

UNIVERSITY OF MISSOURI

COLLEGE OF AGRICULTURE

# Agricultural Experiment Station

COLUMBIA, MISSOURI, OCTOBER, 1915

CIRCULAR NO. 77

---

---

## THE VALUE OF EDUCATION TO THE FARMER

O. R. JOHNSON

"Is education worth while for the farmer?" is a question that has often been answered in a rather indefinite way. Not much information has been obtained on this particular point. The only accurate way of finding an answer to this question is by comparing farmers who have reached different stages of advancement in school work.

A comparison has been made on the basis of definite data secured in the 1912 Farm Management Survey, conducted by the College of Agriculture in the western part of Johnson County, Missouri. The farmers were divided into two groups, containing respectively, 554 farms, whose operators have received only a rural school education, and 102 farms, whose operators have gone further than the rural school. The training received by this second group in addition to their school education amounted on the average to practically two years in the high schools of today. The number of operators receiving a college education was so small as to make a division on this basis impracticable. A comparison of various factors affecting the farms of the two groups will, it is believed, give a more definite idea of the relative positions of the two classes of men. This should answer to a considerable degree the question as to how well education pays the farmer.

In the first place, it should be noted that 15.5 per cent of all farm operators received more than a rural school education. In other words, about one man out of every seven went further than the rural school. Table I shows that the better-educated man operates 44.2 acres or 33 per cent more land. He owns four-fifths of the land he operates while the man of inferior education owns only a little over three-fifths of the land he farms. The man with more education has about 11 per cent higher investment—\$89 instead of \$80 for each acre of

land he operates. The higher investment per acre usually means better land—in other words, land that will give higher yields.

The better-educated farmers keep about one and one-sixth times as much stock as the others, as is shown by the number of acres of crops grown for each animal unit kept. The man with more school training also handles more crops with each workman he employs. Each workman on farms of the first group handles 53.5 acres of crops, while a workman in the second group of farms handles 61.2 acres. In other words, the better-educated man is doing about one and one-fifth times as much as the man with less school training.

Table 1. Farm Operations of Men of Different Degrees of Education

	District school only	More than district school
Number of farms.....	554	102
Average size acres.....	134.0	178.2
Area		
Owned acres.....	83.4	140.4
Rented acres.....	50.6	37.8
Owned per cent.....	62.2	78.78
Rented per cent.....	37.8	21.22
Investment per acre.....	\$80	\$89
Total value.....	\$10,720	\$15,859.80
Crop acres		
Per animal unit <sup>1</sup> .....	4.3	3.6
Per man.....	53.5	61.2
Per horse.....	14.6	14.8
Productive work units <sup>2</sup>		
Per man.....	147.0	171.7
Per horse.....	42.5	43.2
Percentage of receipts from crops.....	37.1	30.7
Crop index <sup>3</sup> .....	97.0	102.0
Labor income <sup>4</sup> .....	\$382	\$655
Family living.....	\$390	\$449

<sup>1</sup> An animal unit is a horse, cow, five mature hogs, or seven mature sheep; two young animals are regarded as equal to one mature animal of the same kind, on the basis of feed and the manure produced. This unit is only approximate at best.

<sup>2</sup> A productive work unit is a 10-hour day of productive labor, done by either a man or a horse. It includes work on live stock, on farm crops, or on the improvement of land, but not on work stock; on the repairs of fences, buildings, and machinery; or on anything else included in the maintenance of the farm.

<sup>3</sup> A crop index of 97 simply means that the yield per acre of all crops on this farm or group of farms is 97 per cent as great as the average yield of the groups of the region.

<sup>4</sup> Labor income is the farmer's net return after paying from his gross income all general running expenses, including also interest at 5 per cent, depreciation, and wages for hired men and members of his family, but excluding household expenses.

Previous work by the farm management department has shown that the crop acreage almost entirely controls the amount of work which the work stock on the farm has to do and that the man who keeps more live stock has more regular employment for his men. This table shows that while the man in the second group of farms, or the one with more education accomplishes more work, his horses do about the same amount of work as do the horses of the first group of farms. These figures bear out the statement just made above. The man keeping more live stock does more work, while by growing the same crop acres per work horse, his horses do practically the same amount of work as do those of the first group.

The farmers that have received less school training sell almost 25 per cent more crops than the farmers that have received more school training. Thirty-seven per cent of the net receipts of the farm come from the sale of crops in the case of the first group of farms, while only 30 per cent, in the case of the second group. The effect of selling a greater proportion of crops on the farms is shown in the crop index figures for each group. The crop index of the first group is 97 per cent—in other words, the average yield on these farms is 3 per cent below the average for the whole section. On the second group of farms the yields are 2 per cent above the average for the section. It should be recalled that this point was mentioned in connection with Table I, where it was found that the second group of farms had the higher investment per acre. This figure shows that the second group of farms is occupying better-yielding land.

A careful consideration of these factors will lead us to conclude that the man with more school training is getting along a little better. The next figure in this table brings out this point very forcibly. The labor income of the man receiving only a district school education is \$382. This means that after he has paid all farm expenses for the year, has allowed his family hired man's wages for any work they may have done on the farm, and has allowed his money the 5 per cent interest to which it is entitled, he has left for his own labor and management \$382, in addition to a house to live in, and products which the farm has furnished him toward this family living. The better-educated man has \$655 labor income, or within \$110 of twice as much for his time and labor in addition to his house to live in and the products which his farm contributes toward his living. The last figure in this table makes a comparison of the total cost of family living of the two groups. There is only about \$60 difference in the total amount of money spent for the family living.

In conclusion, there are several points which these data bring out. The one of greatest interest, perhaps, is that the better-educated

farmer is making an income 71.4 per cent greater than the man with less education. After the labor income of the man with less school training is adjusted to allow for difference in size of business, the man with more education still has about 40 per cent greater income than does the first mentioned group. The other factors indicate strongly that the better-educated man has his business better organized. The facts that he gets slightly better yields and has a system which furnishes him more productive labor, and that he keeps more live stock, seem to show that he has somewhat greater ability in the organization and handling of his business. Because of this fact, it is found that he makes enough larger labor income to pay interest on approximately \$5,500 capital, and allowing for the difference in size of business he still makes enough larger income to pay interest on \$3,700. Other studies have shown that with this size of farm each acre that the farm is increased will add approximately \$2 to the labor income, but that the investment per acre on the two farms is not enough different to make any difference in the income in favor of the better-educated man. Also, the difference in crop yields is not great enough to change the labor income materially. With these facts considered, it would appear as though the man who has received more mental training has increased his efficiency thereby to the extent of making interest on a capital of at least \$3,700. This does not seem to be a bad investment for the small amount of time he spends in getting the additional training and the probable expense of obtaining this training. While other factors may have played some part in his greater earning capacity, yet from a careful study of the organization of his business, it appears that education must have played a very large part in his greater earning ability.