SIZE OF FARM AND OUTPUT PER FARM WORKER IN OHIO

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Introduction

A study of the Ohio farm labor situation was made in the fall of 1942. One phase of this work involved the securing of records from approximately 500 individual farmers, located in 16 widely separated Ohio counties. These records, obtained by personal interview, included detailed information on the labor force employed on each farm, crops raised, yields of the more important crops, machinery used, livestock on hand, numbers and weights of stock produced and other information on the quality of the livestock enterprises. To reduce the time spent in obtaining the farm schedule, no data on farm income were secured.

The purpose of the study was, first, to secure some timely information on the farm labor situation in Ohio,[1/] and second, to study the various factors related to the output per worker, with special reference to size of farm, the results of which are reported herein.

In these days of shortages of farm labor and increasing demands for farm products it is essential that each farm worker strive for maximum output in order to reach the high level of farm production needed by our civilian population, our armed forces and our allies.

Productive man work units[2/] were computed for each farm and are used in this report as a measure of total output of agricultural products. Ordinarily, work units have been figured at standard numbers of days per acre of the various crops and per head of the different classes of livestock. In this study the work units on an acre of corn and some of the more intensive crops were varied according to yield per acre; likewise dairy herds and poultry flocks were figured at variable rates per head, depending on whether they were rated as of average, below average or above average production. Thus it is felt that total output of individual farms is about proportional to the number of productive work units computed in the above manner.

Relation of Work Units per Man to Various Factors

In order to show the wide variation in the output per farm worker and to point out the major factors affecting the efficiency of labor, the records from each of the three major areas of Ohio were sorted on the basis of number of productive man work units accomplished per man. The results are shown in Tables 1, 2 and 3.

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2/ One man work unit is the amount of work accomplished by an average man in a 10 hour day. It is no indication of how hard a farmer works; with labor-saving tools and practices and a well-organized farm, one operator may work no harder than his neighbor yet may accomplish two or three times as much in terms of total output.

Table 1.- Relation of output per man to various factors, 171 western Ohio farms, 1942

	Number of productive work units per man					All farms
	Up to 175	176-250	251-325	326-400	Over 400	
Number of farms	12	58	44	28	29	171
Acres per farm	78	118	185	198	252	168
Crop acres per farm	62	95	147	160	214	137
Acres of corn	18.4	27.3	42.6	47.1	56.9	38.9
Milk cows per farm	4.4	5.6	6.3	9.0	9.6	6.9
Brood sows per farm	3.0	4.3	5.9	7.0	10.0	6.0
Hens per farm	68	108	157	148	148	131
Farmers owning tractors, %	83.3	82.8	95.4	92.8	93.1	89.5
Owning tractor cultivators, %	41.7	77.6	84.1	89.3	86.2	80.1
Owning power mowers, %	8.3	8.6	13.6	21.4	24.1	14.6
Owning hay loaders, %	33.3	46.6	54.5	89.3	69.0	58.5
Using pick-up balers, %	0	10.3	18.2	28.6	34.5	18.7
Using buck rakes, %	0	6.9	6.8	14.3	13.8	8.8
Small grain combined, %	33.1	36.9	44.3	53.5	45.6	44.2
Grain growers using combine, %	25.0	41.4	63.6	64.3	62.1	53.2
Corn husked from stalk, %	32.7	54.6	52.5	73.5	75.5	62.2
Farmers using pickers, %	16.7	44.8	43.1	75.0	69.0	51.5
Owning milking machines, %	0	8.6	9.1	32.1	17.2	13.4
Average age of operator, yrs.	57.7	49.4	46.8	43.2	41.1	46.9
Operators 60 yrs. and over, %	58.3	25.9	20.4	7.1	3.4	19.9
Total work units per farm	235	359	550	618	801	517
Total months, all labor	20.0	20.1	23.8	20.7	20.2	21.2
Work units per man	141	214	278	358	475	293

Table 2.- Relation of output per man to various factors, 164 northeastern Ohio farms, 1942

