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AGRICULTURAL EXPERIMENT STATION

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FAMILY LIVING ON SUCCESSFUL
MINNESOTA FARMS

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UNIVERSITY FARM, ST. PAUL

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The Minnesota Agricultural Experiment Station has recently completed a study of 694 farm families in thirteen communities of Minnesota, made for the purpose of gaining some authoritative information as to how Minnesota farm families really are living. This is a subject concerning which there is much doubt and question at present. It is well recognized that there is distress in American agriculture, and in the discussion about it, naturally the question of the quality of living among farmers constantly comes to the fore. Some, when they discuss this subject, are thinking only of the poorer and most unfortunate farm families; others are thinking only of the most successful; and others profess to be talking about the "average" farm family.

On the whole, there is the impression that farmers generally are at a disadvantage with other groups, economically speaking, and that therefore there is less opportunity for a high quality of living if farming is to be engaged in than if some other occupation is to be followed. In the face of a situation of this kind, many young people are making up their minds definitely whether they wish to make farming their mode of life or to take up city occupations. Which path shall they choose? The authors of this bulletin can not answer because it is a question which each person, with the assistance of parents and friends, must decide. It is a highly personal question, involving in large degree the aptitudes and inclinations of the individual. In coming to a decision, however, one is entitled to the best information obtainable as to what may reasonably be expected from farm life. The question should be viewed deliberately, with the mind freed of all the false notions and emotional biases that have grown up during the period of great distress which covers the last six years and which farm people have been and still are, in part, experiencing. It is comparatively easy to think that one knows very well what farm life is like, especially if he is living on the farm. But what one knows most about or knows best is life on the home farm, and during the last five years. It is necessary to get a larger view than this, taking in many farms and many other occupations, and looking further into the future for the relative prosperity of the various occupations maintained.

If a young person is contemplating a college training in preparation for life's work, it is natural to suppose that he will be better prepared to pursue an occupation successfully. On this assumption the authors

of this bulletin have selected from 694 families studied, 65 whom they consider most successful. Any young man who is ambitious and reasonably capable and who thoroly fits himself for farm life by good training, has a right to expect to do as well as the best 10 per cent of the 694 farm families studied. Some will not do this, even with proper training, but the number will not be large. It must be remembered that a large number of lawyers, doctors, and professors fail to succeed even after they are trained.

These particular 65 farm families were considered most successful because they make the largest incomes and, at the same time, live the best. The latter was considered fully as important as the former. Of what use is a large income if it is not well spent? Moreover, good living is not merely a matter of spending money; it is more largely a matter of putting a given amount of it to very good uses. In the following pages, an attempt is made to describe the living of these 65 families—the kind of houses they have; the amounts they spend for food, clothing, and advancement; and their home comforts and conveniences.

The picture presented is of these farm families after five years of severe agricultural depression. By the time the young men now beginning their training reach that prime of manhood when life is lived at its fullest, living on the farm may be on a much higher plane than now. But life in the cities may improve also. Furthermore, we can have no actual data with which to predict what farm life will be like. The only facts we have are of the present; so we are presenting them. But let us not forget that they represent agriculture while it is depressed or, at best, convalescent. For a complete comparison, we should have data on city families of the economic and social levels to which these young people might reasonably expect to rise. Since this is lacking, we shall present only one side of the picture.

THE 694 FARM FAMILIES

The 694 farm families from whom the 65 were selected are living in thirteen communities located as indicated in Figure 1. The communities were selected with a view to representing as accurately as possible all the different kinds of farming and living conditions in the state. One of the areas is in the cut-over region and another is on the edge of it. In one area included in 1925, the farmers had had poor crops and low prices for potatoes, their main crop, for two years. In another (1926) the potato crop had been good and prices high. Some of the areas represent dairy and livestock communities. Grain growing is also well represented in several areas. In each community, the

the increases and decreases in inventory during the year. In general, the closing inventories were a little larger than the opening inventories. The average of cash receipts for the whole 694 was about \$2700. Thus this group of 65 had receipts 62 per cent above the average.

HOW THE INCOME WAS SPENT

Table I shows that the 50 owner families spent \$4425, on the average, including \$277 as payments on principal of mortgages, \$77 on life insurance, and \$226 on other investments. Including these essentially investment expenditures, on the average all but \$31 of the year's receipts was spent. The \$265 automobile expense represents partly business use and partly family use. Some of the farm expenditures are for buildings and building improvements and new machinery and equipment, part of which represents an addition to investment and not mere replacement. Life insurance is partly protection for the family and partly investment. If a true figure for all expenditures for family living could be obtained, it would probably be about \$1500; and a true figure for investment would probably be about \$750. The last two figures are based on some unpublished computations by the authors.

TABLE I
HOW CASH RECEIPTS OF 50 SUCCESSFUL OWNER FAMILIES WERE SPENT

Items	Amount	Per cent of total
Farm expenditures	\$2030	45.9
Automobile expense	265	6.0
Mortgage interest	319	7.2
Payment on principal of mortgage.....	277	6.3
Family living	1231	29.6
Life insurance	77	1.7
Other investments	226	3.3
Total	\$4425	100.0

Table II shows how the \$1231 was spent on family living. It will be observed that more than a sixth of it was spent on education and other forms of advancement. (This does not include tax money that went to education.) The success of living is judged better by the proportion of the budget spent upon advancement than in any other way; and 18.4 per cent is a relatively high proportion. The average size of the families was 5 persons, 2 parents and 3 children each. The adult-equivalent size of the family was 4 and of the household 4.5.

TABLE II
DISTRIBUTION OF AMOUNT SPENT ON FAMILY LIVING BY THE 50 OWNERS

Items	Amount	Per cent of total
Food	\$ 344	28.0
House furnishings, operating and housekeeping expense.....	191	15.5
Clothing	272	22.1
Fuel	58	4.7
Health	69	5.6
Advancement	227	18.4
Personal	70	5.7
Total	\$1231	100.0

LIVING CONVENIENCES

More can be judged, however, from the conveniences and comforts in the home than by the actual amount of money spent in any one year, especially if it is one of a succession of bad years.

