17-25M 6-11-15M	" "	40,000
	5-13-20M, 5-22-10M	Nancy Halls	50,000
			<u>Total</u>
			140,000 plants

140,000

7

<u>VARIETY</u>	<u>DATE RECEIVED</u>	<u>KIND</u>	<u>QUANTITY</u>
Corn, sweet	6-25	Stalk, Evergreen	100
	6-25	Golden Country Gentleman	100
	3-13	Bantam Hybrid	200
	4-7	King Cross	200
	3-15	Golden Bantam Cross	200
	3-15	Seneca	200
			Total 1,000 lbs.
Pepper, Chile	4-2		Total 1½ lbs.
Barley	4-2		Total 116.2 bu.
Barley			Total 8,425 lbs.
Parsley	4-12	Evergreen	Total 5 lbs.
Mustard	4-12	Giant Southern Curled	5
	4-22		2 oz.
			Total 5 lb. 2 oz.
Chinese Mustard	4-20		Total 5 lbs.
Onion	4-20	Yellow Sweet Spanish	20
	4-27	White Lisbon	5
	3-13	Sweet Spanish Yellow	60
	4-2	Japanese	4
			Total 89 lbs.
Onion, Plants	4-27		Total 4 boxes (8,000 per box)
Pumpkin	4-20	Connecticut Fidd	5
	3-13	Small Sugar	5
	3-13	Crooknecks	5
	3-13	Green Striped Cushaws	10
			Total 25 lbs.
Popcorn	4-27	Iopop #3	Total 10 lbs.
Parsnip	4-22		Total ½ lb.
Sorghum	4-27	Westland	3
		Norkan	1
			Total 4 Tons
Watermelon	3-13	Early Northern Sweets	15
"	"	Striped Klondikes	15
"	"	King and Queen (Winter)	15
			Total 45 lbs.
Swiss Chard	3-13	Lucillus	Total 40 lbs.

VARIETY	DATE RECEIVED	KIND	QUANTITY	
Potatoes	4-8	Irish Cobbler	200	
	4-8	White Neb. Katadin	200	
	4-8	Wyoming Triumphs	100	
	4-2	Irish Cobbler	550	
	3-3	Irish Cobbler	50	
			<u>1100</u>	Total 1100 sks.
Egg-Plant	3-13	Japanese	$\frac{1}{2}$	
	3-13	Florida H1 Bush	5	
			<u>5</u>	Total $5\frac{1}{2}$ lbs.
Cantaloupe		Improved 38 Jumbos	40	
		Improved 45's	40	
			<u>80</u>	Total 80 lbs.
Squash	3-13	Banana	8	
	"	Hubbard	5	
	"	Zucchini	10	
	"	Table Queen	7	
			<u>30</u>	Total 20 lbs.
Chinese Cabbage	3-17			Total 100 lbs.
Cabbage	2-26	Golden Acre	6	
	"	Copenhagen	6	
	"	Danish Balé Head	6	
			<u>18</u>	Total 18 lbs.
Pepper	2-26	California Wonder Low-bush		Total 2 lbs.
Tomatoes	2-26	Earliana Standard	4	
	2-26	Marbon	3	
	2-26	Pearson Improved	3	
			<u>10</u>	Total 10 lbs.
Peas	3-13	Little Marvel	300	
	4-7	Little Marvel, American Wonders	300	
	3-3	Alaska	400	
	"	Asgrow #40	100	
	"	Thomas Laxton	100	
			<u>1200</u>	Total 1200 lbs.
Alfalfa	3-10	Colorado Common		Total 4000 lbs
Clover, Sweet	3-10	Bi-Annual Yellow		Total 4000 lbs.

July 8, 1943

<u>Variety of Vegetables</u>	<u>Total Acres to be Planted</u>	<u>Planted Apr. 1 to June 1</u>	<u>Planted June 1 to July 1</u>	<u>Total Acres Planted</u>
Beans, snap	15	10	5	15
Beans, dry	55	15	40	55
Beet, table	8	5	0	5
Broccoli	15	15	0	15
Cabbage	20	20	0	20
Cabbage, Chinese	15	5	0	5
Carrots	17	10	7	17
Celery	14	0	3	3
Cantaloupe	20	10	10	20
Corn, sweet	53	30	0	30
Cucumber	15	5	0	5
Eggplant	5	0	5	5
Garlic	3	3	0	3
Lettuce	20	15	0	15
Melon, water	12	12	0	12
Onions, dry	32	32	0	32
Onions, green	1	1	0	1
Parsley	1	0	0	0
Peas	11	11	0	11
Pepper	5	5	0	5
Potatoes, Irish	77	77	0	77
Potatoes, Sweet	15	12	3	15
Pumpkins & Squash	15	0	0	0
Radish, Misc. Radish	25	14 $\frac{1}{2}$	0	14 $\frac{1}{2}$
Spinach	14	14	0	14
Swiss Chard	10	10	0	10
Tomatoes	55	15	15	30
Turnips	5	5	0	5
TOTAL	553	351	88	439
 Alfalfa				515
Barley	185	185	0	185
Corn, field	550	320	120	440
Sorghum, grain	500	200	0	200
Sorghum, Forage	200	0	0	0

To GRANADA Relocation Center:

You are scheduled to receive the following kinds and amounts of vegetables from the Gila River Center during the periods specified below:

Produce	: July :	: Aug. :	: Sept. :	: Oct. :	: Nov. :	: Dec. :	: Jan. :	: Feb. :	: Mar. :	: Apr. :	: May :	: June :	: Totals
	(Thousand Pounds)												
Cabbage	:	:	:	:	:	:	8 :	8 :	8 :	8 :	:	:	:
Lettuce	:	:	:	:	:	12 :	12 :	12 :	12 :	12 :	:	:	:
Cabbage, Chinese	:	:	:	:	:	12 :	12 :	12 :	12 :	12 :	:	:	:
Beets	:	:	:	:	:	:	:	25 :	25 :	25 :	25 :	:	:
Carrots	:	:	:	:	:	:	:	:	:	40 :	40 :	40 :	:
Onions, Dry	:	:	:	:	:	:	:	:	:	:	35 :	35 :	:
Total	:	:	:	:	:	24 :	32 :	57 :	57 :	97 :	100 :	75 :	442



GRANDA RELOCATION CENTER
AMACHE, COLORADO

DECEMBER 31, 1942

FARM SECTION REPORT

March 18, 1942, the black date in the history of the United States, will be long remembered as ^{a fracture in} ~~the beginning of~~ ~~the downfall of~~ the democratic principles upon which this country was founded and built; for on this day the President of the United States established the War Relocation Authority and directed it to cooperate with the War Department in putting one minor racial group in relocation centers without giving consideration to breaking up long-standing homes and communities, to loss of jobs and business enterprises, and to the loyalty of the citizens.

The full story behind the evacuation of the Japanese from the West Coast has never been adequately told and probably will not be until many years after the return of peace; for in times of total war many chapters of this complex story remains hazy.

At the relocation center, the object and plans of the WRA were to utilize the manpower and skill of the people of Japanese ancestry to develop natural resources, to produce food, to manufacture essential articles, and to provide community services on a mere sum of \$12, \$16, and \$19 per month. Now, let's go back a few months to find out what were the basic factors in determining the location and selection of relocation centers.

