



EVALUATING VETERAN TRAINING
OPERATIONS IN MENOMINEE COUNTY,
MICHIGAN

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Robert Earl Dando

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This is to certify that the

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IN MENOMINEE COUNTY, MICHIGAN

By
Robert Earl Dando

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THESIS

VITA

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EVALUATING VETERAN TRAINING OPERATIONS
IN MENOMINEE COUNTY, MICHIGAN

ROBERT EARL DANDO

The 26 veterans, who cooperated in this study, were located in Menominee county, Michigan. The veterans were in training, under the G. I. Bill of Rights, in an institutional on-the-farm training program, located at Stephenson, Michigan, see page 3.

Institutional on-the-farm training programs were established by the Congress of the United States under public law 346. This provided that veterans of World War II could receive instructional training, while operating their farms.

The training program for farm veterans at Stephenson, Michigan, was established on July 1, 1946 with six veterans enrolled. Membership in this training program grew until in 1950 the program reached its maximum enrollment of 176 veterans in training at one time.

The purpose of this study is to evaluate, (1) financial progress, (2) Advancements in farming operating efficiency, (3) establishment in farming and (4) value of the G. I. training, over a two year period of the participants in the veteran's agricultural training program as Stephenson. The two year period, in this report, started on January 1, 1948 and ended on December 31, 1949

The following objectives with respect to the veteran

trainees were expected to result from such a study:

1. Stimulate the veteran to do a better job of farming,
thru;
 - a. Increased efficiency in farm operations
 - b. Higher crop yields
 - c. Increased production per cow, sow and hen
2. Increased net worth
3. Higher level of living
4. A better appreciation of the value of accurate farm records
5. A better basis for evaluating the veteran's business
6. An improvement of the total farm training program.

With these objectives in mind, the farm account books kept by the veterans were collected and summarized. From the assembled data, the high income one-half, the low income one-half, and the averages were determined. The procedure used in making the analysis was similar to that used in the preparation of the "Farm Business Reports" published by the Agricultural Economics Department of Michigan State College.

In a program, of this type, there is a continuous change of participants. Older members leave and new member are added. Many veterans either start or discontinue their training program during the year. Therefore, the number of farm records, used in this study for 1948 and 1949 is lower than the total number of veterans participating in this

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program during these years.

Type of Farming Area - Menominee County is the southernmost county in the Upper Peninsula of Michigan. This southernly position accompanied by the modifying effects of Lake Michigan, gives Menominee County a longer growing season, than its neighboring counties to the north. These factors greatly influence the farming practices and type of farm organization in this region. The southern part of the county is bounded on the west by Wisconsin and on the east by Green Bay.

Menominee County has been classified by the Department of Agricultural Economics, Michigan State College, as a Dairy and Potato Area, see page 3. Potatoes no longer are a major crop in the farming program of the farmers in this area. Therefore, at the Stephenson Institute, where the veterans included in this study were training, the area has been designated as a Dairy and General Farming Area.

The 1945 Report of the Census of Agriculture for Michigan presents the following information regarding the agriculture of Menominee County. The land area of the county is 660,840 acres, of which 300,181 acres were classified as land in farms. The land in farms was divided between 2,049 farms, with an average size of 146 acres per farm. About 32 percent of the land in farms was classed as cropland. Thus, on the average farm, there was about 47

acres of land in crops. Approximately 66 percent of the cropland was in forage crops, 23 percent in grain crops, and 11 percent in row crops.

The livestock on Menominee County farms is primarily dairy cattle. In 1945, there were 16,008 milking cows, about 8 per farm, producing approximately 88 million pounds of milk per year. Milk sales gave Menominee farmers an income of \$2,247,763 for dairy products. Poultry and egg income was \$137,186. All other animal products which included dairy cattle sales, swine and other miscellaneous animal products provided \$684,115 of the total income. The value of all farm products sold was \$3,812,419, of which 81 percent was from livestock. The sale of milk was 60 percent of all farm products sold, indicating the importance of dairying in Menominee County.

Soils - Menominee county is part of a vast outwash plain left by the glaciers. The major land divisions are:

(1) The poorly drained soils bordering Green Bay. These low, wet, poorly drained soils make up the Class IV and Class V land, see page 6. The lowland soils in this area consist largely of Rifle peat. The Rifle peat areas are, for the most part, covered with swamp grass, cedar and tamarack. Some of these low areas have been cleared for Reed canary grass pasture. Very little of this low land area is under cultivation, even though the land is

1. Land Suitable for CultivationClass I No Special Problems

Land capable of moderate to high yields of rotation crops with no special soil management or erosion control treatment.

Class II Moderate Problems

Land capable of moderate to high yields of rotation crops but requiring some special soil management, or erosion control treatment, or both, because of moderate erosion, susceptibility to moderate erosion, or poor drainage.

Class III Severe Problems

Land capable of moderate to high yields of rotation crops but requiring intensive soil management measures, or erosion control treatment, or both, because of severe erosion, susceptibility to severe erosion, low inherent soil fertility, droughtyness, or poor drainage.