	Number of productive work units per man					All farms
	26-100	101-175	176-250	251-325	over 325	
Number of farms	23	37	55	37	12	164
Acres per farm	35	73	101	126	206	98
Crop acres per farm	16	37	55	75	116	55
Acres of corn	3.1	8.6	13.2	20.3	26.7	13.3
Acres of truck and fruit	2.1	4.0	9.1	10.7	15.1	7.8
Milk cows per farm	1.4	4.4	8.3	13.0	22.2	8.6
Hens per farm	62	96	108	195	100	118
Farms with better than average cows, %	0	3.1	10.2	40.0	45.4	16.9
Corn yield, bushels per acre	43.9	47.1	55.8	60.9	68.0	57.6
Farmers owning tractors, %	47.8	40.5	65.5	75.7	83.3	61.0
Owning tractor cultivators, %	26.1	29.7	49.1	59.5	66.7	45.1
Owning power mowers, %	0	5.4	5.5	13.5	33.3	8.5
Owning hay loaders, %	0	21.6	58.2	73.0	66.7	45.7
Using pick-up balers, %	0	10.8	5.5	5.4	25.0	7.4
Small grain combined, %	33.0	35.5	33.2	20.7	30.5	28.9
Grain growers using combine, %	33.3	46.6	40.0	39.4	60.0	42.1
Corn husked from stalk, %	27.2	37.1	36.7	50.4	41.3	41.6
Farmers using pickers, %	0	5.4	3.9	24.3	25.0	9.8
Owning milking machines, %	0	5.4	10.9	35.1	50.0	16.5
Cows milked with milker, %	0	11.7	17.4	46.0	78.2	37.6
Average age of operator, yrs.	54.3	45.9	48.8	45.1	35.3	47.1
Operators 60 yrs. and over, %	30.4	16.2	23.7	16.2	8.3	20.1
Operators part-time farming, %	69.6	59.5	32.7	24.3	16.7	40.9
Total work units per farm	84	201	375	513	854	361
Total months, all labor	13.8	17.5	21.7	22.4	27.2	20.1
Work units per man	73	138	207	275	377	215

Table 3.- Relation of output per man to various factors, 120 southeastern Ohio farms, 1942

	Number of productive work units per man					All farms
	26-100	101-175	176-250	251-325	over 325	
Number of farms	16	39	40	18	7	120
Acres per farm	102	160	242	279	352	209
Crop acres per farm	22	60	64	82	83	61
Acres of corn	5.5	15.7	14.1	22.6	22.4	15.2
Milk cows per farm	2.2	5.2	11.4	18.0	25.3	10.0
Ewes per farm	7	11	34	34	50	24
Hens per farm	74	73	105	137	69	93
Farms with better than average cows, %	7.1	10.2	30.8	44.4	57.1	24.8
Corn yield, bushels per acre	47.7	48.6	59.4	63.5	64.4	56.5
Farmers owning tractors, %	12.5	33.3	40.0	83.3	71.4	42.5
Owning tractor cultivators, %	12.5	20.5	20.0	38.9	57.1	24.2
Owning power mowers, %	0	7.7	15.0	22.2	28.6	12.5
Owning hay loaders, %	0	5.1	15.0	22.2	42.8	12.5
Using pick-up balers, %	0	7.7	7.5	11.1	0	6.7
Corn husked from stalk, %	6.8	30.5	21.0	17.2	29.9	23.4
Small grain combined, %	28.8	37.3	22.5	19.6	32.0	27.4
Owning milking machines, %	0	0	20.0	33.3	28.6	13.3
Cows milked with milker, %	0	0	38.0	48.1	53.1	35.4
Average age of operator, yrs.	59.1	54.3	52.7	50.4	47.4	53.4
Operators 60 yrs. and over, %	56.2	43.6	32.5	33.3	14.3	38.3
Operators part-time farming, %	25.0	12.8	10.0	11.1	0	12.5
Total work units per farm	101	252	395	602	777	363
Total months, all labor	16.6	21.1	22.3	25.8	23.9	21.8
Work units per man	73	143	212	280	390	200

Factors Associated with Output per Worker

Some of the factors which appear to be closely related to the output per farm worker will be considered separately, but not necessarily in the order of their importance.