All 50 of these families had automobiles; and 33 of these were not the low-priced types of car commonly owned by people of low incomes. The average age of these cars was 3.8 years, which is somewhat high, probably reflecting the effects of the agricultural depression. Given even one year of high prosperity, a large number of the families will likely buy new cars.

The houses averaged nearly 8 rooms. They are to be criticized more for being too large than too small. A good many of them were built in the days when a large house was an evidence of prosperity.

Thirty-five had central heating plants of various kinds. The remaining 15 houses were of the older type and difficult to provide with a furnace.

As to lighting, 18 had central plants—15 electric and 3 gas. Altho the other 32 had only kerosene or gasoline lamps for lighting, these lamps were nearly all of modern types, which provide reasonably good illumination.

All of the 50 houses had water systems or drains. Some of the water systems, especially in the older houses, consisted of hand pumps in the kitchens. Those in the modern houses were of the full-pressure types. Twenty-eight had both water systems and drains, 11 had pumps without drains, and 11 had drains only.

Most of the families not having good heating, lighting, and water systems were planning to install those improvements soon, or the first year that a little more income provides the extra means for it.

All but 6 of the households had washing machines, mostly of the power type; and the families of all these 6 were small.

Sixteen of the families eat in the kitchen in the summer and 23 in the winter. These families are small, or the kitchens are large and a kerosene or gasoline stove is provided in summer.

The furniture and furnishings of all but 6 of these homes were as good and as comfortable as would be found in a group of average city homes of families with incomes of \$3500 to \$4000. These 6 intended to buy better furniture after they had further reduced their mortgages.

The housekeeping in all these homes, as far as could be judged from an inspection of the living rooms and kitchens during the course of a few hours, was of good quality. Slovenly housekeeping is as easy to find in the country as in the city, but rarely in households of families of the level of intelligence represented by these 50 successful farm families.

HOUSEHOLD ECONOMY

There was abundant evidence in these homes that more than money had gone into the making of most of them comfortable. Efficient household management is just as essential to successful farm living as efficient production on the business side of the partnership. Efficiency is measured in terms of output or returns per unit of input. A more efficient use of money income, or of the time and effort of the members of the farm household, goes just as far toward making a good home as the using of more money or more time and energy. A small amount of money spent for the right sort of things or things of the right quality may contribute more to family living than twice the sum wastefully spent. This is not the sort of thing upon which it is easy to assemble data, but in these homes it was apparent that more than the usual proportion of the income had been spent for durable types of goods, and for durable qualities.

COMPARISON WITH CITY LIVING

How does such living compare with city living? This is a question that is sure to be asked at this stage. It can not be answered, at least, not in any definite, conclusive way. A few facts and figures can be brought forward that partly answer it and may help a young person to decide whether to cast his lot with the country or the city; but there is still room for a great deal of personal judgment.

To begin with, some conveniences and comforts may be more easily obtained in a town and city than in the country. Families living in the country may have houses as fine as city houses, and much more commodious lawns; but they are seldom as near good stores, good high schools and colleges, good hospitals and doctors, good churches, good theaters and libraries. But many towns and villages and many districts in cities lack these things. One hardship of country living is the difficulty of procuring regular supplies of fresh meat, fruits, and vegetables out of the local season. But this applies as well to villages, towns,

and portions of cities. The automobile and good roads bring country people much nearer to their local stores, schools, and amusements than formerly, but these may be of lower quality as compared with the best available in the larger cities. To many people, these seem to be overwhelming handicaps of country life.

To offset these, the country usually has more quiet, more fresh air and sunlight, and fresher and more wholesome supplies of certain important foods. And, to those capable of enjoying them, there are the great delights of being in closer contact with nature. Nearly everybody agrees that a country home is a better place in which to rear a family than a city home.

Country people, both women and men for the most part, think that they work longer hours and work harder than town and city people. But this is not proved. For many city people, especially those who get ahead, work long hours too, and their work often imposes a heavy nervous strain upon them, so that they sleep much less soundly than people on farms. Furthermore, the so-called 8-hour-a-day man often spends as much as two hours a day going to and from his work. This means, with his noontime, 10 or 11 hours away from home in addition to home chores.

Obviously, there can be no measure of the relative values of such conditions. They can only be mentioned. Whatever comparison is possible must be in terms of other things.

A city person is likely to point to the \$1231 spent on family living and remark how small it seems. But there is a great deal that it does not include.

First, it does not include the house rent that the city man pays in cash or its equivalent. Houses as good as the 50 included in the study, with lawns and play grounds half as commodious, would rent for an average of not less than \$75 a month in Minneapolis and St. Paul. Some of whom the authors have inquired on this point have estimated as high as \$100 a month. The \$75 per month, or \$900 per year, is very conservative. This must be added to the \$1231, which raises the total to \$2131.

There must also be added to it the large supply of food which the farm family obtains from the farm. Following is a conservative estimate of the cost of this if purchased in the city. The quantities used are based on the results of the 1925 survey of 357 Minnesota farm families. The prices are mostly taken from reports of the Bureau of Labor Statistics on retail prices for Minneapolis and St. Paul for 1925. The prices of locally grown fruits and vegetables are from a special study made in the summer of 1924 by the Division of Agricultural Economics, University of Minnesota.

TABLE III
ESTIMATED COST OF FARM PRODUCED FOOD IF PURCHASED IN MINNEAPOLIS

Items	Amount per family per year*	Average 1925 retail price in city	Estimated cost in city
Whole milk, gal.	308	\$0.45	\$139
Cream, qt.	154	0.50	77
Butter, lb.	75	0.50	38
Eggs, doz.	179	0.43	77
Poultry, lb.	87	0.35	30
Meat (all types), lb.	570	0.31	177
Potatoes, bu.	36	1.50	54
Fresh fruit ....	...	...	...
Fresh vegetables ....	...	...	70
Home-canned goods ....	...	...	...
Total cost			\$662