Class IV Problems Limit Cultivation

Land low in inherent fertility, severely eroded or poorly drained on which moderate to high yields of intertilled crops cannot be maintained. Best suited for grass and legumes.

2. Land Not Suited for CultivationClass V No Special Problems

Land which if maintained in permanent grass or woodland requires no special restrictions in use.

Class VI Moderate Problems

Land which because of slope, erosion, shallow soil, stone content or other limiting physical factors requires moderate restrictions in use even though maintained in grass or woodland.

Class VII Severe Problems

Land which because of slope, erosion, shallow soil, stone content or other limiting physical factors requires severe restrictions in use even though maintained in grass or woodland.

Class VIII Lots, roads, strip mines, gravel bars, sloughs, or areas not suited to general agricultural use nor adapted to utilization for domestic plants or animals.

cleared, since the use of machinery in the spring is not possible.

(2) the bottom lands along the Menominee River are largely rolling sandy loam soils. These sandy loam areas are largely Onoway fine sandy loam. The bottom lands along the river and the sandy loams bordering the bottom lands are quite droughty. These areas make up the Class II and Class III land. The droughty nature of these light, quick draining sandy loams creates an acid condition in the soil due to the loss of calcium by leaching. Applications of lime in this area have proven to be very beneficial and necessary for such a crop as alfalfa.

(3) The central rolling uplands are the agriculturally important areas while the others are given over primarily to forests and recreation. These level to rolling well drained loams make up the Class I farming land. The major portion of this loam area is classed as Onoway loam. The upland loams have shown little indication of needing lime.

Elevation and Topography - The average elevation of Menominee County is 775 feet above sea level. The lowest levels are along the Green Bay shore and the Menominee River. The mean sea level elevation at the Green Bay shore is 580 feet. The land rises gently toward the center of the county forming a natural divide, which extends north and south through the county. The central upland areas rise

from slightly above lake level to a peak near Powers in the north central part of the county. Some of the highest elevations are slightly over 1,000 feet above sea level. The eskers and drumlins, which make up the rolling uplands, lie in a north-easterly and south-westerly direction and extend from one-fourth mile to one mile in length and vary in width from 20 to 160 rods.

Climate - Menominee County, over a period of 30 years, had a mean winter temperature of about 19 degrees above zero Fahrenheit, and a minimum temperature record of near 27 degrees below zero. The mean summer temperature is 66 degrees Fahrenheit, with maximum temperatures about 102 degrees Fahrenheit. The annual temperature difference between the southern end of the county and the northern end is three or four degrees. The mean annual temperature in Menominee County is 43 degrees Fahrenheit.

The mean annual precipitation is 33 inches. The heaviest precipitation is during the summer months and the lightest during the winter months. The mean annual snow depth varied considerably, being 43 inches at Menominee and 66 inches at Powers.

The prevailing winds are from the north-west in winter and from the south-west in summer. The average date of the last killing frost in the spring is June 8, and the average date of the first killing frost in the fall is September 26. The length of the growing season averages

114 days, varying from about 120 days at Menominee to about 90 days at Powers.

Weather Conditions, 1948-1949 - During 1948 the summer growing season at Stephenson extended from June 9 to October 3, giving the farmers in this region a 114 day growing season between the two killing frosts. The mean summer temperature was 67 degrees Fahrenheit, and the annual rainfall was 27 inches.

During 1949 the summer growing season extended from June 8 to September 24. The mean summer temperature was 66 degrees Fahrenheit, with an annual rainfall of 29 inches. During both 1948 and 1949 the rainfall was below the 30 year normal, with 1948 being 5.67 inches below normal and 1949 being 3.48 inches below normal. Also during both years the late summer growing season was rather droughty.

Economic Factors - As stated above, the major source of farm income in this region is from the sale of milk. Approximately 50 of the 2,049 farmers of Menominee County are fortunate enough to find an outlet for their milk at nearby whole milk distributing plants. Since these milk plants sell their products locally, the number of farmers who can enjoy the premium price for market milk is restricted. Most of the milk produced in the county is sold at 1 local cheese factories and the local condensery plant.

The condensery and cheese factories have maintained the price of milk within one cent a pound of butterfat of

each other, based on the price of butter at Chicago. Of the 26 veterans, who cooperated in this study, none are selling their milk at the whole milk market. Five are selling their milk to the condensery and the rest to various cheese factories.

The majority of grain and forage crops produced in the county are marketed through dairy cattle. A small amount of grain is marketed through swine and poultry. The small amount of grain and forage sold as chas crops are sold locally, during the late winter, to neighboring farmers, who have run out of their home-grown feeds.

VETERAN'S GENERAL STATUS

Length of Time on Program - The veterans, who cooperated in this report, had been farming only a short length of time. One veteran had been operating his farm for a period of four years prior to this report. He is a disabled veteran who was discharged before the general demobilization of the armed services in 1946. Another veteran obtained his farm less than one month prior to this report. The average period of time that these veterans had been operating their farms is one year and ten months, see table 1.

Table 1 - The number of years that the farms were operated by the 26 veterans in Menominee County, included in this report, as of January 1, 1948, the starting date of this study.