Age of operator.- Although only about one-half of the labor on Ohio farms is performed by the operator (the proportion varying from 65 per cent or more on the smaller farms to 35 per cent or less on the largest), the data in Tables 1 - 3 indicate that the operator's age has a bearing on the output per worker. In each of the three areas, the average age of the operator and the proportion of the operators who were 60 or over decreased with successive increases in the number of productive man work units per man. Necessity, zeal and physical ability for work generally decrease as a farmer becomes older. The younger operators usually had more labor-saving machinery and were more adept in its use. These factors may account for the tendency of farms operated by the younger men to be larger than those operated by their elders. (Table 4)

Table 4.- Acres per farm,* and work units per farm and per man, by age of operator, three Ohio areas, 1942

Age of operator	Number of farms*	Total acres per farm	Work units per farm	Work units per man
Western Ohio:				
Under 40 years	48	200	624	343
40-49 years	37	193	602	302
50-59 years	32	183	521	279
60 years & over	30	133	418	229
Total	147	181	554	295
Northeastern Ohio:				
Under 40 years	22	152	633	274
40-49 years	22	127	539	241
50-59 years	25	119	507	215
60 years & over	28	118	329	192
Total	97	128	492	231
Southeastern Ohio:				
Under 40 years	12	331	518	232
40-49 years	28	207	459	218
50-59 years	23	248	366	198
60 years & over	42	170	313	180
Total	105	215	387	202

* Excluding those whose operators had work off the farm.

Average output (number of work units accomplished) per man (Table 4) was only about seven-tenths as great on farms whose operators were 60 years old and over as on those operated by men under 40. This does not mean that all the young operators were efficient in their use of labor or that all the old operators were running farms having a low output per man. The range in output per worker, with farms grouped according to age of the operator, is given in Table 5. All age groups showed a wide variation in work units per man.

Table 5.- Distribution of farms,* by age of operator and by number of work units per man, three Ohio areas, 1942

Age of operator	Number of farms, by work units per man						
	26-100	101-175	176-250	251-325	326-400	401-475	Over 475
Western Ohio:							
Under 40 years	-	-	11	13	12	7	5
40-49 years	-	2	11	10	5	6	3
50-59 years	-	2	14	9	4	2	1
60 years & over	2	5	11	9	2	1	-
Total	2	9	47	41	23	16	9
Northeastern Ohio:							
Under 40 years	1	2	5	8	5	-	1
40-49 years	-	4	8	8	1	1	-
50-59 years	1	4	13	6	1	-	-
60 years & over	5	5	11	6	1	-	-
Total	7	15	37	28	8	1	1
Southeastern Ohio:							
Under 40 years	-	2	5	4	1	-	-
40-49 years	3	9	10	3	1	2	-
50-59 years	2	7	9	3	1	-	1
60 years & over	7	16	12	6	1	-	-
Total	12	34	36	16	4	2	1

* Excluding those whose operators had work off the farm.

Use of labor-saving machinery.- The importance of labor-saving machinery is so generally recognized that its effect on increasing the output per man needs little comment. Cost records show that an Ohio farmer using modern power machinery can produce and harvest 50 acres of corn with the same amount of labor expended by a neighbor using horse-drawn machinery on 10 acres.

In Tables 1, 2 and 3 a general increase in the use of labor-saving machines and practices was noted as output per man increased. Would it be reasonable to expect that increasing the number of labor-saving machines on a farm would always result in an increased number of work units accomplished per man?

The full-time farms in the western Ohio areas, the section of the state best adapted to farm machinery, were sorted on the basis of number of major labor-saving machines used. (Table 6)

Table 6.- Relation of use of labor-saving machines to output per man and other factors, 147 Western Ohio farms, 1942

Number of principal labor-saving machines used*	Number of farms**	Acres per farm	Average age of operator	Work units per farm	Work units per man
1 or less	17	80	52.9	242	195
2	23	127	49.7	393	244
3	34	162	50.1	526	266
4	49	205	44.7	628	322
5 or more	24	282	42.4	818	359
Total	147	181	47.3	554	295

* Includes tractors, tractor cultivators, power mower, pick-up baler, combine (for small grain), corn picker, and milking machine.