The original conditions which determined the location of

these centers were: that the area provide work opportunities to the evacuees in the way of public works, agriculture production, manufacturing; that adequate public facilities - water supply, highways, railroads, and power - were readily available; that there would not be a large displacement of Caucasian people; and that the area was not near a large population or war industry. In the following paragraphs, I will present to you some of the facts which led to the selection of Granada, Colorado, as one of the ten relocation centers which was to devote its labor supply in agriculture production.

NATURAL ENVIRONMENT FACTORS

The principal soil types found in this area are the Manvel silt loam, Las Animas silty clay loam, and the Las Animas clay loam. But in order to simplify the classification of the soils on this project, the land of this relocation center was divided into five groups; class one, class two, pasture grade, non-arable, and the building and road land. Class one land consisted of 2,110 acres of the rich productive manvel silt loam soil which has good drainage, little alkaline, high crop yield, and a gentle sloping topography toward the river, north of the center. Class two land of 3,364 acres is identical with class one except that the soil contains between .2 to .5% total soluble salts. The crops that are well adapted to class one and two lands include sugar-beets, alfalfa, small grains, and truck crops such as cucumbers, onions, tomatoes, beans, peas, cabbage, potatoes, sweet potatoes, and melons. The average yield of the best soils are; sugar-beets, 12 to 14 tons per acre;

alfalfa, three to four tons per acre; and barley, 50 to 60 bushels per acre. Pasture grade land consisted of 2,117 acres which would not favor successful crop production for it was composed of the lower-lying and heavy texture area where the alkaline salts have accumulated in the upper surface. Non-arable land and the building site land totaled to 3,134 acres, and it would not pay to cultivate this land except to use it as a pasture land for livestock.

The climatic conditions are as follows: The growing season averages 165 days with a relatively low humidity, large amount of sunshine, moderately high wind movements with strong winds during the fall and spring. The annual average rainfall is 15 inches and snowfall is about 14 inches, and most of the precipitation occurs during the growing season. The average annual temperature is 54 F with a summer average of 91 F and winter average of 25 F. Hailstorms are an untimely event occurring in spotted areas and occasionally doing a serious damage to crops, and because of this large tracts of one type of crop are not grown in one place. The elevation of the project is about 3,400 ft. and the land slopes toward the north, toward the Arkansas River, and this makes drainage good.

The water supply for irrigation is obtainable from the Arkansas River thru the X-Y Irrigation Ditch Co. and the Lamar Canal and Irrigation Company, and ground water is also available at a depth of approximately 30 ft. The owner of the X-Y Ranch owns 137 of the 150 shares of the stock in the X-Y Irrigation Ditch Company, and this entitles the project approximately

5,400 acre-feet of water annually. The Lamar Canal and Irrigation Company is a mutual irrigation company with 26,000 shares outstanding, and the American Beet Sugar Co. owns 23,000 shares in this company which will provide an ample supply of water to irrigate approximately 3,000 acres of land. But 15,000 shares of stock in the Lamar Canal and Irrigation Company will furnish an adequate supply of water for the project land.

The majority of the Granada Relocation area was under cultivation last year, 1942, and of the total of 10,150 acres comprising the center, the X-Y Ranch consisted of 4,668 acres, the Koen Ranch or the American Beet Sugar Company of 3,520 acres, and the remainder was made up of small private ownership. The X-Y Ranch was owner-operated, but the Koen Ranch was owned by the American Beet Sugar Company and this land was tenant operated by twenty White and three Mexican families. On September 7, 1942, 4,668 acres of the project area became available to the WRA and the remaining 5,497 acres will become available on February 1, 1943.

ESTIMATED COST OF THE PROJECT SITE

The cost per acre of the Koen Ranch was much higher than the X-Y ranch, for the reason that the soil of the Koen Ranch was much more fertile, the irrigation system was more highly developed, the land has been under good farm management practice, and is now in good condition. The present condition of the X-Y Ranch is very poor, the buildings and irrigation structures are in a bad state of repair; also the soil is not very fertile and some work will be required to rehabilitate part of the X-Y

Ranch irrigation system. The X-Y ditch is in need of repairs and the main diversion of the X-Y ditch was washed out last spring by flood waters and will have to be replaced. The Lamar Canal is in a good condition throughout its entire length. The following is a list of the approximate cost of the sites:

A. American Beet Sugar Company

3,520 acres @ \$185/acre (approx) \$650,000

B. X-Y Ranch

4,668 Acres @ approximately \$31/acre \$144,500

C. 12 Small Private Ownerships

1,962 acres @ approximately \$31/acre \$ 60,800

Total approx. cost of project land \$855,300

NATIONAL 1942 WRA FARM PROGRAM

The National 1942 WRA farm program was directed toward having the center supply as much as possible the food requirements of the evacuees. Thus the initial cropping program was designed first to produce food for the center, and secondly, to grow those products essential to the armed forces and to the Lend-lease program. The third objective was to cultivate essential war crops such as guarayule, silk, seeds, insecticide crops, and possibly coil crops. Livestock production was to be directed toward poultry and hog production, for the hogs could be fed on the garbage from the mess halls, and the poultry on the grain grown on the project. Dairy production was not to be established because of the indefinite period of occupation and since sanitary requirements would be hard to fulfill.

The 1942 land use of the Granada project area was;
 beets 775 acres, alfalfa 1165 acres, corn 204 acres, sorghum
 578 acres, grain 2,247 acres, onions 13 acres, potatoes 10 acres,
 melon 6 acres, cucumbers 9 acres, hayland 1,631 acres, waste
 871 acres, idle and pasture 1,696 acres, roads and ditches
 880 acres, and the center 640 acres.

INITIAL 1943 GRANADA FARM PROGRAM

The initial 1943 agriculture program of the Granada Project was based upon the assumption that an ample supply of labor would be available and that the evacuees would remain in the center for the duration of the war. The subsistent needs of the center was given first consideration for the number of acres that would be set aside for the farm program. Using the requirements per person in pounds for a year as a basis, 700 acres was arrived at as the requirements of the center population. The feed requirements of the livestock was then considered with that of land preparation for future cropping programs. The third objective was to meet the needs of the nation for essential war crops. The following in the initial proposed 1943 crop acreage program:

700	acres	in	Vegetables
500	"	"	Pyrethrum
800	"	"	Alfalfa
1000	"	"	Grain - oats, barley, and new alfalfa
50	"	"	Altos sorgo
1000	"	"	Seed crops
100	"	"	Irrigated pasture

50 acres in Pickle cucumbers

200 " " Corn

100 " " Sorghum

4,500 total acres

The following is the proposed 1943 vegetable crop acreage.