* The average size of household was 4.25 adult-equivalents based on weights given in L. Emmet Holt's "Food, health, and growth," 1922. For assistance in the computation of these weights the authors are indebted to Miss Paulena Nickell. Many people will say that the estimates of quantities of certain foods appear high. They are corroborated by unpublished data gathered by G. A. Pond, on the Owatonna and Windom statistical routes of the Farm Management Division of the Minnesota Agricultural Experiment Station and by data given in Minnesota Agricultural Experiment Station Bulletin 162, by F. W. Peck, based on the records of statistical routes over a period of 10 years, 1905-14. See also Carl C. Taylor's "Rural sociology," p. 338; Raymond Pearl, "Studies in human biology," p. 419; Ernst Engel, "Die Lebenskosten Belgischer Arbeiter-Familien, Fruher, und Jetzt." Bulletin L'institut Internationale de Statistique, vol. 9, 1895, p. 47, Table 6; M. Rubin, Consommation de Familles d'Ouvriers Danois, vol. 13, Bul. l'Institut Int. de Stat., 1901; Levnadskostnaderna pa Landsbygen i Sverige, K. Socialstyrelsen, 1923; Nebraska Bul. 219, Cost of feeding the farm family, by J. O. Rankin, 1927; and report on "The cost of living studies on 26 Ohio farms," 1924, by C. E. Lively (mimeographed release). See also Yearbooks of the U. S. Dept. Agr. for 1920, 1923, and 1924; and the rural and urban comparisons in Slosse and Waxweiler, "Enquete Sur le Regime Alimentaire," p. 171ff. The large amount of food used is due partly to the outdoor life, the fact of home production, wasteful consumption, certain social customs, and the amount of physical labor performed by the families.

These data, however, are for the average of the 357 families. The 50 families use more than \$662 worth of farm-grown foods. Not that they eat much more in the aggregate, but rather that they use a larger proportion of such more expensive foods as butter, cream, meat, and eggs. Unpublished data indicate that \$80 would be a conservative allowance for this. This would raise the \$662 to \$742. This, added to \$344 spent for purchased foods, makes a total of \$1086 as the estimated cost in the Twin Cities of the food eaten by each of the 50 farm families consisting of parents and 3 children per family, and their hired men and visitors.

Probably, however, city people can not use to advantage as large quantities of either home-grown or purchased foods as farm people. They do less hard physical work and are not out in the cold as much in the winter. If we allow \$286 as a deduction on account of this, there will still be \$800 left, of which \$344 is purchased, leaving \$456 as

produced on the farm.¹ It is interesting to check the total food cost of \$800 against the fairly liberal allowance of \$850 of an average Minneapolis school teacher's family of parents and 3 minor children, as computed by Dr. Royal Meeker in his recent study of the budgets of such families.² These school teachers must compare fairly well in intelligence and general ability with the families included in our study. If economic progress be used as the criterion of native ability, successful farm families, on the average, possess more of it than school teachers, for it is plain from data to be presented further that they are making much greater economic progress. These teachers happen to be, however, the highest grade of city workers for whom budget studies have been made in this territory. The farm families studied average at least four-tenths adult-equivalent larger than the Minneapolis school teacher's family used in Dr. Meeker's computations. Our figures seem too conservative, if anything.

The coal bill of the school teacher's family is \$140; the coal and wood bill of the farm families is only \$58. The other \$82 is obtained from the farm, or saved. There is serious question whether farm people keep their homes as warm as do city people. Our data show that approximately half of the farm fuel is purchased. Let us allow \$50 for this item.

The water, light, gas, and telephone bills of the Minneapolis dweller total about \$140 per year, which is about \$100 more than the country equivalents or near-equivalents of these costs—another item to be added to the \$1231.

The clothing bill of the Minneapolis school teacher's family, figured on a fairly liberal basis to match the relatively high living of the 50 selected farm families, was estimated by Dr. Meeker at \$693. The clothing bill of the 50 farm families averaged \$272. Some of this represents poorer clothes and less variety in the wardrobe; but the

¹ There is no proof that this or any other amount is a proper deduction. Pearl (*op. cit.*) found that city families ate between 5 and 15 per cent less, whereas Engel found a difference of 27 per cent. However, Engel was dealing with poorer families. The Swedish rural laborers and small farmers consumed from 19 to 34 per cent more food than city laborers in the same country, altho the urban families had the higher incomes. Furthermore, the food in the country was of a better type. (See *Levnadskostnaderna, Op. Cit.*) The Nebraska study found greater differences than any of the others. Some data collected by Zimmerman, in North Carolina, show a difference of 16 per cent. Our deduction in dollars is equal in percentage to Engel's difference in quantity, and hence is sufficiently conservative.

² See "A study of costs and standards of living of Minneapolis teachers in relation to their salaries," by Royal C. Meeker, published by the Central Committee of Teachers' Association, Minneapolis, Minn., Sept., 1926. Dr. Meeker estimates a minimum food cost of 41 cents per day per person. On this basis, the food for a teacher's family of 5 persons will cost \$2.05 per day, or \$750 per year. Another \$100, according to his method of figuring, would raise the food budget to a reasonably comfortable level. The food would then cost \$850 per year. Those who wish to go thoroly into a comparison of rural and urban life should acquaint themselves with the studies in Belgium, Denmark, and Sweden referred to elsewhere in this bulletin, and also with studies in many other fields. A forthcoming book by P. A. Sorokin and C. C. Zimmerman, on "Rural and urban populations," will summarize much of this material in other fields.

larger part of the difference is due to the fact that farm people, especially the men, wear working clothes nearly all the time, and these are relatively cheap and durable. Wearing overalls six days a week does not make a farmer poorly dressed. He is as satisfactorily dressed in his overalls and shirt that he can buy for \$5 as a floorwalker in a department store would be in his \$75 tailor-made suit. But if he is poorly clad when he is really dressed up, then the comparison is against him. The clothing bill of country children is much less than that of city children for the same degree of comfort and satisfaction. The difference between \$693 and \$272 is \$421. Let us conservatively estimate that \$325 of this \$421 is real economy, not poorer living.

Another large item is automobile expense. On these farms, the automobile, with all of its operating costs, upkeep, and garage rent, is furnished the farm family in addition to the \$1231. Dr. Meeker's estimate of automobile and garage cost to the city family is \$400. This is evidence, however, that farm families do not use their automobiles as freely as city people. Let us consider \$300 instead of \$400 as a fairer comparison. To this should be further added the saving in street car fare, amounting, in Dr. Meeker's calculations, to \$130 per year.