** Excluding those whose operators had work off the farm.

There was a marked relationship between number of labor-saving machines per farm and output or work units per man. On farms where less than two of the specified labor-saving machines were used, the workers accomplished an average of 195 units of productive work per man in a year, compared with an average of 359 work units per man on farms employing 5 or more of these machines. The figures in the right-hand column (Table 6) would have been different, of course, and the range would have been somewhat greater had pick-up balers, combines and corn pickers been enumerated only when they harvested all of crop involved. The owners or custom users of some labor-saving tools lost part or all of the advantages so gained, either by reason of the small numbers of livestock carried or the inefficient chore labor required to care for them, or because of the small size of farm operated. It will be noted, however, that there was a rather definite relationship between the number of labor-saving machines employed and the average size of farm. Age of the operator was also one of the closely inter-related factors.

The same general relationships and trends shown in the western part of the state were found in northeastern and southeastern Ohio.

Size of farm.- In each of the three areas (Tables 1, 2 and 3) size of farm as measured by total acres, and size of farm business as measured by the number of crop acres, amount of livestock and total man work units, increased with successive increases in the number of work units accomplished per man.

When the farms were sorted according to size in acres (Tables 7, 8 and 9) the relationships between size and other factors previously discussed were again apparent. In general, the larger the farm, the more extensive was the use of labor-saving machines; one important exception was that operators of the smallest farms in southeastern Ohio, most of whom did not own grain binders, had a larger proportion of their small grain harvested with combines than did those on the largest farms.

The operators of the largest farms were somewhat younger, on the average than the operators of small farms. The extent to which farm operators had employment away from home was inversely proportional to the size of farm. In the western and northeastern Ohio areas included in the study none of the operators of farms of 210 acres or more were engaged in non-farm work, whereas in northeastern Ohio 53 out of 86 men operating farms of less than 90 acres had full-time or part-time industrial or other employment. Another point of interest was that as size of farm increased, the proportion of farms having workers (including the operator) of military age (18 to 37 inclusive) also increased. On the entire group of 159 farms of less than 90 acres there were only 61 male farm workers between the ages of 18 and 38, and 25 of these were operators who had non-farm employment. On the other hand, there were 95 male workers of draft age on 67 of the 98 farms of 210 acres or more, only one of whom was a farm operator employed part-time at outside work.

Finally, in all areas, the number of work units accomplished per man increased with size of farm. However, the wrong conclusions might be drawn regarding the importance of size of farm in its effect on output per farm worker if the analysis were to be discontinued at this point. Are all small farms inefficient in their use of labor and are large farms always efficient? The analysis made in Tables 10-13 may clarify some of the misunderstandings on this point.

Table 7.- Size of farm and labor efficiency, 171 western Ohio farms, 1942

	Total acres in farm			
	1-89	90-149	150-209	210 & over
Number of farms	49	37	43	42
Acres per farm	64	119	177	325
Crop acres per farm	51	98	145	264
Work units per farm	243	415	571	870
Farmers owning tractors, %	71.4	94.5	97.6	100.0
Owning tractor cultivators, %	49.0	83.7	93.0	100.0
Owning hay loaders, %	34.7	56.8	74.4	71.4
Using pick-up balers, %	4.1	8.1	23.2	40.5
Small grain combined, %	28.1	36.7	47.8	48.8
Corn husked off stalk, %	44.6	61.2	64.6	65.2
Farms owning milking machines, %	8.2	16.2	16.3	14.3
Average age of operator, yrs.	48.8	48.3	47.0	42.3
Operators 60 yrs. & over, %	28.6	21.6	20.9	7.0
Operators working off farm, %	30.6	5.4	16.3	0
Farms having males 18-37, %	36.7	37.8	65.1	71.4
Total labor per farm, months	13.4	19.5	22.5	30.2
Crop acres per man	45.5	60.4	77.0	105.1
Work units per man	218	256	304	346