Years on farm		Number of veterans	
4		1	
3		3	
2		14	
1		6	
0		2	
47	TOTAL	26	
1.8	Average number of years	XX	
22	Average number of months	XX	

The veterans training program was established in Stephenson on July 1, 1946 with five veterans. Four of the original trainees cooperated in this study and have had one year and six months training. Eight of the veterans began training on January 1, 1948. The average length on time in training by the entire group, as of January 1, 1948 was 8.4 months, as shown in table 2.

Table 2 - Months of "On-Farm" training of 26 veterans in Menominee County at the start of this study, as of January 1, 1948

Months of "On-Farm" training	Number of veterans
0 - 3	8
4 - 6	2
7 - 9	3
10 - 12	7
13 - 15	0
16 - 19	6
TOTAL 26	
8.4 Average number of months per veteran	

Net Worth - The net worth of the 26 veterans, as of January 1, 1948, averaged \$6,332. The highest net worth statement was \$16,371, while the lowest was \$670. This indicates a range of over \$15,000. The \$4,000 to \$5,000 range had the greatest number of veterans in net worth value. Table 3, shows the general distribution of net worth of the 26 veterans.

The highest net worth statement, as of December 31, 1949, was \$21,034, while the lowest was \$1,305. In no case did the net worth of any veteran decrease during the two-year period covered in this study. Table 3, also shows the general distribution of net worth at the end of 1949. As shown in table 3, the average net worth increased about \$2,500. The average net worth in December 1949 was \$8,794. Some of these veterans showed a substantial increase in net worth. The majority showed an increase in net worth from \$1,000 to \$3,000. Table 4 gives the general distri-

bution of increases in net worth during the two-year period covered in the report.

Table 3 - Distribution of net worth of 26 veterans located in Menominee County, January 1, 1948 and December 31, 1949

Net worth	Number of veterans	
	January 1, 1948	December 31, 1949
\$15,001 and above	2	3
\$12,001 to \$15,000	0	3
\$9,001 to \$12,000	4	4
\$6,001 to \$9,000	6	10
\$3,001 to \$6,000	9	3
\$3,000 or below	5	3
Average net worth	\$6,332	\$8,794

Table 4 - Increases in net worth of 26 veterans located in Menominee County, Michigan between January 1, 1948 and December 31, 1949

Increases	Number of veterans
\$5,001 to \$6,000	3
\$4,001 to \$5,000	1
\$3,001 to \$4,000	4
\$2,001 to \$3,000	6
\$1,001 to \$2,000	8
\$1,000 or below	4
Total	26

The veteran with the greatest change in net worth had an increase of \$5,923. The veteran with the least change had an increase of only \$258. The veteran with the lowest net worth, at the beginning of this study, remained the lowest and showed an increase of only \$635. The veteran with the highest net worth at the beginning of this study also remained the highest and showed an increase of \$4,663.

Establishment in Farming - Twenty of the veterans in this study were operating farms which they purchased since their discharge from the military services. Three of the farms were cash purchases, 7 were local bank mortgages, 3 were government loans, 3 were parent held mortgages and 4 were Farmers Home Administration loans. Five of the veterans were operating family farms as partners with their parents. One veteran was cash renting. The status of ownership changed very little during the two year period. One veteran increased his partnership from a one-third son and two-thirds father to a 50-50 crop livestock share partnership with his father.

Size of Business - Table 5 shows the size of the farm business for the 26 veterans, who were cooperating in this study. The land acreage of these farms remained constant during the two year period covered in this study. The capital investment changed from \$8,666 on January 1, 1948 to \$11,315 on December 31, 1949, an increase of \$2,649 for the two-year period. Annual gross incomes as well as total expenses increased slightly during the two-year period. The productive man work units per farm increased considerably as did the productive man work units per man. However these figures are still below the average of 405 per farm for well established and efficiently operated farms in the area (area 16).

Gross incomes during 1948 ranged from \$6,638 down to

\$545. During 1949 the range of income was from \$7,476 down to \$791. The high income was on different farms each year.

Table 5 - Size of business on 26 veterans farms located in Menominee County, Michigan, 1948 and 1949

Item	1948	1949
Acres: Total	158	158
Tillable	61	61
Capital investment (less house)	\$8,666	\$9,729
Gross income	\$2,887	\$3,253
Total Expenses *	\$3,287	\$3,597
Productive man work units	175	241
Productive man work units per man	135	185

* Includes operator's labor but not interest on investment

Total expenses, which include a charge for the operator's labor, during 1948 ranged from \$1,575 to \$6,083. In 1949 expenses ranged from \$1,349 to \$6,993. The high income farm did not have the highest expenses during 1948 but did during 1949. The low income farms had the lowest expenses each year.

From the standpoint of the amount of productive work available on these farms, the farm with the highest number of units for both years had 384 units in 1948 and 457 units in 1949. The lowest farm in this respect for both years had only 37 units in 1948 and 61 units in 1949.