Lastly, Dr. Meeker's table has an item of \$550 for teacher's retirement fund, life insurance, and savings. These items for the 50 farm families are all covered in the \$71 of life insurance, the payments on principal of mortgage of \$277, and other investment items mentioned in Table I, the total of these being \$580. To provide as well for its future as these 50 farm families are providing, assuming no increase from year to year in the value of the livestock and the land and farm buildings other than house, would take this \$580 at the least. The farm family's method of providing for the future does not take care of the early years of life so well as does that of the city family, but it takes better care of the later years.

A very moderate estimate for the increase in inventory just mentioned as not included in the \$580, would be \$220. This is determined as follows: Between 1900 and 1925, the farm buildings on the same Minnesota farms increased in value in terms of a constant-value dollar, that of 1925, by \$2100, or \$85 per year.³ The 50 successful farmers must have done much better than this, as is indicated by the buildings now on their farms and by the housing improvements averaging \$80 per farm made even in 1924 and 1925. These farms are also 65 acres over the average in size. A reasonable estimate for them is \$120 per year.

³ The buildings and land clearing on the 34,000 new farms created during the period are not included in the average. (From a manuscript, "The credit situation in Minnesota," by J. D. Black and B. M. Gile.)

Between 1900 and 1920,⁴ three million acres of Minnesota land were improved. Evidence obtained from land settlement studies indicates that a million acres were farms started on new land during this period. This would leave an increase of 13 acres per farm on the farms already in existence. Other evidence from land settlement studies in Minnesota indicates that improving an acre of brush or timber land adds about \$45 to its value, at present land prices. No data are available as to the value added by drainage improvements. A reasonable estimate for the increase in land inventory of 50 of the most successful farmers is \$50 per year. This does not include the very important gains made between 1900 and 1925 from the general rise in the price level and the accompanying rise in the value of land.⁵

The estimates for average increase per year in livestock and equipment inventory on the 50 successful farms between 1900 and 1925 is \$50 in 1925 dollar values. This is based on the rate of increase in equipment and number of livestock on farms already in existence, and their farm values in 1925.

⁴ No data are available on improved land in 1925. See U. S. Dept. Agr. Bull. 1295, pp. 1-12.

⁵ A man buying 160 acres of average land in the state of Minnesota in 1900 and in each of the years from 1900 to 1924, with a mortgage on it for half its purchase price, and selling it in 1925, having in the meantime paid off none of the principal and made no new improvements, merely making enough replacements to keep the farm in the same condition of improvement, would have made the following gains or losses from the changes in land values:

Year	Purchase price	Mortgage	Equity at purchase	Equity in 1925	Gain + Loss -
1900.....	\$ 4,100	\$2050	\$2050	\$10700	+ \$8650
1910.....	7,200	3600	3600	9150	+ 5550
1911.....	7,350	3675	3675	9075	+ 5400
1912.....	7,500	3750	3750	9000	+ 5250
1913.....	7,850	3925	3925	8825	+ 4900
1914.....	9,300	4650	4650	8100	+ 3450
1915.....	10,400	5200	5200	7550	+ 2350
1916.....	10,900	5450	5450	7300	+ 1850
1917.....	11,400	5700	5700	7000	+ 1300
1918.....	11,800	5900	5900	6850	+ 950
1919.....	12,800	6400	6400	6350	- 50
1920.....	17,500	8750	8750	4000	- 4750
1921.....	18,000	9000	9000	3750	- 5250
1922.....	17,000	8500	8500	4250	- 4250
1923.....	13,900	6950	6950	5800	- 1150
1924.....	12,750	6375	6375	6375	none
1925.....	12,750	6375	6375	6375	none

The best evidence obtainable indicates that the present owner-operators in Minnesota have been owners for an average of 15 years, and that only about 22 per cent of them became owners for the first time during the high prices from 1919 to 1923. Those who bought one farm and sold another when prices were at these high levels can be treated as if they were holding the same farm, unless the new farm was larger than the old one; and the adverse effects of exchange of the latter kind in these three years is more than offset by the gains made from similar exchanges during all the rest of the years. A reasonable estimate of the average gain from increase in land values that would have been made under the assumed conditions, is \$2300, or \$95 per year.

The total of \$220, consisting of \$120 of additional increase in buildings inventory, \$50 of increase in land inventory due only to improvements, and \$50 for increase in livestock and equipment inventory, should be added to the \$580, making a total of \$800 which the city family must put aside as savings or investments to keep up with the farm family, if they are to be as well provided for in the future as these 50 successful farm families.

Table IV brings together all the foregoing estimates of city equivalents of the real incomes received by these 50 successful farm families. A city family, in order to live as well and be as well provided for in the future as these 50 farm families, would need an annual income of approximately \$4300.

Remember, the authors do not say that these 50 farm families and city families with annual incomes of \$4300 would be living equally well. All they say is that so far as the items in the table are concerned, they

Farmers of the type of the 50 covered in the survey have made more than twice this amount of gain from this source, let us say, \$200.

The above is a purely supposed case. Farmers, as a matter of fact, make improvements on their farms, pay off their mortgages, build up their herds of livestock, etc. The gains made by an actual sample of Minnesota farmers from increase in inventory, in land, buildings, livestock, and machinery, in this case including the effect of rise of prices as worked out above, and from payments on principal of mortgages, are as in Table A. The assets at each period represent the value of all property then owned by the farmers. In interpreting the table, the reader must remember that the farmers in each purchase-period group are a different set of farmers. Those who bought in 1921-24 were more well-to-do than those who bought in 1919-20. What we are interested in is the gain made by each group of farmers. On this basis, even those purchasing in 1919-20 have lost no money. Their gains in other inventory and payments on mortgages since purchase have more than offset the effect of the decline in land values. The average gain made by these farmers from all sources is \$485 per year. This indicates that the estimate of \$220 for increase in inventory from other than rise in prices, plus about \$200 for gain from rise in prices, is entirely reasonable. The period indicated in Table A is 10 years longer than that considered above.