Table 8.- Size of farm and labor efficiency, 164 northeastern Ohio farms, 1942

	Total acres in farm			
	1-89	90-149	150-209	210 & over
Number of farms	86	42	22	14
Acres per farm	45	114	174	267
Crop acres per farm	27	60	95	144
Work units per farm	196	375	584	980
Farmers owning tractors, %	46.5	69.0	81.8	100.0
Owning tractor cultivators, %	30.2	50.0	63.6	92.9
Owning hay loaders, %	17.4	73.8	81.8	78.6
Using pick-up balers, %	4.6	4.8	9.1	28.6
Small grain combined, %	32.8	23.0	23.3	41.3
Corn husked off stalk, %	34.3	34.7	57.4	40.5
Farms owning milking machines, %	7.0	16.7	31.8	42.8
Average age of operator, yrs.	47.7	46.3	49.0	43.1
Operators 60 yrs. & over, %	22.1	14.3	18.2	28.6
Operators working off farms, %	61.6	23.8	18.2	0
Farms having males 18-37, %	44.2	54.7	68.2	78.6
Total labor per farm, months	14.3	20.8	30.4	36.9
Crop acres per man	22.5	34.5	37.3	46.8
Work units per man	164	216	231	318

Table 9.- Size of farm and labor efficiency, 120 southeastern Ohio farms, 1942

	Total acres in farm			
	1-89	90-149	150-209	210 & over
Number of farms	24	28	26	42
Acres per farm	63	116	177	374
Crop acres per farm	36	43	61	88
Work units per farm	163	215	389	559
Farmers owning tractors, %	20.8	21.4	53.8	61.9
Owning tractor cultivators, %	12.5	7.1	23.1	40.5
Owning hay loaders, %	0	0	19.2	23.8
Using pick-up balers, %	8.3	3.6	0	11.9
Small grain combined, %	58.4	25.7	14.9	26.1
Corn husked off stalk, %	14.5	26.0	15.3	28.0
Farms owning milking machines, %	0	3.6	26.9	19.0
Average age of operator, yrs.	58.6	58.2	49.5	49.8
Operators 60 yrs. & over, %	58.3	57.1	19.2	26.2
Operators working off farm, %	20.8	14.3	7.7	9.5
Farms with males 18-57, %	12.5	21.4	30.8	61.9
Total labor per farm, months	14.2	18.0	20.6	29.2
Crop acres per man	30.3	28.5	35.3	36.2
Work units per man	138	143	227	230

Variations in Output on Farms of All Sizes

In each area there were a number of small farms on which output or man work units per man exceeded the average accomplishment of all farmers in the area; likewise there were always some among the largest farms which fell far below the general average in work units per man.

Table 10.- Distribution of farms, by size and by number of work units per man, three Ohio areas, 1942

Size of farm	Number of farms, by work units per man						
	26-100	101-175	176-250	251-325	326-400	401-475	Over 475
Western Ohio:							
1-89 acres	2	7	25	11	2	2	-
90-149 acres	-	3	17	7	4	3	3
150-209 acres	-	-	11	11	15	5	1
210 acres & over	-	-	5	15	7	10	5
Total	2	10	58	44	28	20	9
Northeastern Ohio:							
1-89 acres	22	26	25	10	3	-	-
90-149 acres	1	7	21	13	-	-	-
150-209 acres	-	3	6	11	2	-	-
210 acres & over	-	1	3	3	5	1	1
Total	23	37	55	37	10	1	1
Southeastern Ohio:							
1-89 acres	6	13	4	1	-	-	-
90-149 acres	9	10	8	1	-	-	-
150-209 acres	1	6	12	5	1	1	-
210 acres & over	-	10	16	11	3	1	1
Total	16	39	40	18	4	2	1

Additional data relating to size of farm and the variations existing between farms of different sizes are presented in Tables 11, 12 and 13.

The full-time farms[3/] in each of the three Ohio agricultural areas were arranged in the order of their size in acres and then divided into three groups, each having as nearly as possible equal numbers. The farms in each of these groups, designated as small, medium size and large farms, were next arranged in the order of number of work units accomplished per man and then divided into two classes of approximately equal numbers, one class having a relatively low output per worker, the other relatively high.