<u>CROP</u>	<u>ACRES</u>	<u>YIELD PER ACRE</u> <u>IN LBS</u>	<u>HARVEST SEASON</u>	<u>REQUIRED</u> <u>PER PERSON IN</u> <u>LBS</u>
Broccoli	15	24,000	July-Oct.	50
Cabbage	24	24,000	" "	100
Cantaloupe	35	5,000	Aug.-Nov.	20
Carrot	20	14,000	July-Oct.	40
Cauliflower	16	5,000	Sept.-Oct.	10
Chinese Cabbage	10	12,000	July-Dec.	20
Celery	20	5,000	Oct.-Nov.	20
Cucumber	8	5,000	Aug.-Sept.	5
Dry Beans	100	1,200	July-Oct.	5
Dry Onions	25	8,000	Sept.	25
Irish potatoes	80	10,000	July-Dec	100
Lettuce	50	4,000	Sept.-Oct.	40
Parsnips	4	10,000	Sept.-Oct.	5
Peas (green)	20	5,000	June July	20
Pumpkin & Squash	10	8,000	Aug.-Nov.	10
Rutabaga	4	20,000	Aug.-Oct.	10
Radishes	25	15,000	July-Oct.	5
Snap Beans	25	4,000	June-Sept.	20
Spinach	20	3,000	May-Oct.	10
Sweet potatoe	10	5,000	Sept-Oct.	20

<u>CROPS</u>	<u>ACRES</u>	<u>YIELD PER ACRE</u> <u>IN LBS</u>	<u>HARVEST SEASON</u>	<u>REQUIRED PER</u> <u>PERSON IN LBS</u>
Sweet corn	30	1,6000	July-Sept.	6
Swiss Chard	8	10,000	June-Oct.	10
Table Beets	8	"	June-Sept	10
Tomatoes	35	12,000	Aug-Oct.	75
Watermelon	15	14,000	Aug.-Oct.	20

Above figures pertain to a population of approx. 7,500 people

The aim of the poultry production goal was 10,000 laying hens, and the hog production should start with about 200 head of feeder pigs, utilizing the mess hall garbage for feed, and then later enlarging to 1,000 heads. A breeding program will be developed if hogs are not available by purchase. The dairy herd of thirty-five cows will remain constant until definite plans are made.

REVISED 1943 GRANADA FARM PROGRAM

The initial 1943 Granada farm program of October 2, 1942 was revised on December 10, 1942, because of the change in the National WRA policy to permit and to encourage the relocation of evacuees outside of the centers, especially as farm workers. The lucrative outside wage offers has reduced the available prospective labor supply which has hindered the initial plans of the farm section. Therefore, a revised 1943 plan was proposed to keep the agricultural land of the project in production, and it was decided upon that part of the Kcen Ranch should be leased to Caucasian tenants. The X-Y Ranch land will be classified into that which is suitable for immediate crop production and that which will require additional land develop-

ment. The present project land could not be sufficiently operated with the present amount of equipment. Since the live-stock program is being conducted on the Koen Ranch, about 100 acres of it will have to be reserved for poultry, hog, dairy, and administrative headquarter area. The revised cropping program will consist of :

500	Acres of	Pyrethrum
700	" "	Vegetables
800	" "	Alfalfal
300	" "	Wheat
700	" "	Grain
500	" "	Corn & Sorghum

The above program will require about 250 men through February and March, and about 1000 men from May to November. About \$5,000 will be needed for cash purchase of seeds stocks and about \$60,000 for farm equipment. The factors which will hinder the 1943 farm program are; low wages compared to outside farm work of about equal task, evacuees are not interested in farming as a work project, relocation policy of the WRA, and the scarcity of seeds, supplies, and equipments.

FARM CAPITAL EQUIPMENT ON FARM PROJECT

Building improvement on the X-Y Ranch consist of three frame dwellings, a large old barn, a fine-car garage, a corrugated iron building, six steel grain storage tanks with a combined capacity of 20,000 bushels of beet dump, and three or four small cottages of little value. These improvements on the X-Y Ranch is estimated at \$5,350. Building improvements on the

American Beet Sugar Company (Koen Ranch) holdings consisted of; 41 home dwellings, a boarding house, sheds, and barns, and also improved hog, poultry, dairy sheds with their installations. The estimated value of the Koen Ranch improvements value over \$50,000. The 12 small ownership improvements consist of three dwellings and a small outboilding valued at approximately \$5,000.

Much of the present farm equipment was purchased from the former tenants, other government agencies, and from dealers of farm equipments. Some of the equipment is new; others require repairs and others are usable, but most of the quipment is out of date and not very efficient. The present supply will care for about one half of the proposed crop acreage program. The farm equipment consist of ; 11 tractors - 9 crawlers and 2 wheel farm type, -3 land levelers, 6 cultivators, 15 plows, one combine, three binders, 13 harrows, 4 mowers, 6 planters, one lister, 3 feed cutters, 4 buckrackes, 3 wagons, one manure spreader, and 6 trucks. The needed farm equipments required to fulfill the 1943 crop program are as follows; 12 wheel tractors, 18 cultivators, 7 harrows, 7 planters, 2 hay stackers, 3 grain drills, 3-14 Tandan Tractor disc, 3 power mowers, 5 sulky and tractor rakes, 3 manure spreaders, 2 land rollers, 4 tractor plows, two plows, and 3 corn listers.

The construction of thirty-eight buildings are necessary for the project farm in 1943, and they are as follows:

A. 24 shed-type poultry laying houses

20' X 40' to cost approximately \$300 each

B. 12 shed-type poultry breeder houses

10' X 12 ' to cost approximately \$140 each

C. One vegetable storage cellar

40' X 120' to cost approximately \$2,500

D. One vegetable packing shed

24' X 100' to cost approximately \$500

E. 10 miles of barbed wired stock fence

to cost approximately \$150 per mile

The cost of the above structures will be reduced greatly by the use of salvagable material now on the farm project.

ACCOMPLISHMENTS OF THE FARM SECTION FROM SEPT. 1 to DEC. 31, 1942

The dairy program started with 38 heads of dairy cows, calves, heifers, and one bull which were delivered to this project in September from the NYA project in Dodge City, Kansas. At that time the cows were in a very poor productive status, for only five cows were milking at that time; now eighteen of them are milking. From September 1st the Caucasian staff mess was receiving the dairy products, and starting December 1st the Army kitchen has been utilizing the project farm milk. The October milk production was 2,953 lbs, and November's output was 4,044 lbs. The initial preparation program of the dairy industry started with the removal of the former tenant's personal property; and this general clean-up of the dairy barn delayed the dairy program. A new pumping system, water heating system, new windows, doors, new corral fences, feed rack, a 30' X 50' cow shed, and a small calf shed were constructed, following the general clean-up and weed eradication program. 13, A total of 13 calves has been born between Aug. 12 and Dec. 13.

1942, and at the present time the steers and heifers calves are on full fattening diet. Straight Jersey and Holstein breeds will be kept for breeding, and the rest will be fattened for the center consumption.

Hog production began with the purchase of twenty-five hogs from the former tenants of the farm, and during the last few months 49 feeder pigs have been purchased. The hogs have been utilizing a large portion of the center's garbage and with the efforts of the evacuees the hog project has been very successfull. But the initial developments of the hog project was hindered by the inability of purchase additional feeder pigs and the lack of building materials. A power driven pressure pump was installed at the hog shed. Already approximately 1200 lbs of pork has been utilized by the center mess halls, and it is expected that 4,000 lbs of pork will be available for the center in a few months.

The poultry program was initiated with a poultry flock of approximately 550 hens and pullets(young hens) and 75 cockerels (young roosters); some of these birds have been utilized by the canter mess and others have died, and at the present time there are about 500 chickens on the project. Egg production up to Dec. 31 totaled to approximately 75 dozen eggs and these have been used in the Caucasian mess hall. An old adobe, open front, cattle shed was rebuilt by the evacuees into a straw-loft laying shed. There is a need of a competent poultry foreman at the present time.

Other livestock on the project farm include two mules and

one saddle horse which were transferred here from NYA in Dodge City, Kansas. In addition two draft horses were purchased from local farmers. These livestock are being fed oats, straw, sorghum, and to date the mules have been used to work part of the project.