TABLE A
GAINS MADE BY 176 FARMERS PURCHASING FARMS IN SIX COMMUNITIES IN MINNESOTA AT
VARIOUS PERIODS BETWEEN 1881 AND 1925*

	1881- 1890	1891- 1900	1901- 1910	1911- 1915	1916- 1918	1919- 1920	1921- 1924
Assets at purchase.....	\$ 3,114	\$ 3,118	\$ 6,669	\$ 7,438	\$13,329	\$12,240	\$12,662
Indebtedness then.....	2,225	2,000	3,500	2,625	6,600	4,550	5,550
Equity then.....	889	1,118	3,169	4,813	6,729	7,690	7,112
Assets, 1924.....	17,512	16,270	17,805	13,561	19,155	12,340	13,020
Indebtedness, 1924....	1,600	540	2,800	2,800	5,750	4,550	5,450
Equity, 1924.....	15,912	15,730	15,005	10,761	13,405	7,790	7,570
Amount gain.....	15,023	14,612	11,836	5,948	6,676	100	458
Average gain per year..	375	487	592	495	834	20	229
Percentage gain or loss	1,689	1,307	373	124	99	1+	6

* Survey made by B. M. Gile, Division of Agricultural Economics, University of Minnesota.

It is highly probable that further gains from rises in land values will be made in the future, but since there is no certainty of it, no allowance is made for it in the above calculations.

would be living equally well. There may still be special advantages of the city and the country which can not be measured, and which might add greatly to, or subtract greatly from, the \$4300 in Table IV.

TABLE IV
LIVING OF 50 SUCCESSFUL MINNESOTA FARM FAMILIES EXPRESSED IN CITY EQUIVALENTS

Items	Cost of city equivalent
Cash spent on farm family living.....	\$1231
Rent of house.....	900
Food furnished by farm.....	456
Fuel furnished by farm.....	50
Extra cost of water, light, gas, and telephone in city.....	100
Extra cost of clothing in city.....	325
Automobile and garage.....	300
Car fare—extra item needed in city.....	130
Provision for future.....	800
Total	\$4292

INCOMES OF CITY GROUPS

The salaries of Minneapolis public school teachers are as follows:⁶

Grade teachers	\$1200 to \$2500
Grade principals	2200 to 3800
High-school teachers	1500 to 2500
High-school principals	3000 to 5000

The question will be at once asked, How do these teachers live so well as they appear to with such incomes? The first answer is that most of the grade teachers and even high-school teachers are unmarried and have no families to support. The rest have postponed marrying in many cases until promoted to higher-ranking positions; also many of them have no children or only one or two in place of three allowed for in Dr. Meeker's figures.⁷ Some of them have other sources of income.

It is equally interesting to consider the incomes of the staff of teachers of the University of Minnesota. The median salaries, according to rank for full-time members of the instructional staff in the College of Science, Literature, and the Arts are:

Instructors	\$1975
Assistant professors	2850
Associate professors	3550
Professors	4375

Those in the lower-income levels, unless they have outside sources of income, as many do, get along either by postponing marriage, or by

⁶ Furnished by the courtesy of the Minneapolis Board of Education.

⁷ For evidence of this decline in size of families among certain urban families, see P. A. Sorokin, "Social mobility," Chapter XX. Harpers, 1927.

having small families or none at all, and by reduced expenditures.⁸ Young farmers usually wait at least till they become tenants before getting married. (The average age of marrying of 102 farmers' sons in the 1925 study was 24 years.)

EFFECT OF LARGER FARM INCOMES

If these 50 farmers were to have larger incomes next year than last, the evidence given in Figure 2 goes to show that most of it would go into larger payments on mortgages and investments, and only a small part of it into better living. If the higher incomes were to continue, however, living would presently improve considerably. This conclusion is based on Figure 2, which shows how the expenditures for other than farm operating expenses of 157 farm families in 1924, divided as cash receipts, increased in amount. Proportionately, the investment expenditures increase much more rapidly than those for living.

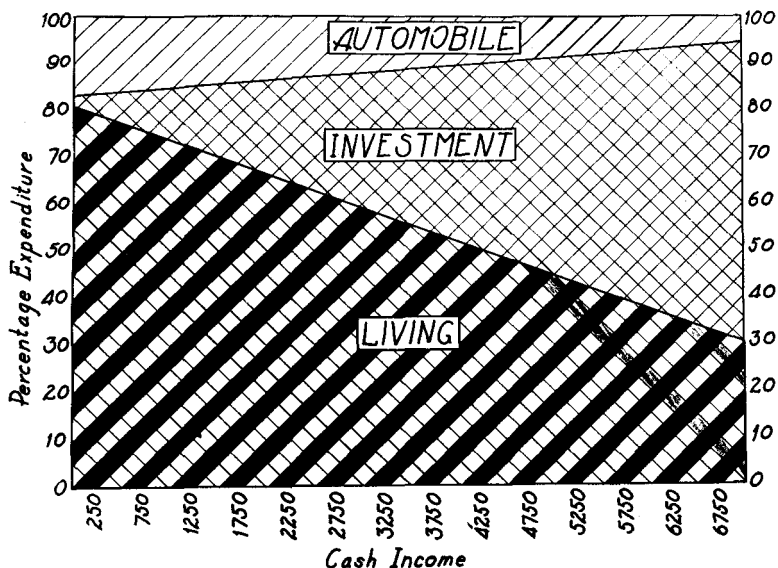


Fig. 2. How the Percentage of Expenditures for Other than Farm Purposes Is Divided as Their Amount Changes

PROGRESS RECORDS

Table V shows that two-thirds of the farms operated by these 50 families were mortgaged, but for only about one-third of their value, on the average. As they are relatively large farms (about 65 acres above the state average, and 16 per cent above the state average in value per acre, the mortgages, averaging \$7266 per mortgaged farm,

⁸ See Piexotto, "Getting and spending at the professional standard of living," for a study of a similar group of college professors.

are not important. The equity of these 50 families in their farms averaged \$16,004. This is at the end of five years of severe agricultural depression, and in spite of the fact that a number of these farmers had bought land at the high prices of 1919, 1920, and 1921. The average age of these 50 farmers was 49.5 years.

The interest on the \$4796 of average mortgage indebtedness per farm is approximately \$264. Table I shows \$319 of interest paid, the remaining \$55 being interest on short-time loans. These 50 families carry an average of about \$750 of short-time loans at present. This may be unusually high, reflecting the disastrous years just before.