The largest farm had 560 acres of land with 175 acres under cultivation. The smallest farm had only 40 acres of land with 35 under cultivation. However, the farm with the least number of acres under cultivation had only nine acres tillable. One might say, that a farm with only 9 acres under

cultivation, should not even be classed as a commercial farm. However, this farm had a herd of five milking cows and the veteran had a **sizable** income from the sale of woodland products, while in the process of clearing land for future use.

The largest farm from the standpoint of capital investment, on January 1, 1948 was \$16,909. Another veteran increased more than the one stated above and by the end of 1949 had a capital investment of \$21,518. The veteran with the least capital investment had only \$670 at the beginning of 1948 but increased to \$1,305 by the end of 1949. This veteran was renting and his only equity in the farm was the inventory of crops grown on the farm he was operating.

SOILS

Farm Acreages - The total land area, of the 26 farms included in this report, is 4,101 acres. The range of total acreages per farm is from 40 to 560 acres. The tillable acreages per farm range from 9 to 175.

Acreages of Soil Classes - Using the land use classification chart, on page 6, as a guide in determining the soil types, about one-fifth of the land, on the 26 farms in this report, was in Class I. The following table shows the acreages of land found in the various classes and the percentage of the total land of these farms in each class.

Table 6 - Land classification, acreages and percentages, on 26 veteran's farms in Menominee County

Land class	Acreages	Percentages
Class I	901	22
Class II	1,070	26
Class III	406	10
Class IV	130	3
Class V	1,594	39
Total	4,101	100

Soil Management Practices - A sound soil management program, which results in high crop yields, is good business. Although farmers in general use commercial fertilizers, lime, green manure crops, etc., most of them have not reached the maximum possibility in soil and crop improvement. This is particularly true of many veterans who have taken over farms on which the soils are greatly depleted of minerals and organic matter.

Table 7, shows the relation of income on 26 veterans farms to the soil management practices used on their farms. In general, the high income farms had larger percentages of tillable land in legumes. The high income farms also used more fertilizer per acre of tillable land. It also might be noted that the high income farms planted only alfalfa in 1949.

Table 7 - Soil management practices, on 26 veteran's farms located in Menominee County, 1948 and 1949

Item	Low income 1/2		Average all farms		High income 1/2	
	1948	1949	1948	1949	1948	1949
% of tillable acres:						
Manured, barnyard	13	13	13	13	13	13
Manured, green	3	8	3	6	2	4
Seeded, alfalfa *	12	13	14	18	16	22
Seeded, clover *	17	2	15	1	12	0
In legumes **	10	18	8	19	6	20
In sod crops	58	63	57	59	56	57
Fertilizer used per tillable acre	\$2.15	\$2.75	\$2.41	\$2.88	\$2.69	\$3.03

* Percentage of crops planted during accounting year

** Percentage of crops established prior to current year

CROPS

Kinds of Crops - As indicated, on page 5 of this report, dairying is the major type of farming in Menominee County. The crops grown in this county are primarily corn, oats and forage. Potatoes, which have been a leading cash crop in the county, have declined considerably during the past decade. On the veteran's farms, in this report, potatoes average less than one percent of the total cropland. The remaining cropland is given over to minor crops, such as barley, wheat and sugar beets.

Acreages of Crops - Acreages of individual crops varied greatly from farm to farm. The average of the 26 farms in this report remained fairly constant during the two years covered. Forage crops occupied 57 percent of the tillable land in 1948 and 59 percent of the tillable land in 1949. Table 8 shows the total acreages of tillable land in various crops for the two year period. Included in this table is the percent of tillable acres for the crops.

Table 8 - Acreages and percentages of various crops on 26 veteran's farms, located in Menominee County

Item	1948		1949	
	Acres	% of total	Acres	% of total
Tillable land, total	1,585	100	1,578	100
Hay and pasture	898	57	943	59
Alfalfa hay	121	8	255	16
Other hay	490	31	400	25
Tillable pasture	287	18	288	18
Corn: Silage	119	8	120	8
Grain	31	2	46	3
Oats	415	26	390	25
Other crops	122	7	79	5

The most significant factor, shown in table 8, is the increase in alfalfa. The table indicates that the acreage of land in alfalfa in 1949 was double the amount grown in 1948. As indicated, the major portion of the increase in alfalfa resulted in a decrease of other hay crops. It may be noted, also, that a considerable part of the increase in alfalfa came from a substantial decrease in other crops, which were the minor crops grown in the area. Also, a one percent decrease in the acreage of oats was balanced by an increase of one percent in the acreage of corn grown for grain.

Rotation Practices - The principal crop rotation, on all of the 26 veteran's farms, was a five year rotation. The rotation consisted of corn followed by oats then seeded to forage for three years. The third year in forage was used primarily for pasture. Five of the farms raised wheat and barley in place of oats and three farms raised potatoes in addition to corn and followed the potatoes with wheat.

Types of Machinery - Each of the 26 farms in this report had a tractor, a tractor plow, a mower, a side-delivery rake, a hay loader and wagon. Eighteen of the farms had a tractor disc. Spring tooth harrows were found on 21 farms. Of the 26 farms, only two had grain combines. One farm had a field chopper.