Crop production and land preparation began with the planting of ten acres of radishes and Chinese cabbage by the evacuees in early September, and due to an early freeze in November the crops froze in the ground, immatured. Approximately ten tons of alfalfa was harvested off of 25 acres of the X-Y Ranch by the evacuees. Thru a crop-share understanding with the former tenants, the farm section harvested 100 bushels of good quality grain sorghum and about 25 tons of forage fodder, shocked in bundles. About 500 acres of the X-Y land was eradicated of weeds by tractor drag and by fire; of this 400 acres were plowed for spring planting. A barn on the X-Y Ranch was torn down to utilize the material in other essential farm construction work. Farm roads and land were graded to allow proper drainage and construction work.

LABOR

In September when Don R. Sabin, WRA field representative from Washington, was here to lay plans for the project farm, the evacuee farm labor prospects were bright. For at that time approximately a hundred workers were employed on the project farm. The fall offer of sugar-beet and potatoe harvest work and the change in the WRA policy, toward resettlement, lead many of the evacuees to seek employment outside the center at

lucrative wages. On October 9, 1942, there were about twenty-five workers on the farm when the labor requirements were 255 workers to fulfill the farm section fall crop, livestock, and land preparation program. The following is a list of the required labor at that time.

Livestock

a. Poultry	12
b. Hogs	12
c. Dairy	6

Farm building

a. Salvage	50
b. Construction	50

Land preparation

a. Irrigation	25
b. Cultivation	100

At that time, the placement section reported that additional labor could not be expected for 60 days. But Mr. Bennison of the farm section stated that more help could be secured, but the evacuees disliked the idea of working under the present WRA policy.

The recruiting of evacuees for outside employment has hindered and delayed the progress of the farm section and has resulted in the revision of many-well planned and thought-out farm programs. At the present time there are about 45 workers on the project farm, carrying on the following departmental work; dairy industry, hog production, poultry production, tractor work; irrigation work, general farm work, and office

lucrative wages. On October 9, 1942, there were about twenty-five workers on the pad

work.

VOCATIONAL AGRICULTURE CLASSES

Vocational classes in Agriculture 1 and 3 was started October 12 on a voluntary enrollemnt bases at the Amache Relocation Center High School. The purpose of these vocational agriculture classes was to have the students understand the things around them and to train future farmers withat a working knowledge of scientific agriculture. So that they will be able to judge good crops and livestock, manage and to conduct agricultuee experiments themselves, and above all, how to good farmers.

The personnel of the voacational agriculture department is as follows:

1. L. J. Burgert, Superintendent of Vocational Agriculture and Industry.
2. G. U. Griffith, Head of the Science Department & Teacher of Agriculture.
3. Ed. N. Tokunaga, Agriculture Teacher
4. Masao F. Watanabe, Farm Practice Supervisor.

At the beginning of the agricultural course in October, there were 17 students enrolled in Agriculture 1 and 20 students in Agriculture 3. Now there are 28 students in Agriculture 1 and 31 in Agriculture 3, and by these figues you can readily tell that the response has be good in vocational agriculture. A few of the students went outside the center to aid in the fall harvest, but this did not hinder the progress of the course; for the students came back wiser and witha more knowledge of the local farming practices.

The study program is made up of class room studies and practical field studies. The studies of the classroom were; introduction to life science, general biology, entomology(study of insects),botany, soil science, chemistry, physics, truck crops, field crops, dairy industry, hog raising, sheep raising, beef production, poultry production, farm machinery, and other studies. The field studies consist of practical farm work every other day on the farm, and here the students were able to utilize and verify their class room studies. In other words, the farm was their laboratory.

During the past few months, the vocational agriculture students have helped to build the cow shed, calve shed, hog shed, garage extensions, hog pens; repair fences; plowed; eradicated weeds; tore down barns, repaired farm equipments, collected scrap iron, and many other essential farm task.

FARM ADMINISTRATIVE ORGANIZATION

The Caucasian personnel and their title, date of beginning work on this project, and their duties on the Granada Farm project are as follows:

Warren R. Bennison, Chief of Agriculture & Industry, started to work here on July 27, 1942, and his duties are to establish general policies and to coordinate the agricultural activities of this project, including any industrial activities that may be attempted. Up to now the policy and program making for this section has consisted mainly of developing a program that will fit the labor supply of the project.

Henry W. Schmitz, Farm Superintendent, started to work here on July 24, 1942, and his duties are to carry out the activities on the farm, which to date constituted fall preparation for spring seeding and planting; the inauguration of a hog-feeding enterprise; and initiating general farm activities necessary to converting the land from private use to public use.

Ernest W. Tigges, Assistant Farm Superintendent, started work here on August 14, 1942, and his duties are to assist Mr. Schmitz in carrying out the details of the farm activities.

John R. Justice, Acting Marketing Specialist, started work here on August 16, 1942, and at the present he is acting as an assistant farm superintendent, thus his duties are to carry out the detail of the farm enterprises.

Robert Lundgren, Senior Foreman of Labor, was employed on his project December 12, 1942, and at the present time he is surveying the Manvel Irrigation Project, as a preliminary to rebuilding, cleaning ditches. Later he will prepare an estimate of necessary new structure for water control and irrigation purposes.

ASSEMBLY AGRICULTURE COMMITTEE

The Agriculture Committee of the Granada Project is composed of a group of selected members from the center assembly, composed of elected block managers and block representatives of the people of the center, to act as investigators in seeking solutions to problems that may arise. The committee is composed of elder Californian farmers, and the members are as follows; E. S. Inouye

(chairman), Mr. Okubo (vic. Chairman), H. M. Inouye, Mr. Fujii, and Mr. Nakano. This committee has met five times with the administrative staff of the farm section and with the field representatives of the WRA to seek solutions to a workable farm program.

The first meeting was a general get-together of 250 evacuees, interested in farming, with the WRA farm officials. Mr. Don Sabin, WRA field representative, presented the plans and policies of the WRA in agriculture production.

The second meeting was held on October 12 with 50 people present. The project farm and the work connected with it was the main discussion question, and it was stated that the agricultural program must consider the following points; the farm project must supply the center food requirements, supply other centers, and to produce essential war crops. But before this could be done, the farm section needed the aid of the evacuees in its program. Questions on the mind of the evacuees concerning the agriculture industry were answered by the farm administration. The proposed 1943 farm program was then presented to the evacuees and with the present wage scale of \$12, \$16, and \$19 month was discussed.

At the third meeting on November 14, the discussion was centered around the necessity of revising the initial farm program due to the change in the WRA policy and the recruiting of evacuees for outside employment. Mr. J. H. Smart, regional director of the WRA, was the guest speaker at the fourth agriculture meeting on December 1. The effect of recruiting

evacuees for outside employment on the agriculture program was discuss. The conclusion was that the initial farm program would have to be revised.

Mr. Utz, field representative of the WRA farm section, was here at the fifth agriculture committee meeting. The evacuees stated that they were now accustomed to Colorado farming practices, therefore, it was found necessary that they study Colorado Agriculture problems in order to formulate a working 1943 crop program. But in the mean time it was essential that farm preparation work be carried on right away. The primary problem affecting future farm plans is the insecurity of an adequate supply of labor.

SUMMARY & CONCLUSION

The natural environmental factors favors a successful agriculture production program on the Granada Farm Project, but the insecurity of labor will hinder any workable plan. Due to the recruiting of evacuees for the fall harvest work and the change in the WRA policies, toward resettlement has resulted in the revision of the farm section program a number of times already. Therefore, it is essential and necessary that the WRA establish and make definite plans and policies for the betterment of the WRA and to the evacuees, for then both the evacuees and administration could look forward to tomorrow.