Table I also showed average payments of \$277 on the principal. This is at the rate of \$420 for the farms mortgaged. Each new payment on the principal reduces the interest and leaves more to go toward the principal. Even at the rate of payments in these unprosperous years, less than 13 years will be required to pay off the mortgages on the amortization plan.

One is likely to think, in looking over a group of farm families such as these 50, that economic inheritance has probably been largely responsible for their present well-being. Unfortunately, records on this point were obtained from only a few of the last areas studied, but these areas include 15 of the 50 farm families. It is the judgment of the field men that conditions in the areas where these 15 families are living are practically the same as in the remaining areas, so that the 15 can be taken as a fairly good sample on this point. Five of the 15 had inherited land, but in most of these cases there were obligations against it, or the son had helped his father purchase the land while he was still working at home. The amounts inherited represented 29 per cent of the present equities of these 5 families, and only 8 per cent of present equities of the 15 families.

TABLE V
AVERAGE FARM EQUITIES OF THE 50 SUCCESSFUL OWNER FAMILIES

Acres in farm operated	225
Value of land owned.....	\$20,800
Average amount of mortgage against land owned.....	\$4,796
Average equity in land owned.....	\$16,004
Per cent of all farms mortgaged.....	66
Average amount of mortgages for farms mortgaged.....	\$7,266
Ratio of mortgage debt to value of mortgaged land.....	35

Thus economic inheritance had not played a very large part in the progress of these 15 families. Nearly all had actually climbed the agricultural ladder. All but one of the 15 were sons of owner farmers, and he was the son of an English bailiff, or farm manager. Thirteen had worked on their father's farms in the United States for an average of 7.5 years. Only four had ever been laborers on farms other than

their father's. Three had followed other occupations, one as a farm manager for 8 years, another as a railway engineer for 5 years, and the third as a teacher for 12 years. Ten had become farm tenants at an average age of 23.2 years. They had become owner-operators all the way from 21 to 35 years of age, the average being 27.5 years. The average size of the first farms they owned was 112 acres. We have no evidence as to the relative significance of native ability or training or environment in the success of these farmers. An important element was their experience as farmers' sons on the home farm or working out. The greater number of them achieved success before the age of 45. After achieving success, according to the records they gave, they worked fewer hours and spent more time in leisure and recreation. They may have worked harder and denied themselves more comforts in the earlier years of their progress than do most city families of today. But this is not proved.

The net value of all property (both real and personal) owned by these 15 farm families in 1926 varied from \$14,000 to \$77,000, the average being more than \$30,000.

THE CHILDREN OF THESE 50 FAMILIES

These 50 families had 186 children, an average of 3.72 per family. Half of the mothers of these families were still of child-bearing age. Of these 186 children, 40 had left home and were engaged in the following occupations: farming 21, professions 8, retailing 1, skilled labor 7, unskilled labor 3. The last 3 are still young and may rise to a higher occupational group. This shows, in the first place, a strong percentage remaining farmers, which is a sign of the liking which the family has for agriculture; in the second place, that the others have been given a good start in life.⁹

The average education of all who had finished school was about 11 years, or an equivalent of 3 years of high school. The average education of the parents was about 8 years. Of the children no longer in school, 16 had attended college, 44 high school, and 20 grade school only. Only 4 of the 100 parents had received any college education and only 29 others had attended high schools.

It is also interesting to note that there were 25 girls 18 years of age or over still at home on these 50 farms, as compared with 18 boys of this age or over. This is to be compared with 2 boys and 1 girl on the 357 farms. This disproportion of the sexes on farms arises out of the tendency for poorer farm families to keep the sons at home because they contribute to the family income, and for the daughters

⁹ See Carle C. Zimmerman, "The migration to towns and cities." *Am. Jour. Sociology*, July and September, 1927, for comparative data on migration.

to marry early or migrate to town and cities for work.¹⁰ These families were keeping the girls at home to help with the housework.

COMMUNITY ACTIVITIES

The heads of these households were members and officers in lodges, co-operative associations, farm bureaus, and political organizations to a greater extent than in the usual families. Several were crop reporters for the state and the United States Department of Agriculture. Many of the families belonged to town social organizations to a greater extent than average farm families. The data which show this are not given here.

COMPARISON WITH AVERAGE FAMILIES

Comparing the expenditures of these 50 families with the average expenditures of 157 families studied, as in Table VI, will bring out some interesting differences. The expenditures for family living, \$206, or 25 per cent higher; those for automobile, \$53, or 20 per cent higher; those for investment (including interest) \$320, or 55 per cent higher; and those for farm expenses, \$964, or 90 per cent higher. It took \$964 more of expenditure on the farm business to increase the cash receipts \$1543. A large part of this was spent for feeder cattle, in several areas.

TABLE VI
EXPENDITURES OF 50 SUCCESSFUL FARM FAMILIES COMPARED WITH THE AVERAGE
OF 157 IN 1924*

	Average of 157 in 1924	Average of 50 in 1925	Difference in favor of suc- cessful families
Family living	\$1025	\$1231	+ \$ 206
Farm expenses	1066	2030	+ 964
Investment	579	899	+ 320
Automobile	212	265	+ 53
Total	\$2882	\$4425	+ \$1543

* Average size of family for the 157 families was 2 parents and 2.72 children. The adult-equivalent size of the family was 4.25.

Table VII shows the percentage difference between the same two groups in expenditures for the different items in family living. It is in advancement expenditures, house furnishings, etc., and food that the largest percentage differences occur.

¹⁰ *Ibid.*

TABLE VII
EXPENDITURES FOR VARIOUS ITEMS OF FAMILY LIVING OF THE VARIOUS SUCCESSFUL
FAMILIES COMPARED WITH THE AVERAGE OF 157 FAMILIES IN 1924*

Items	Average of 157 in 1925	Average of 50 in 1925 and 1926	Difference	
			Actual	Percentage
Food	\$324	\$344	+ \$ 20	+ 6.2
Clothing	231	272	+ 41	+ 17.7
House furnishings, operation, and fuel	150	249	+ 99	+ 66.0
Health	79	69	- 10	- 12.3
Advancement	108	227	+ 119	+ 110.0
Personal	47	70	+ 23	+ 14.8
Total	\$939*	\$1231	+ \$292	+ 31.2

* New houses and expensive alterations are omitted from this group to make the figures comparable with those for the successful families.