Tillage Practices - The common practice of plowing, on the farms covered in this report, was to fall plow the row crop land in the fall. The ground was allowed to remain open over winter and, in the spring, the land planted to a grain crop. Sod land was generally plowed in the spring and planted to corn. New ground, which was cleared of timber in the winter was often plowed and planted to corn in the spring. Since spring wheat was grown rather than winter wheat, forage seedings were planted with the grain crops.

Crop Program - Crop yields were higher during 1949 than during 1948. Alfalfa yields increased substantially from 0.9 tons per acre in 1948 to 1.5 tons per acre in 1949. Oat yields averaged 33 bushels per acre in 1948 and increased to 41 bushels per acre in 1949. Although acreages were small, potatoes increased over 100 bushels per acre from 1948 to 1949.

Table 9, shows the cropping program for the 26 farms for 1948 and 1949. Crop incomes increased more than \$100 per farm from 1948 to 1949. The low income farms in 1948 showed a loss in crop income while the high income farms had crop incomes of \$1,000. The amount of tillable land remained constant for the two year period. The percent of tillable land in hay and pasture increased slightly in 1949 while the percent of tillable land in legumes increased markedly, from 8 percent in 1948 to 19 percent in 1949.

Table 9 - Crop income program on 26 veteran's farms in Menominee County, 1948 and 1949

Item	1/2 low income		Average all farms		1/2 high income	
	1948	1949	1948	1949	1948	1949
Number of farms	13	13	26	26	13	13
Value land per til acre	\$ 35	\$ 41	\$ 36	\$ 37	\$ 38	\$ 34
Acres tillable land	65	51	61	61	57	70
Percent tillable land in:						
Hay and pasture	59	61	57	59	54	57
Legumes	4	10	8	19	13	26
Hay: alfalfa	3	18	8	16	13	15
other	34	27	31	25	27	23
Pasture, tillable	22	16	18	18	14	19
Corn: silage	9	7	8	8	5	8
grain	3	2	2	3	1	4
Oats	23	27	26	25	30	23
Barley	-	1	1	1	2	2
Wheat, spring	1	2	1	2	1	2
Potatoes	-	-	-	-	1	1
Other crops	5	-	5	2	6	3
Yields:						
Alfalfa hay tons	1.0	1.4	0.9	1.5	0.9	1.7
Other hay tons	1.3	1.3	1.3	1.6	1.4	1.9
Corn silage tons	8.9	10.3	8.5	9.9	7.8	9.6
Oats bu.	28	36	33	41	38	45
Barley bu.	25	20	28	31	28	35
Wheat bu.	17	12	20	20	21	25
Potatoes bu.	350	-	262	382	242	382
Crop yield index	96	86	100	100	107	111
Crop sales & PMA payments	\$ 26	\$ 60	\$ 210	\$ 267	\$ 395	\$ 473
Crop income	\$ 1142	\$ 75	\$ 429	\$ 597	\$ 1000	\$ 1120
Feed bought	\$ 414	\$ 356	\$ 358	\$ 437	\$ 303	\$ 517

As stated above, an increase in production accompanied the increase in the acreage, especially in alfalfa. The increase of alfalfa was offset by a corresponding decrease in other hay. The increase in the crop income and crop yields was accompanied by increased purchases of feed for livestock. This indicates an increase in the amount of feed being used for livestock on the veterans farms.

Table 10 - Relation of crop yields to farm earnings on 26 veteran's farms, Menominee County, 1948 and 1949

Item	1/2 low income		Average all farms		1/2 high income	
	1948	1949	1948	1949	1948	1949
Number of farms	13	13	26	26	13	13
Crop yield index	77	83	100	100	111	123
Tillable acres	67	59	61	61	55	63
Crop income	\$288	\$337	\$429	\$597	\$571	\$858
Labor income	\$92	\$309	\$323	\$505	\$554	\$701

Crop yields were generally higher in 1949 than in 1948. Table 10 indicates that the 26 veterans cooperating in this report improved their cropping programs, during the two year period. The crop yield index shows a substantial increase of both the low income group and the high income group from 1948 to 1949. Crop incomes were higher in 1949 for all groups. Crop incomes increased, on the average \$168 from 1948 to 1949. Labor incomes increased \$182. As table 10 indicates, increased crop yields do bring higher incomes.

LIVESTOCK

Kinds and Numbers of Livestock - The availability of nearby markets and the kinds of crops adapted to a region generally determines the kinds of livestock found in any area.

Table 11 - Kinds and numbers of livestock on 26 veteran's farms in Menominee County, 1948 and 1949

Kinds of livestock	Number of farms with livestock		Average per farm	
	1948	1949	1948	1949
Dairy cows: total	23	24	6.4	7.4
Guernsey	3	3	0.6	0.6
Holstein-Friesian	19	20	5.6	6.6
Jersey	1	1	0.2	0.2
Sows	14	15	0.3	0.4
Hens	11	13	17.0	21.7
Horses	9	4	0.5	0.3

Table 11 indicates the kinds and numbers of livestock on the 26 farms used in this report. None of the farms had beef cattle or sheep, during the two year period covered. Horses showed a sharp decline from 1948 to 1949. Of the 9 farms reporting horses in 1948 only two of the farms had horses as a major source of power for the farm work. In 1949, only one farm had horses as a major source of power for farm work.