Mark M. Hayashi

Documentation Section of the
Reports Office

WAR RELOCATION AUTHORITY
GRANADA PROJECT
O F F I C E M E M O R A N D U M

October 27, 1942

To: Mr. James G. Lindley
From: Warren R. Bennison
Subject: Soils Report By Lindsey Brown

Attached herewith is a soils report prepared by Lindsey Brown, Soils Specialist of the F.S.A.

Mr. Brown spent four days surveying the project with the assistance of E. W. Tigges and Fred Hashimoto. The information secured by him has been recorded on a map for future study. Also, Mr. Brown will secure copies of aerial photos used by him as a basis of his survey of this project. The information in this report is rather general, but gives us the basis of his classification of the land; and the detailed information he left with us will be valuable in the future.

The assistance of Mr. Brown was well worth while and has crystalized the available information of the soils contained in this project.

WRB:mw

Lindley

SOILS ON GRANADA RELOCATION PROJECT

BASIS OF STUDY

A semi-detailed land classification of the lands under the Lamar Canal was made by the Bureau of Reclamation in 1939. The maps are on aerial pictures of 1000 feet to the inch scale with diagrams of numerous soil borings indicating soil texture, total soluble salts and pH to depths of 5 feet. The original field sheets were borrowed and examined rather closely throughout the project in the field. General descriptions of each designated land class resulted from this examination.

Land Classes

The land-classification objective is a determination of the quality and quantity of arable land within a given project area and a determination of the feasibility of increasing the economic value of that area by irrigation. The quality of the land must be evaluated, not only upon its natural characteristics, but also upon the changes in its inherent producing capacity which can be induced by irrigation. This qualitative analysis of the land is determined on the basis of the soil, topography, drainage, and climate. The type of crops which can be produced is an important element in the qualitative analysis as well as the accessibility to markets, market requirements, and quantity and quality of irrigation water. To be of standard applicability, successful and desirable in its objective, a land classification must be based on an accurate determination of the fixed qualitative characteristics. Any revisions which may become necessary because of variable economic factors may readily be made.

Class One Land -- Within the project, class one lands are in general loam or silt loam in the surface foot underlain with material ranging from loamy sand to clay loam in the lower sub-soil. The topography is gently sloping, has good under-drainage and can be expected to produce as high yields of all adapted crops as any in regions of similar climate. Some areas of first class land are fine sandy

loam in the surface and loamy sand in the sub-soil. These areas are better adapted to the production of vine crops than are the slightly heavier soils. Also, there are a few heavy clay loam or light clay spots within first class lands, which on a more detailed survey would be designated as second class land. These areas, however, can be expected to produce high yields of alfalfa, sugar beets, small grains, and some vegetable crops.

Class Two Lands -- Lands designated as class two throughout this project are largely so graded because they contain over .20% total soluble salts and less than .50%. Although there are only a few of the locally grown crops such as beans that do not produce well with this salt content, the presence of these amounts presents a hazard under irrigation which must be recognized at all times. Over irrigation and seepage may cause the salt to accumulate in spots to such concentration that ordinary crops will not grow. A few areas were designated as second class due to irregular surface relief. Although most crops produce the same on these soils as on first class land they require more labor and perhaps water to satisfactorily irrigate. A few areas of second class land are quite sandy (loamy sand surface soils and sandy loam to sand sub-soils). These areas would not produce under ordinary farming practices nearly so high yields of sugar beets and alfalfa as do the generally heavier first class lands. However, they produce potatoes, beans, and vine crops even better than do the heaviest first class lands. In general it may be said that all first and second class lands on the project are well adapted to the production of a large variety of crops under irrigation.

Preliminary examination reveals that between 500 and 600 acres of land north and west of the center are light silt loam to sandy loam in surface soil textures and are well adapted to the production of vegetable crops. Another area that may be expected to produce good yields of vegetable crops lies partially northwest and partially southeast of Barton. There are between 400 and 500 acres in this vicinity. The segregation of the heavier or "beet-alfalfa land" from the moderate textured "general crop land" and the sandier "vine crop land" must be accomplished by more detailed field examination. This can readily be done as farm plans are made by the Assistant Farm Superintendent.

Pasture Grade Land -- (designated on map as "5-2s"). This land occupies the lower-lying and in general the heavy textured areas nearer the river. In past years they have had the water table so near the surface that alkaline salts have accumulated in their upper parts. In general, only water-loving grasses and sedges now grow on the areas. As a general rule, this type of land will not produce enough crop under irrigation to pay the labor of producing the crop and for the water to irrigate it. Their best use is as pasture, applying only waste water that does not have to be bought or in years of high precipitation, some portions may be dry farmed with the resulting production enough to realize some profit for the farmer. They are at least temporarily regarded as non-arable lands. Some portions may be reclaimed by drainage at which time they should be re-classified into second class land.

Sixth Class Or Non-arable Land -- Sixth Class lands are regarded as those that cannot be irrigated with any hope of paying for the cost of getting water to them, or draining them, or expending the time, fertilizer, and tillage effort that might be necessary to produce any crop. They are impossible or impractical to irrigate. For all practical purposes they should be regarded as waste land or dry pasture.

The following table summarizes the acreages of First, Second, Pasture, and Sixth Class land on the project.

GRANADA RELOCATION PROJECT
(Colorado)

Summary of Acreages by Land Classes

Class 1	2110 acres	
Class 2	3364 acres	
Total Arable		5474 acres
Pasture grade		2117 acres
Class 6		1233 acres
Building sites, roads, ditches, railroads and above ditches recently used		1901 acres
Project Total		1 0725 acres

Lindsey Brown
Lindsey Brown
October 23, 1942

B

TEMPORARY OPERATING PLANS FOR
THE PROJECT FARM
GRANADA PROJECT, GRANADA, COLORADO

Just a few days before the first contingent of colonists arrived at the Granada Project, 39 head of cattle, 11 head of hogs, 2 mules, and 1 horse were delivered at the Koen Ranch, a part of the project farms. Care for this stock was provided by the personnel of the farm section, together with the help of a kindly disposed operator on the Koen Ranch. Limited facilities were provided for the handling of the stock until labor became available.

Possession of the eastern portion of the project area was given to W.R.A. on about September 7th, although prior to this date, verbal agreement with the former owner permitted us to hire the cultivation of approximately 120 acres of milo. On the X Y Ranch, a portion of the boundary fences and cross fences were removed by the former owner. The ranch headquarters are now in possession of the W. R. A. and plans are under way for the utilization of usable buildings and other structures. On the Koen Ranch, part of the project area, all of the present farm operators are still in possession of crops and buildings they have occupied. The W.R.A. was able to secure possession, through verbal agreement, of two large sheds, suitable for warehouses and repair shops, an improvised poultry house and a dairy barn. None of the crop land on the Koen Ranch will become available until January 31, 1943.

LIVESTOCK

DAIRY

Twenty-seven mature cows, 6 heifers and 5 bulls were shipped to the project in September. Only 5 of these cows were milking at the time of delivery. Most of this stock is of good quality and with proper care, promises to become better than average producers. The condition of this stock indicates poor handling and management for sometime prior to the delivery here at the project. It would appear that this group of cows and young heifers may become the source of a valuable supply of milk for the project center. It will also be the means of consuming a good deal of the feed crops and roughage produced on the ranch. Although this herd is much too small to meet the total milk requirements of the project, there are two means of expanding it rapidly, either by direct purchase or by the much slower method of breeding up and retaining all desirable females. It will be the purpose of the project, until needs or policies demand otherwise, to retain and develop heifers and heifer calves for the purpose of adding to the herd. It will be further the purpose of the dairy work to feed for maximum milk production.