COMPARISON WITH 30 FAMILIES LIVING LESS WELL

As the field men went from farm to farm, they came upon families who appeared to be prosperous but did not live as well as their neighbors of the same general income status. The records of 30 of these were analyzed separately to see what the facts were with respect to their living. Examination showed that their cash receipts were \$900 less than the average for the 50 successful families. Out of their \$2100 of receipts over and above farm expenditures, more than \$800 had gone to pay off debts and interest and other investments. Living expenditures were \$406 less than for the 50 families. The items that were cut most severely in the family living budget were: Advancement, reduced from \$227 to \$80; clothing, from \$272 to \$197; and food, reduced from \$344 to \$271. The largest reduction in advancement expenditures was in the amounts spent for education of the children. More of the food came from the farms. Automobile expenditures were actually \$32 higher. About a fourth of these families had central heating plants; a fourth, central lighting; three-fifths, water systems or kitchen pumps; one-half, drains; and three-fourths, washing machines. The furniture and the housekeeping seemed to be more deficient than anything else. The children through school had been given an eighth-grade education on the average, which was nearly two years more than the parents had received.

That these families were in reasonable circumstances is evidenced by the fact that their equities were \$13,000 as compared with \$16,000 for the group of 50. Economic differences apparently accounted for only a part of the poorer living.

SOURCE OF INCOME OF THE 50 FAMILIES

While this study does not deal particularly with how the incomes of these families were produced, some light is thrown on the problem studied by examining the sources of cash receipts. Table VIII gives this distribution. The "all other" consists mostly of potatoes, truck, and outside labor. Poultry is included with "other livestock." The "dairy herd" receipts include receipts for sale of veal calves, old cows, etc.

TABLE VIII
AVERAGE CASH RECEIPTS BY SOURCES FOR 50 SUCCESSFUL FARM FAMILIES

Sources	Total receipts	Per cent of total
Average total receipts.....	\$4546	100.0
Grain	531	11.7
Dairy herd	1211	26.6
Other livestock	1914	42.1
All other	890	19.6

Next, the 50 farms are put in four groups as in Tables IX and X. It appears in Table IX that the successful grain farmers, to judge from receipts, have the most even balance of production of any group. The successful dairy, livestock, and potato and truck farmers seem to be rather highly specialized. This suggests that there is a good deal to learn about the proper amount of diversification and specialization in agriculture. This and other studies indicate that successful farmers in the United States select a single line of production for their major emphasis, but even more carefully dovetail other lines of production with it.

TABLE IX
PERCENTAGE DISTRIBUTION OF SOURCES OF CASH RECEIPTS OF DIFFERENT GROUPS OF SUCCESSFUL FARM FAMILIES

Sources of cash receipts	Grain farmers	Dairy farmers	Livestock	Potato and truck
Grain	31.2	7.2	5.1	1.9
Dairy herd.....	20.6	53.2	12.7	21.8
Other livestock	30.5	31.3	68.4	1.6
All other	27.7	8.3	13.8	74.7
Total	100.0	100.0	100.0	100.0

TABLE X
AVERAGE DISTRIBUTION OF EXPENDITURES BY DIFFERENT TYPES OF SUCCESSFUL FARM FAMILIES

Expenditures	Grain	Dairy	Other livestock	Potato and truck
Living	\$1149	\$1403	\$1181	\$1120
Farm	2013	1673	2787	1091
Investment	1013	855	902	220
Auto	228	311	220	333
Total	\$4403	\$4242	\$5090	\$2764

Table X explains Table IX. The "other livestock" farmers have larger cash receipts than the others because of large expenditures for feeder cattle. The dairy farmers are spending the most on family living and next to most on automobiles. The grain and "other livestock" farmers have the heaviest debts and are paying most as interest and principal of mortgages.

THE 15 SUCCESSFUL TENANT FAMILIES

The 15 farm families in the tenant group were selected because they were living well and at the same time were accumulating machinery and livestock and saving money for the farms they hoped to purchase in the future. An analysis of the pertinent facts concerning these tenant families is found in Table XI. They are spending a smaller proportion of their cash receipts for living and other expenses than the owner families. Their farms are 25 acres smaller than those of the owner families, which explains to some extent the smaller farm expenditures. Some of it is due to the fact that they were buying fewer feeder cattle. More of it was due to savings in interest, taxes, and building upkeep. The interest bill represents an average short-term indebtedness of about \$1625 as an average throughout the year. They thus save \$217 on interest as compared with the owner families. Their taxes were \$200 less; and there was a saving of \$30 on building upkeep. They were spending considerably more for farm machinery than the owner families. The investment item for these tenants includes new livestock and payments on equipment purchased.

Most of the reduction in family living expenditures is due to the fact that the families are smaller, 2.47 children as compared with 3.72 for the owner families. This shows consistently in the food, clothing, and advancement items.

TABLE XI
CASH RECEIPTS AND EXPENDITURES OF 15 SUCCESSFUL TENANT FAMILIES COMPARED WITH
THOSE OF THE 50 SUCCESSFUL OWNER FAMILIES*

	15 Tenants	50 Owners
Cash receipts	\$3830	\$4556
Cash expenditures	3746	4425
Family living	909	1231
Farm (excluding rent).....	1306	2030
Rent (cash only)	417	.....
Interest	98	319
Principal of mortgage.....	.....	277
Other investment	650	226
Life insurance	46	77
Automobile	319	265
Food	265	344
Clothing	228	272
House furnishings, etc. (including fuel).....	188	249
Health	60	69
Advancement	103	2227
Personal	65	70

* The tenant families were smaller. In adult-equivalents their families were 3.2 and their households were 3.8.

So far as household equipment—furniture, washing machines, etc.—is concerned, the tenant houses were almost as well supplied as the owner homes. Only about two-thirds as many of the houses are provided with furnaces and lighting and water systems as of the owner homes. Many of the tenant houses had been occupied by owner families only a few years before.