Within each of the three size-of-farm groups (Tables 11-13), there was a tendency for farms with a high labor efficiency to be somewhat larger in size than those classified as having a low output per man. Farms with a relatively large number of work units per man also had a greater output per acre. They made more use of labor-saving machines and practices, and generally had a smaller supply of labor with which to carry on a larger farming business.

An examination of the bottom line in these three tables indicates clearly that there is room for improvement on farms of all sizes. In each area, there was about as much difference, relatively, in work units per man, between the more efficient and the less efficient large farms as there was between comparable groups of small farms. The absolute difference in number of work units per man was greater on the large than on the small farms. Likewise in each area, more work units were accomplished per man on the more efficient half of the small farms than on the less efficient of the large farms.

Except for the fact that in Ohio there are more small farms than large farms, stepping up the efficiency of labor on the lower half of the small farms to the level of that attained on the upper half of the same size group would not have produced as much additional farm output as would raising the relatively low half of the large farm to a point where they would have equalled the upper half. Which of these two would be the more difficult to attain may be open to discussion. Nevertheless, the need for improvement is widespread and is not limited to any one farming area or any one size of farm.

3/ Farms whose operators had employment off the farm were omitted from these three tables. Although in general there was a close relationship between size of farm and "part-time farming", there was much less relationship between the amount of farming done in such cases and the acreage of the farm operated on a part-time basis. Furthermore, it was difficult to measure the amount of time available for or devoted to farming by rural or farm residents with "full-time" or even part-time industrial jobs.

Table 11.- Size of farm and other factors related to variations in output per farm worker, 147 western Ohio farms, 1942

	Small farms		Medium size farms		Large farms	
	Work units per man low	Work units per man high	Work units per man low	Work units per man high	Work units per man low	Work units per man high
Number of farms	24	25	24	25	24	25
Acres per farm	78	83	150	160	285	328
Crop acres per farm	63	68	123	131	223	275
Work units per farm	259	366	445	598	710	935
Work units per acre	3.3	4.4	3.0	3.7	2.5	2.8
Corn yield, bu. per acre	63.5	65.9	64.8	68.4.	63.0	65.8
Farms with better than average cows, %	20.8	26.1	17.4	43.4	13.0.	45.8
Farmers owning tractors, %	70.8	92.0	100.0	96.0	100.0	100.0
Owning tractor cultivators, %	41.7	72.0	87.5	92.0	100.0	100.0
Owning hay loaders, %	33.3	60.0	62.5	72.0	66.7	80.0
Using pick-up balers, %	0	4.0	4.2	24.0	33.3	36.0
Small grain combined, %	23.1	27.0	35.1	46.1	44.6	57.7
Corn husked off stalk, %	41.1	62.1	61.0	69.0	52.1	74.1
Average age of operator, yrs.	53.0	45.5	53.3	46.2	45.2	40.9
Operators 60 yrs. & over, %	33.3	16.0	41.7	16.0	12.5	4.0
Farms having males 18-37, %	20.8	40.0	50.0	56.0	70.8	76.0
Total labor per farm, months	17.5	14.5	24.6	20.7	32.0	25.9
Crop acres per man	43.4	56.8	60.2	76.1	83.6	127.6
Work units per man	178	304	217	346	266	434

Table 12.- Size of farm and other factors related to variations in output per farm worker, 97 northeastern Ohio farms, 1942