Much of the feeds will have to be purchased as the project possesses few crops available in sufficient amount. Some alfalfa hay and straw, and possibly some fodder may be salvaged from the X Y Ranch.

The present dairy facilities consist of a dairy barn abandoned by a dairyman some years ago. One of the farm operators was using this building for a catch-all, a horse stable, a shop and a garage. A silo in excellent condition is available at the barn and a good well, requiring rehabilitation of the pumping system is available. The barn requires considerable repair and reconditioning, which is already under way.

Dairy Labor

In the beginning, some difficulty was encountered in securing a dairy supervisor and to get milkers. A dairy supervisor and 4 milkers were secured and have worked for about two weeks. The demand for outside labor in beet fields and otherwise has taken two of these men. Approximately 8 to 10 good dairy hands will be ultimately required to care for and milk this herd of cows when all are in production.

Summary

It is planned to develop the young stock, properly feed and care for the mature producing cows and gradually build up the present herd through the addition of young cows and heifers. It is also the purpose to produce a very large portion of all of the feed required on the project land. It is hoped that the labor interested in dairying will become available to the extent that some of the younger men who are definitely interested in dairying will become permanent workers and themselves gain valuable experience. (See table No. 1, Appendix for more detailed plans.)

HOGS

Two sows and 9 pigs were delivered at the project farm early in September. These sows are of the Duroc breed and of excellent type. The pigs are from one of these sows and about 6 or 7 weeks of age. They arrived in rather poor condition, largely due to neglect before delivery to the farm. Practically no facilities were available at the Koen Ranch for handling this stock. One of the operators furnished a pen and housing and feeding equipment on the condition that we purchase 2 of his sows and 12 pigs. This deal was consummated and we are now in possession of 4 sows and 21 pigs. All animals have been vaccinated for hog cholera and have greatly improved with proper feeding and handling. The immediate problem confronting the hog department appears to be the selection of a suitable site for feeding of hogs, in view of the fact that garbage will constitute a considerable portion of the proposed ration. Sufficient feed has been purchased locally and on the farm to feed

these pigs for several more weeks, or until they are able to go on a garbage ration. It is planned that ultimately approximately 200 hogs per month, averaging 250 pounds will be produced. This would require a rather extensive hog lay-out, properly located so as not to interfere with living conditions of staff or colonists. Tentatively, a rather favorable appearing site is under consideration which has all the features necessary, namely: (1) Convenience for the delivery of garbage; (2) Proper drainage; (3) Water; and (4) Convenience for workers. If this location proves desirable, it is believed that the present well and the cement feeding floors will be an added inducement to locate the lay-out at this point. Due to the shortage of material, as well as experienced carpenters, it may become necessary that the farm workers themselves construct a temporary straw shed for housing these feeder hogs.

Breeding Lay-Out

It is proposed that most, or all of the feeder hogs necessary on this ranch will eventually be produced from our own herd of sows. It has been decided that probably the Poland China and the Hampshire breeds be utilized as the basis of producing a crossbreed feeder pig. Experience has shown that cross bred hogs are vigorous and thrifty. It is planned to begin purchase of good young gilts of these two breeds early this fall and winter to the extent that ultimately we may have 75 to 100 sows farrowing the following spring, beginning in early in March and continuing until approximately the 1st of June. Bred sows and gilts will be purchased. In each breeding season, spring and fall, a few sows in each of the breeds will be mated to boars of their own breed for the purpose of producing purebred gilts. Pigs, when they have reached the weight of approximately 50 to 60 pounds will be placed on a limited garbage ration, which will gradually be increased as the feeding period advances. A grain ration, with a protein supplement will probably be fed unlimited in self feeders. It is planned to market these hogs at approximately 250 pounds of weight.

Labor

After some delay, a hog supervisor, with three assistants was secured to take over the handling of the hogs on the farm. So far, their work has been very favorable, in light of limited facilities with which they have been obliged to work.

Building and Equipment

The garbage feeding operations will be maintained at a permanent site. It is believed that with proper care, and sanitary methods, disease and losses can be kept at a minimum. The breeding herd of sows and gilts will be handled on new clean ground, possibly on some of the present alfalfa stands on the Koen Ranch. Sufficient alfalfa acreage will permit us to rotate

from season to season and from year to year. Either two-apartment or one-apartment shed type farrowing houses will be built for handling sows and pigs. Construction of these buildings will be undertaken when carpenters become available. It is believed that one or two good sample hog houses can be turned out by the present workers so that future adjustments and revisions can be applied when these houses can be produced in greater numbers. (See table No. 2 for further information concerning hog plans.) To provide immediate housing for feeder hogs temporary straw sheds may be erected.

POULTRY

The poultry now in our possession on the project, was acquired through purchase. Approximately 500 birds are being fed and cared for by a poultry supervisor with four assistants. These men, in addition to the routine feeding and care of poultry, are using all other time in the reconstruction of a stone, adobe poultry house, 20 x 95 ft. in size. A poultry supervisor with considerable practical commercial experience in California, planned and supervised the reconstruction of this building.

Breeds

To date, the purchase of poultry has involved only two breeds, namely, the White Rock and the Single Combed Rhode Island Red. Ninety-five mature producing hens, 350 young pullets and 55 younger birds constitute the present flock. Feed was purchased and the eggs produced are being turned over to the mess halls in the center.

It is planned to develop the poultry project on the farm by the gradual purchase of good quality pullets of the two breeds mentioned above so that by Spring, approximately five thousand birds will have been acquired. Early in the year, it is planned to have sufficient laying houses constructed which may in the start be utilized for the purpose of brooding chicks. This will provide clean quarters and a minimum loss may thus be expected. These laying houses will, of course, become the permanent quarters for the mature birds. When cockerels have reached a weight suitable for meat purposes, they will be delivered to the project center. It is also planned that some of these permanent type laying houses will be utilized for producing meat birds. It is planned to place approximately 500 of these chicks into brooder houses each month, beginning in December and increasing this number until sufficient meat birds are available, as indicated in table No. 3 in the appendix.

Housing and Location

It is believed that the housing of the laying flock is an immediate and important problem. The location of future units will be near the present ranch headquarters on the Koen

Ranch. Conditions are favorable for the following reasons: Drainage and exposure is desirable, and light and water nearby and available. The raising of young laying stock will be carried on on new clean ground in portable brooder houses, together with summer shelter. Some of the present alfalfa acreage on the Koen Ranch will be utilized so that young birds will be produced each Spring on new ground. The production of meat birds will be carried on in permanently located houses.

(See table 3 in the appendix for further details.)

HORSES AND MULES

One team of mules and one riding horse were delivered to the project in the early part of September. The mules are drafty in type and in good sound condition. It is planned to acquire at least one additional team of horses or mules to add to the horse power on the farm. These work animals will be used in mowing weeds and crops, in plowing small corners, repairing ditches and in numerous other ways around the farm and livestock quarters. The riding horse is useful to the staff in the supervision of the work because some parts of the farm land can be reached only by horseback at certain times of the year.

FIELD CROPS

Practically the entire X Y Ranch portion of the project requires fall and early winter plowing. This is due to the fact that most of the crops, or all of the crops consisted of grain, mostly barley and wheat, and a limited amount of alfalfa. For the last four or five months, the former operator attempted to utilize most of the feed and grass available on the ranch by grazing heavily with sheep. In order to place this land in a condition for next year's crops, it will be necessary to plow most or all of this land. On the Koen Ranch portion, a good deal of the land will be grazed by sheep in the late fall and early winter in order to utilize fodder, wheat and oats in the stubble, beet tops, straw and grass in the ditches, turn rows and fence rows. Therefore, none of the stubble land will be plowed before we secure full possession of the land.