Swine and poultry were primarily used as a source of food for the family. One farm raised swine for cash income and two farms used poultry and eggs as a source of cash income.

Dairying was the most important livestock enterprise, as shown in table 11. Only three breeds of dairy cattle were reported. These were Holstein-Friesian, Guernsey and Jersey. Of these three breeds, the Holstein-Friesian were outstanding in numbers and farms reporting.

Management Practices - All of the 26 veterans who cooperated in this report used a stanchion type dairy barn. Two of the veterans milked their cows by hand during the two year period, while the remaining 24 veterans used mechanical milkers. Four of the veterans did not have a source of water supply in their barns. All veterans, however, had electric power and lights in the dairy barns.

All of the 26 veterans were feeding their cows according to the production of the cow. However, some veterans were feeding as high as one pound of grain mixture to each three pounds of milk, while others were feeding as low as one pound of grain to each seven pounds of milk produced.

Amount of Livestock and Farm Earnings - Generally speaking, farm earnings in this region increase when the amount of livestock kept on the farm increases. Likewise, the higher the amount of livestock kept per tillable acre the higher the income of the farm. During 1948, two of the 26 veterans did not have any livestock on their farms. However, during 1949, all of the 26 veterans had livestock on their farms.

Table 12 - Amount of livestock and farm earnings on 26 veteran's farms in Menominee County, 1948 and 1949

Item	1/2 least livestock		Average all farms		1/2 most livestock	
	1948	1949	1948	1949	1948	1949
Number of farms	12	13	24	26	12	13
P.A.U. *	5.5	6.1	10.1	10.8	14.7	15.6
T.A. per P.A.U.	9.4	6.4	6.1	5.5	4.9	5.2
Tillable acres	51	39	62	61	73	82
P.M.W.U. **	120	180	185	241	250	301
Dairy cows, number	3.4	4.5	6.9	7.3	10.3	10.1
Feed bought	\$263	\$231	\$388	\$436	\$519	\$642
Labor income	\$155	\$424	\$333	\$505	\$510	\$586

* Productive animal units

** Productive man work units

Table 12 shows that the farms, with the most livestock had higher incomes than those with very few numbers of livestock. In 1948, the farms with the most livestock had labor incomes about 3.3 times more than the farms with the least livestock. The feed costs, however, were only two times more on the farms with the most livestock. The variations in incomes was not as significant in 1949 as in 1948.

Dairy Sales Per Cow and Farm Earnings - Since dairying is the major farm income enterprise on these veteran's farms, the dairy sales should be a determining factor in obtaining the total farm earnings.

Perhaps it should be stated, at this time, that the average price of butterfat, during 1948, averaged about 40 cents a pound more than in 1949. One of the veterans,

who cooperated in this report, sold 88,237 pounds of milk in 1948 giving him total dairy sales of \$3,556. In 1949, this same veteran sold 98,882 pounds of milk and received only \$2,619. Table 13 illustrates the dollar decrease in milk sales during 1949. The labor incomes during 1949, however, were still higher than in 1948. The higher average labor income was due primarily to the increased crop income on the veteran's farms as shown in table 10.

Table 13 - Dairy sales per cow and farm earnings on 26 veteran's farms in Menominee County, 1948 and 1949

Item	Dairy products sales per cow *					
	Lowest 1/2		Average		Highest 1/2	
	1948	1949	1948	1949	1948	1949
Number of farms	12	12	24	26	12	13
Tillable acres	51	61	61	61	73	61
Til. acres per P.A.U.	5.2	6.1	6.2	5.6	7.0	5.0
Prod. man work units	181	252	186	241	190	229
Number of cows	7.3	7.1	6.9	8.4	6.3	9.7
Dairy sales, total	\$1428	\$1188	\$1768	\$1535	\$2109	\$1882
Dairy sales per cow	\$ 194	\$ 167	\$ 257	\$ 182	\$ 330	\$ 194
Pounds of milk sold	38691	43413	45783	53299	52874	63184
Pounds milk sold/cow	5246	6095	6655	6331	8283	6504
Feed bought	\$ 338	\$ 296	\$ 388	\$ 436	\$ 494	\$ 577
Labor income	\$ 383	\$ 390	\$ 333	\$ 505	\$ 283	\$ 619

* Range: 1948-low 250 and under, 1949-low 200 and under

Productive livestock Income Factors - Investments in livestock, during 1949 averaged higher than in 1948. The livestock incomes per tillable acre were higher in 1949. Also, total productive livestock incomes were higher in 1949 than in 1948. However, as stated previously, dairy products sales were lower in 1949 than in 1948.

although the pounds of milk sold per cow were greater. The sale of dairy cattle was higher in 1949, which aided in balancing the loss in dairy products sales. This factor is shown in table 14.