	Small farms		Medium size farms		Large farms	
	Work units per man low	Work units per man high	Work units per man low	Work units per man high	Work units per man low	Work units per man high
Number of farms	16	17	16	16	16	16
Acres per farm	48	71	105	120	191	236
Crop acres per farm	25	47	55	69	104	127
Work units per farm	194	404	330	482	635	910
Work units per acre	4.1	5.7	3.1	4.0	3.3	3.9
Corn yield, bu. per acre	52.3	58.4	59.2	56.6	60.0	65.6
Farms with better than average cows, %	0	26.7	6.7	43.7	30.8	37.5
Farmers owning tractors, %	43.8	58.8	56.2	68.8	75.0	100.0
Owning tractor cultivators, %	18.8	41.2	43.8	56.2	62.5	81.2
Owning hay loaders, %	6.2	52.9	81.2	81.2	81.2	81.2
Using pick-up balers, %	6.2	5.9	6.2	6.2	6.2	31.2
Using corn-pickers, %	0	11.8	0	18.8	12.5	25.0
Owning milking machines, %	0	33.3	13.3	25.0	23.1	56.2
Average age of operator, yrs.	56.6	49.0	47.4	48.8	54.2	39.4
Operators 60 yrs. & over, %	56.2	29.4	31.2	6.2	31.2	18.8
Farms having males 18-37, %	31.2	52.9	68.8	37.5	62.5	87.5
Total labor per farm, months	21.1	22.6	21.5	22.3	36.4	31.7
Crop acres per man	14.5	27.4	30.9	37.3	34.2	48.0
Work units per man	110	236	184	260	209	345

Table 13.- Size of farm and other factors related to variations in output per farm worker, 105 southeastern Ohio farms, 1942

	Small farms		Medium size farms		Large farms	
	Work units per man low	Work units per man high	Work units per man low	Work units per man high	Work units per man low	Work units per man high
Number of farms	17	18	17	18	17	18
Acres per farm	87	126	167	174	376	362
Crop acres per farm	31	42	43	64	108	97
Work units per farm	173	287	246	406	512	684
Work units per acre	2.0	2.3	1.5	2.3	1.4	1.9
Corn yield, bu. per acre	50.0	51.0	54.5	57.7	55.5	59.9
Farms with better than average cows, %	13.3	22.2	11.8	27.8	35.3	27.8
Farmers owning tractors, %	17.6	44.4	23.5	33.3	70.6	83.3
Owning tractor cultivators, %	5.9	16.7	11.8	16.7	47.1	50.0
Owning hay loaders, %	0	11.1	0	16.7	29.4	27.8
Owning milking machines, %	0	16.7	5.9	22.2	23.5	22.2
Average age of operator, yrs.	65.7	50.1	58.1	51.7	48.8	50.3
Operators 60 yrs. & over, %	88.2	22.2	47.1	27.8	23.5	33.3
Farms having males 18-37, %	35.3	11.1	17.6	38.9	70.6	55.5
Total labor per farm, months	18.4	18.1	20.5	20.4	33.0	28.2
Crop acres per man	20.0	28.7	24.9	37.9	39.2	41.4
Work units per man	112	192	144	239	186	291

SUMMARY

1. The average output per man was greater on large farms than on small farms. In the three principal agricultural areas of Ohio, workers on farms averaging 300 acres in size accomplished about 65 per cent more work units per man than those on farms of 60 acres.

2. This study, however, does not bear out the assumption that labor on most large farms is being used at its maximum efficiency.

3. There was a wide variation in the efficiency of labor on farms of all sizes. Many operators of large farms lost the advantages gained by the extensive use of labor-saving machinery, either through inefficiencies in doing the chore labor on livestock or by carrying on livestock enterprises of low productivity or of insufficient size to provide full-time work for the available labor. On the other hand, some small farm operators made very good showings because they were heavily stocked, raised intensive crops, or hired considerable custom work done.

4. In fact, the number of productive work units accomplished per man was greater on as many as half of the small full-time farms than it was on the less efficient half of the large farms.

5. There was about as great a percentage difference, in output per man, between the more efficient and the less efficient large farms as there was between comparable groups of small farms whose operators had no work away from home.

6. Age of the farm operator has considerable bearing on output. The younger men tended to operate farms that were larger in size and hence better adapted to the use of labor-saving machinery. Most of the men of draft age were on the larger farms. The small farms had operators who were older, on the average, and, in addition, more of the operators of small farms had employment in industrial or other non-farm work.

7. The need for stepping up the output per farm worker is widespread and is not limited to any one type of farming area or to farms of any one size.