Alfalfa

Practically all of the alfalfa on the X Y portion of the project plans should be plowed under and the land utilized for the production of potatoes or vegetable crops during the next crop year. While on the Koen Ranch, most of the alfalfa acreage is in good condition. W.R.A. was able to harvest a third cutting of alfalfa on the X Y lands, probably amounting to seven or eight tons of good quality hay. Alfalfa hay produced on the Koen Ranch has been purchased and is being fed to the dairy herd and the horse and mules. A third cutting is now available to us and promises to be of excellent quality. This

alfalfa is to be purchased in the field and colonist labor and project equipment will be utilized to put it up. There are approximately 1165 acres of alfalfa on all of the project land, of which approximately 1000 acres should be maintained for next year's hay crops.

Sorghums

About 250 acres of grain and forage sorghums were turned over to us on the X Y Ranch, largely for the reason that the danger of stock poisoning would not permit the former operator to pasture this crop with sheep. A local farm operator was hired to cultivate 120 acres of milo which had been planted but had received no cultivation. Although an early frost has set this back considerably, a fair amount of grain may be harvested late in October. About 70 acres of sorghum was of the Atlas or forage type, and was badly damaged by the recent frost. However, a considerable amount of grain and some feed may be expected. No labor was expended in cultivation of this acreage as it had received one cultivation and was too large for further tillage.

Probably 300 acres of sorghum, both grain and forage, will be planted in 1943. The grain sorghum will be used in poultry feeding operations and the forage sorghum, which in some cases may be a catch crop, will be used in producing ensilage for the dairy herd.

Corn

The only corn growing on the project area is on the Koen ranch portion or on small adjacent farms. This year's crop is heavy and of good quality. Irrigated corn has a definite place in the cropping system in the future. It is planned to plant approximately 200 acres of corn for grain in 1943.

Wild Hay

There are approximately one thousand acres of wild hay on the project lands. Probably 90% of this area is on the X Y portion of the ranch. This hay land lies adjacent to the river and the grass ranges from fine quality to rather coarse and stemmy. The 1942 hay crop was turned over to us by the former operator. Several attempts were made to have this hay put up on shares by farmers or stockmen. Although several indicated they were interested, the problem of securing labor was the obstacle which prevented the putting up of this hay during August. At the present, a group of men indicate interest and willingness to go ahead and cut and bail as much of this hay as they can. W.R.A. is to receive one-fifth of the crop. At this time, it is difficult to estimate the amount of hay which we can expect this season. It is planned to fully utilize this wild hay crop next year, providing sufficient labor is available.

Straw

At the present, several straw piles, mostly wheat and barley, will be available to us for livestock operations this winter. If this straw is bailed within the next few weeks before the sheep herds begin grazing in this valley, most of it can be secured merely for the cost of bailing with our own labor. In the future, it is planned that a substantial portion of the straw produced from the wheat, barley and oats, will be saved and the better part bailed immediately after harvesting.

Ensilage Crops

As previously stated, ensilage crops will be planted for the 1943 crop season. At present, some of the operators, due to a shortage of labor, are willing and anxious to sell their ensilage crops and corn crops in the field. It is believed that a considerable amount of ensilage may be acquired and put into the silo at a cost commensurate with the profits secured from feeding ensilage to dairy cows. It is believed that sufficient acreage can be made available in 1943 to produce the approximate 300 tons of ensilage necessary to fill the silo now available on the dairy farm.

Wheat.

Approximately 200 acres of the first plowed ground will be seeded to wheat this fall. This will in some measure aid in maintaining the wheat base allotted under the Tripple A program.

Oats

In the 1943 cropping plan, some new alfalfa fields will be established and oats will be used as a nurse crop. The grain resulting from this will be utilized in stock feeding operations.

Sugar Beets

The sugar beet acreage for 1943 will be largely determined by the number of experienced colonists available for the production and handling of this crop. If this available labor and supervisory assistance becomes available, probably about 1000 acres of sugar beets may be grown in 1943.

Vegetables

The purpose of producing vegetables on the farm lands of the project will be to supply this need in the diet of the colonists. It will also utilize a great deal of labor experienced in vegetable production. It is believed that a wide variety of vegetables, including potatoes may be grown on the project

lands. Probably some investigation, research and testing may be necessary on some types. The kinds and varieties of vegetables will be more definitely determined after a more careful study of the soils, and the soil conditions, the available vegetable labor and the chances of securing the needed equipment. These plans will be developed in cooperation with experienced vegetable growers among the colonists.

Fall Plowing

Due to the fact that a large portion of the X Y Ranch is in stubble and in some parts, covered with a heavy weed growth, it will be necessary to operate a number of large plows in order to turn under the stubble and weeds; and begin the preparations of this ground for next spring's crop operations. Four 4-bottom gang plows and one 3-bottom gang plow with the necessary tractors to operate them are now available. One additional new 2-bottom, 2-way plow has been purchased and will be used in those areas which will probably be planted to vegetables in 1943. It is planned to plow all of this land wherever possible in an East to West direction, thus throwing the furrows at right angles to the prevailing winds and thus avoiding much of the chances of blowing. It is believed that in some places the weeds are of such height that it will be necessary to cut and burn them before plowing.

FARM MACHINERY

Some machinery and equipment was purchased from three former operators on the project lands. In addition, a number of new items not available from these operators, and for which there was an immediate need, had been purchased from dealers. Some plows and other miscellaneous farm equipment has been delivered to the project from other government agencies. With careful planning and handling of this limited equipment, it is believed that most of the fall farming operations can be carried out with fair results. It is believed, however, that plans and means for securing any additional equipment should be developed at an early date so that when weather conditions are favorable for Spring operations, the equipment and men can be put to work on the farm without delay.

APPENDIX

WAR RELOCATION AUTHORITY Agricultural Development Division DAIRY UNIT

Justice

Table 1. Dairy

From inquiry and information at hand there appears to be deficient milk supply in and adjacent to the Project Area. Milk is a required food product and is readily acceptable.

Objectives of the Dairy Unit:

1. To furnish a supplemental supply of Grade A whole milk for utilization on the Project.
2. To utilize present equipment located on Project lands with proper renovation.
3. To utilize a part of the Hay, Grain and forage to be produced on the Project.
4. To provide work for a number of evacuees, who are experienced in dairying.

We recommend, if a dairy enterprise is desired that the dairy cattle available at the N. Y. A. Center, Dodge City be transferred to the Granada Project. Regular purchase of good dairy cows, as they become available, should be continued until the project is sufficiently stocked to utilize the present barn facilities.

It would be necessary to purchase grain, hay and mill feeds. However, the Project lands would supply sufficient hay in June 1943 and grain in October 1943.

On the basis of the cattle available for transfer to War Relocation Authority from N. Y. A. Dodge City, Kansas and those now being recommended for purchase, it would be necessary to purchase the following feed.

Estimated amount and cost of feed from Approximately September 1942 - to September 1, 1943.

Alfalfa Hay	110 T @ \$10.00	\$1,100.00
Grain	15 T @ 30.00	450.00
Bran	17 T @ 35.00	245.00
Prot. Sup.	12 T @ 52.00	104.00
Mineral	1000 #	30.00
Salt	1000 #	15.00
		<hr/> \$1,944.00

Table I (Continued)

It is expected that 110,000 quarts of milk will be produced in one year. Assuming this milk is worth .07¢ per quart, it may be expected that \$7,500.00 worth of milk will be available.