Swine numbers increased slightly during 1949 over 1948 as did the pigs weaned per litter. However, hog income totals were lower in 1949. Table 14 indicates that farms, with the least total productive livestock incomes, had a substantial increase in hog incomes from 1948 to 1949. This was due to the fact that more of the pigs were kept on the farm until large enough to sell as fat hogs.

The numbers of laying hens per farm remained fairly constant during the two year period. Egg sales per hen showed substantial increases from 1948 to 1949. Poultry meat incomes increased markedly in 1949 with an increase of over 100 percent.

Table 14 - Productive Livestock Incomes on 26 veterans farms in Menominee County

Item	1/2 low income		Average all farms		1/2 high income	
	1948	1949	1948	1949	1948	1949
Number of farms	12	12	24	25	12	13
Productive livestock investment	\$815	\$1291	\$1278	\$1538	\$1740	\$1766
Productive animal units	6.3	7.9	10.1	10.3	13.8	14.5
Til. acres per P.A.U.	6.8	6.0	6.1	5.4	5.9	5.1
Prod. livestock income per T.A.	\$25.55	\$26.92	\$37.03	\$40.66	\$43.11	\$48.85
Cattle: % of farms reporting	100	92	100	96	100	100
Cows per farm reporting	4.4	6.4	6.9	8.0	9.3	9.3
Sales per cow, dairy products	\$173	\$165	\$257	\$209	\$297	\$234
Sales per farm dairy products	\$763	\$1047	\$1768	\$1662	\$2774	\$2183
Cattle income per farm	\$253	\$261	\$378	\$539	\$504	\$775
Milk sold: pounds per cow	4931	5279	6659	7192	7477	8293
Hogs: % of farms reporting	50	75	58	60	75	54
Sows per farm reporting	0.8	0.7	0.6	0.8	0.5	0.8
Litters farrowed per farm	0.6	0.6	0.8	0.5	0.9	0.3
Pigs weaned per litter	7	8	7	8	7	9
Income per farm	\$42	\$116	\$153	\$133	\$237	\$153
Poultry: % of farms reporting	50	58	46	52	42	46
Hens per farm reporting	25	17	40	43	59	74
Egg sales per hen	\$1.89	\$1.49	\$2.37	\$5.23	\$2.61	\$6.23
Egg sales per farm	\$46	\$25	\$95	\$227	\$153	\$462
Meat income per farm	8	5	40	103	78	217
Poultry income; total	41	15	173	389	332	826

EXPENSE AND EFFICIENCY FACTORS

Man Labor - The average number of men per farm on the 26 farms in this report was 1.3. As indicated in table 15 the hired labor was very low, showing that most of the labor on the 26 veteran's farms was supplied by the veteran and a member of his family. Man labor costs per tillable acre remained fairly stable for the two year period. Hired labor averaged less than \$100 per farm.

Power and Machinery - Investments in machinery and equipment was about 30 percent higher in 1949 than in 1948. The high income farms had machinery investments below that of the low income farms indicating that the low income farms might have been more profitable if the veterans had invested more capital in productive livestock than in the non-productive equipment. Consequently, the annual cost of equipment ran higher on the low income farms. Machinery expenses during 1948 averaged \$636 and during 1949 expense averaged \$753.

Improvements - Improvement investments were about the same during the two years of this report. The investment in buildings was about the same for both high and low income groups. Improvement annual expenses were \$192 in 1948 and increased slightly in 1949 to \$244. Many new improvements were being made on the veteran's houses but the dwelling of the operator is not included in the farm business.

Table 15 - Expenses on 26 veteran's farms located in Menominee County for the year 1948

Item	Lowest income 1/2	Average all farms	Highest income 1/2
Number of farms	13	26	13
Tillable acres	63	61	59
Gross income	\$2,302	\$2887	\$3,444
Gross income per til. acre	\$37.46	\$47.36	\$58.60
Total expenses per Til. acre	\$54.05	\$53.92	\$53.79
Total expenses *	\$3,414	\$3,287	\$3,161
Man labor:			
Number of men	1.4	1.3	1.2
Prod. man work units per man	124	135	148
Hired	\$ 70	\$ 83	\$ 95
Family	\$ 328	\$ 265	\$ 203
Operators	\$1,200	\$1,200	\$1,200
Man labor cost per til. acre	\$25.30	\$25.39	\$25.49
Power and Machinery:			
Investment	\$2,337	\$1,858	\$1,379
Annual expense	\$ 720	\$ 636	\$ 553
Expense per til. acre	\$11.40	\$10.44	\$ 9.41
Improvements:			
Investment (less house)	\$2,317	\$2,126	\$1,936
Investment per animal unit	\$ 245	\$ 229	\$ 212
Annual expense	\$ 193	\$ 192	\$ 192
Expense per til. acre	\$ 3.06	\$ 3.09	\$ 3.27
Feed bought: total			
Per tillable acre	\$ 372	\$ 358	\$ 345
	\$ 5.89	\$ 5.89	\$ 5.86
Crop expense: total			
Per tillable acre	\$ 365	\$ 379	\$ 392
	\$ 5.78	\$ 6.21	\$ 6.67
Taxes: total			
Per tillable acre	\$ 34	\$ 35	\$ 36
	\$ 0.54	\$ 0.57	\$ 0.61
Other expenses: total			
Per tillable acre	\$ 107	\$ 140	\$ 173
	\$ 1.69	\$ 2.29	\$ 2.94