The general conclusion is that these successful tenant families were living only a little less well than the successful owner families. It is apparent that farm tenancy in itself, or the fact of climbing the agricultural ladder, need not be a bar to successful living on the farm. These farmers are climbing the agricultural ladder and at the same time living well and making a contribution to their communities and to the civilization of which they are a part. No young man should hold back from training himself for farming because he has not the necessary wherewith to buy a farm when leaving college. It will be highly advantageous for him, in most cases, to operate as a tenant for a few years until he finds out the kind of farm he is suited to and acquires some actual management experience. The buying of a farm should in most cases be postponed until the family has definitely made up its mind where it wishes to make its permanent home.

HOW THESE 65 FAMILIES COMPARE WITH THE NORMAL

The reader will want to know how the 65 families compare with the normal in income. Table XII shows the number of farm families out of 488 whose cash receipts were at different levels.¹¹ The average was \$2741 and most of them were between \$1200 and \$3300. The lower income families have much smaller farm expenditures, as indicated in Table XI. This is due to smaller farms and to a more restricted scale of operation as well as to reduced expenditures for new machinery and buildings, upkeep, and improvements.

How these remaining farm expenditures are distributed is suggested by Figure 2. The payments on principal and other investment expenditures are cut down most. Automobile expense is also reduced, but not greatly. The reduction of approximately \$350 below the average in their living expenditures comes out of advancement expenditures most of all, then clothing, and then house furnishings. They have less variety in their food and on the whole depend more on such farm-produced foods as potatoes, pork, poultry, and vegetables. Some, however, depend altogether too much upon the grocery store, which is one of the reasons for their continuing economic distress.

¹¹ Cash receipts for 1924 were not obtained for 200 of the families studied.

TABLE XII
 VARIATION IN CASH RECEIPTS OF 488 MINNESOTA FARM FAMILIES IN 1924 AND 1925

Cash receipts group	Number	Average income for group	Average farm expenditures	Average remainder
500 or less	16	\$ 349	\$ 529	-\$ 180*
501-1000.....	33	863	427	436
1001-1500.....	80	1292	560	732
1501-2000.....	80	1802	734	1068
2001-2500.....	69	2264	890	1374
2501-3000.....	55	2819	1231	1588
3001-3500.....	46	3263	1393	1870
3501-4000.....	28	3774	1623	2151
4001-4500.....	18	4276	1634	2642
4501-5000.....	16	4534	1977	2557
5001-5500.....	13	5308	1928	3380
5501-6000.....	8	5715	2992	2723
6001-6500.....	3	6307	2304	4003
6501 and over.....	23	8551	4404	4147
Average.....	488	\$2741	\$1195	\$1546

* These families used up previous savings and in some cases went heavily into debt for living expenses.

Table XIII contains an estimate of the average cash receipts of Minnesota farmers, by years, since 1900. The averages for 1925 and 1926 are \$595 less than the average given in Table XII. A part of this is due to the fact that Table XII includes some items, such as children's wages, outside labor, and other outside income, not included in Table XIII.

It appears that the incomes in 1924 and 1925 are \$849 higher than those in 1913 and 1914. But if the increase in taxes, interest, and wages (due to higher farm wages) is taken out, as in the third column of the table, only \$628 more is left. If the \$1463 left in 1924-25 and the \$835 left in 1913-14 are adjusted to the same price level, that of 1925, using the Bureau of Labor Statistics Index of Wholesale Prices, the comparison is as \$1463 in 1924-25 is to \$1332 before the war. If a retail price index is substituted for the wholesale price index, the same comparison is as \$1463 is to \$1448.

This makes it plain that Minnesota farmers have very little more to buy with now than in 1913-14. Their living, however, is on an appreciable higher level, as shown by the number of automobiles, heating and lighting systems, and the like. With slightly larger real incomes, and much higher living expenditures, something has to suffer—it is mostly land and building improvements and payments on the principal of mortgages.

Of course, this does not give the relative condition of farmers compared with other social classes. The money wages of factory workers in the United States, according to data in the report of the

Federal Reserve Board, are now 3 per cent higher than in 1919-20, and their real wages (in purchasing power) are 16 per cent higher. The year 1926 was the best that corporations in the United States have ever had. Each year, of late, has shown a large increase in the number of million-dollar incomes.

TABLE XIII
AVERAGE CASH RECEIPTS LESS EXPENDITURES FOR TAXES, INTEREST, AND WAGES ON
MINNESOTA FARMS, BY YEARS, SINCE 1900*

Year	Average gross cash receipts	Taxes, interest, and wages	Remainder
1900.....	\$ 480	\$131	\$ 349
1901.....	703	140	563
1902.....	719	149	570
1903.....	715	159	556
1904.....	746	164	582
1905.....	712	172	540
1906.....	658	182	476
1907.....	905	191	714
1908.....	923	196	727
1909.....	905	204	701
1910.....	1062	218	844
1911.....	910	234	676
1912.....	1013	257	756
1913.....	1120	276	844
1914.....	1117	291	826
1915.....	1204	306	898
1916.....	1343	337	1006
1917.....	1795	372	1423
1918.....	2591	430	2160
1919.....	2483	470	2013
1920.....	2125	575	1550
1921.....	1273	489	784
1922.....	1406	480	926
1923.....	1555	481	1074
1924.....	1836	502	1334
1925.....	2100	507	1593
1926.....	2091	516	1575

* For the years 1900-09, these data are taken from the unpublished Master's thesis of Bryan Smith (Minnesota). The rest of the table is from the unpublished Doctor's thesis of A. G. Black (Minnesota). These are computed from census data and are probably underestimates.

It is believed that the situation just described is a more or less temporary one. As to how long a period will be required before farm families' real incomes will be raised to a level more in keeping with urban incomes, no one knows, and judgments differ considerably. Except for the setbacks of unfavorable years, there may be a gradual improvement, and future years may see very pronounced improvement. Young people choosing their life occupations should look into the future and consider what line of work will offer them the best opportunities at that time. This is a most important circumstance to be considered by young men and women in choosing between agriculture and city occupations. But these data really show that even if there is no change for the better, many young men, especially those who are properly trained, may live and are living successful lives as farmers.