CATTLE IN DAIRY UNIT

Heifers (9)

Holstein heifers	8 mo.	2
Jersey "	8 mo.	2
Holstein "	14 mo.	1
Grade Jersey heifer,	24 mos.	2
" " "	15 mos.	1
" " "	7 mos.	1

Bulls (6)

Holstein Bull	16 mos.	1
" "	12 mos.	2
" "	8 mos.	1
Jersey "	8 mos.	1
Red bull calf	9 mos.	1

Calves (3)

Jersey bull calf	1
Holstein bull calf	1
Jersey-Herford cross heifer calf	1

Cows (29)

Jersey	22
Holstein	7

Bulls

Purebred Jersey (registered)	1
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Stock transferred From N.Y.A. to W.R.A.

Cows	27
Bulls	1
Young bulls & bull calves	7
Young heifers & heifer calves	5

Stock Purchased

Cows	2
Bred heifers	2
Yr. heifers	2
heifer calf	1

Increase since herd Arrived

Bull calf	1
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Table II Hogs

It is estimated that 8,000 people will consume approximately 38,112 lbs. of pork per month.

To supply the needs of the center, a monthly kill of 200 hogs of 190 lb. dressed weight is required, or 24,000 lbs. per year.

Objectives of the Project:

1. To supply essential food.
2. To utilize garbage (kitchen waste), waste vegetables, fruit, meats and table scraps.
3. To utilize feed (grain) and pasture produced on the project farm.
4. To utilize labor experienced in hog production.

Until sufficient brood sows are obtained to supply the hogs required for the project, regular supply purchases of pigs weighing from 40 to 60 lbs. should be made. It is estimated that 240 brood sows may eventually produce the required number of feeder pigs.

The following indicates the anticipated results from feeding grain and garbage:

Initial wt. Per Head	Av. Daily Gains Per Head Est.	Length of Feeding Period	Final Weight	Est. Dress- ing Weight
40# - 60#	1½#	132 days	240# - 250#	190#

Proposed Feeding Schedule Per Hog

<u>Average Daily Ration Pounds</u>	<u>Feed consumed per mo.</u>	<u>Feed Per 12- mo. Period</u>
Grain 4.52#	135.60#	1639.80#
Garbage 3.03# L2	90.90	1105.95#
Protein Sup- plement .0754#	2.2620	27.521#

Estimated Feed Costs Per Hog

Av. Initial Weight	Av. Gain	Feed Period	Feed Consumed Per 100# gain	Total feed per head Price finished per unit	Cost per hd.	Cost per lb.
40 - 60#	200#	132 days	Grain 300# Garbage 200# Protein Supp. 10#	Grain 600# 1½ Garbage 400# 0 Protein Supp. 20# 3½	\$9.00 0 0.70	.036¢ .0024¢
Total feed costs						.0384¢

Table II (Continued)

ESTIMATED FEED CONSUMED AND PRODUCTION COSTS
FOR FEEDING GARBAGE HOGS

Average Initial weight	50 lbs.
Average Expected daily gain	1 $\frac{1}{2}$ lbs.
Average length feeding period	132 days
Amount feed consumed per feeding Period:	

Garbage	400 lbs.
Grain	600 lbs.
Protein Supplement	20 lbs.
Minerals	2 lbs.

Cost of Feed:

Garbage	N.C.
Grain, (600# @ \$1.25 cwt.)	\$9.00
Protein Supp. & Mineral	.70

The estimated costs of pork produced as a result of the preceding feeding schedule is as follows:

50 lb. feeder pig, initial cost at 18¢	\$9.00
Total feed cost	9.70
Vaccination costs	.25
Labor costs	1.00
Misc. cost (death loss, fuel for cooking garbage, etc.)	1.00
Total cost of 250# hog	<u>\$20.95</u>
Cost per 100#	8.38
Cost per lb.	.0838

Estimated No. of hogs constantly on feed	1000
Estimated av. daily consumption of garbage	3030 or 1.5 Tons
" " " " " grain	4520 or 2.26 Tons

TABLE III - POULTRY

Poultry enterprise (Part A Laying flock)

Purpose of the Poultry enterprise (Laying flock)

1. To provide eggs to be consumed on the project.
2. To provide labor for persons experienced in poultry (egg) production.
3. To utilize a part of the feed crops produced on Project lands.
4. To utilize a part of material obtained in demolishing buildings not usable in present condition of project lands.

Planned Production

No. hens	Average expected Eggs per hen per year	Estimated Total egg Production	Production Dozen
10,250	135	1,383,750	115,312.5

It is estimated that the above egg production will supply 9609.375 dozen eggs per month for consumption on the project.

The following mash mixture is one that may be desirable for use in feeding the laying flock.

	36# ground yellow corn
	20# ground oats
	20# Middlings
	10# meat and bone meal
	2# dried milk
	3# ground oyster shell
	1# salt
	8# alfalfa meal
Total	<u>100#</u>

Dry milk need not be in mixture if liquid milk is available and fed daily. Oyster shall may be omitted and fed separately, and alfalfa meal may be omitted if green grass and other leafy feeds are available. It may be desirable to feed some charcoal.

A laying hen of the Leghorn breed will consume about 35# to 40# of the above mixture a year and combined with a scratch feed of which each bird should have 35# to 40#. The heavy breeds

Table III (continued)

of poultry will require about 15% more than the light breeds.

Scratch feed to be fed in straw or thrown to the birds twice daily.

Scratch Feed

	33 1/3# yellow corn
	33 1/3# whole wheat
	33 1/3# whole oats or milo
Total	<u>100#</u>

It is recommended that the feeds be mixed on the project area. This will help to keep the cost of egg production to a minimum.

The space needed in the laying house for each bird of the smaller birds should be 2½ square feet per bird. The houses should be constructed with a straw loft to provide warmth in winter and coolness in summer. Not more than 500 birds should be assigned to one house.

Feed required for 10,250 hens

<u>No. hens</u>	<u>Egg Production per year</u>	<u>Pounds per year</u>	<u>Pounds per Month</u>
10,250	1,383,750	Mash 358,750# Scratch 358,750#	29,895,833# 29,895,833#

Estimated Cost of Feed per Bird -- year

	<u>Lbs. Feed per year</u>	<u>Cost of Feed</u>	<u>Total feed cost per bird</u>
Mash	35#	\$0.875)	
Scratch	35#	0.507)	\$1.382

Estimated Cost for 10,250 hens per year

	<u>Lbs. Feed per year</u>	<u>Cost of Feed per year</u>	<u>Total Feed Cost---Flock</u>
Mash	3587 cwt.	\$9004.625)	
Scratch	3587 cwt.	5201.875)	\$14206.50
Miscellaneous expense			1025.00
Labor costs:			2000.00

Table III (continued)

Estimated total cost to produce 115,312.5 dozen eggs, \$17,231.50
Estimated cost per dozen eggs, \$0.1494

For best production the following must be carefully observed.

1. Fresh mash should be available at all times.
2. Oyster shell should be available at all times.
3. Water supply should be clean and fresh.
4. Sanitary practices promote healthy chickens for greater production.
5. Poultry house should be dry and well ventilated at all times.
6. Cod liver oil or Sardine oil should be fed when birds are confined out of direct sunlight (during winter months when they are kept indoors.)

Herbert T. Schmitz