* Includes operator's labor charge but not interest on investment

Table 16 - Expenses on 26 veteran's farms located in Menominee County for the year 1949

Item	Lowest income 1/2	Average all farms	Highest income 1/2
Number of farms	13	26	13
Tillable acres	57	61	64
Gross income	\$2,824	\$3,253	\$3,681
Gross income per til. acre	\$49.41	\$53.59	\$57.31
Total expenses per til. acre	\$64.97	\$59.27	\$54.19
Total expenses *	\$3,713	\$3,597	\$3,481
Man labor:			
Number of men	1.3	1.3	1.3
Prod. man work units per man	189	185	176
Hired	\$40	\$47	\$53
Family	\$258	\$305	\$351
Operator's	\$1,200	\$1,200	\$1,200
Man labor cost per til. acre	\$27.57	\$25.56	\$24.97
Power and Machinery:			
Investment	\$2,726	\$2,455	\$2,184
Annual expense	\$819	\$753	\$686
expense per til acre	\$14.34	\$12.40	\$10.68
Improvements:			
Investment (less house)	\$2,052	\$2,092	\$2,132
Investment per animal unit	\$182	\$192	\$203
Annual expense	\$306	\$244	\$182
Expense per til. acre	\$5.35	\$4.02	\$2.83
Feed bought: total	\$387	\$433	\$486
Per tillable acre	\$6.77	\$7.19	\$7.57
Crop expense: total	\$356	\$347	\$339
Per tillable acre	\$6.22	\$5.72	\$5.27
Taxes: total	\$37	\$50	\$63
Per tillable acre	\$0.66	\$0.82	\$0.97
Other expenses: total	\$217	\$178	\$140
Per tillable acre	\$3.80	\$2.94	\$2.17

* Includes operator's labor charge but not interest on investment

Feed - Feed costs continued to rise during the two year period with feed costs during 1949 being about \$100 higher than in 1948. During 1948 the low income farms purchased more feed than the high income farms, while in 1949 the high income farms purchased more feed. Lower feed costs do not always mean more profits.

Crops - Crop expenses on the 26 farms in this report ran higher in 1948 than in 1949. With more land being put into hay and pasture crops, less land is being used for the higher cost grain and row crops. Likewise, during 1949 four of the 26 veterans were planning on using grass silage in 1950 and left more land in forage and prepared less acreages for corn.

Taxes - In Menominee County the property taxes are very low. The low assesment of farm property made the taxes on the 26 veterans farms a small item in their total expenses. Taxes were higher in 1949 than in 1948.

Miscellaneous - Miscellaneous expenses included such items as the farm share of electricity, farm papers, dog licenses, medicine for livestock, breeding fees, livestock or crop losses and interest. These other expenses were slightly higher in 1949 than in 1948. The high income farms in 1948 had the higher expenses, while in 1949 the low income farms had the higher miscellaneous expenses.

Efficiency Factors - The productive man work units per man increased on the 26 farms in this report from 1948

to 1949. The same number of men were reported both years indicating an increase in the amount of productive work being accomplished by each veteran on his farm. In spite of the lower price of milk in 1949, farm incomes increased during 1949. Expenses also increased. The high income farm, however, during both years, showed gross incomes per tillable acre that were higher than their expenses per tillable acre. High income farms showed more profits with lower machinery operating expenses. This was also true for their annual expenses in their improvements.

EVALUATING VETERAN TRAINING OPERATIONS
IN MENOMINEE COUNTY, MICHIGAN

by

Robert Earl Dando

* * * ABSTRACT * * *

The 26 veterans who cooperated in this study were located in Menominee County, Michigan. They were enrollees in an institutional on-the-farm training program. All 26 veterans were receiving their training under the G.I. Bill of Rights.

As of January 1, 1948, the beginning date of this report, these veterans had been in training 22 months. Twenty of the 26 veterans were operating farms owned by them. The net worth of these veterans, at the beginning of the study was \$6,332 and increased to \$8,794 by the end of the two year period. Although not indicated in this report, capital debts were being retired at an average rate of \$600 per farm per year.

The average size of farm of the 26 veterans was 158 acres total, with 61 acres tillable. The major crops were forage, corn and oats. The major livestock enterprise was dairying with an average of 7 cows per farm.

After each veteran's account book had been summarized the veteran was contacted and his progress shown to him. The strong and weak points of the farm business were also pointed out to each veteran.

the veteran was contacted and his progress shown to him. The strong and weak points of the farm business were also pointed out to each veteran as an instructional instrument to aid in improving the farm business and level of living.

The increase in the use of alfalfa in place of other sod crops and many other items showing increases during this study indicates that the training which the veterans were receiving was being put to use in a practical way on their farms. This study indicates that crop yields were improving and livestock production was also improving. the fact that capital debts are being retired and net worth being increased each year, these 26 veterans were becoming more established in farming as each year indicated.

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