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Lowry Nelson

*University of Minnesota, St. Paul*

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## Social Science Section

### SELECTIVITY OF MIGRATION FROM MINNESOTA FARMS

LOWRY NELSON

*University of Minnesota, St. Paul*

#### ABSTRACT

The volume of migration from farms in the United States has been one of the remarkable population trends of the last quarter of a century. In spite of the steady increase in the Nation's population, the number of persons on farms has been declining. The farm population reached the lowest point in perhaps half a century during the years of World War II. As of 1947, the farm population is still less by some 3 million than it was in 1940, although there has been some recovery from the low point of 1945. This trend has been made possible by the rapid introduction of labor-saving devices and other improvements into agriculture. The result of these technological changes is that fewer human beings are required to produce the food for an expanding urban-industrial population. Meantime, the birth rate of people residing on farms continues to be larger than that of the cities; and larger than is needed for replacement.<sup>1</sup>

As this migration continues from year to year the question of its selectivity in terms of qualities and characteristics of migrants becomes increasingly significant. This is true because the reduced numbers on farms must be sufficiently competent to operate the highly mechanized agricultural plant to the end that food production will not only be maintained but continuously increased.

What is presently known about the characteristics of the migrants from Minnesota farms? The two factors on which we know the migration to be selective are sex and age. How do we know this? There are two main sources of evidence immediately available, both from the United States Bureau of the Census; one is the general census of population, the other consists of the four special volumes on internal migration. The first source can be used to compare the farm population by age and sex composition with the other groups in the population, that is, the urban and rural non-farm groups. When such comparisons are made, the selectivity as to age and sex becomes apparent.

<sup>1</sup> George W. Hill and Douglas G. Marshall have found, however, that on the basis of the living population in the better farming areas, the number of males reaching age 20 will be barely sufficient in 1960 to replace those reaching the age of 60. See their paper "Reproduction and Replacement of Farm Population and Agricultural Policy," *Journal of Farm Economics*, vol. 29, no. 2, May, 1947.

First, to consider age characteristics. The farm population has a higher proportion of people under 15 and smaller proportion of people from 15 to 60 than the other two groups. The differences can only be the consequence of migration. The large proportion of people in the middle ages in the urban population is the result of migration into the cities. The pyramid of total population reveals a general cone-shape, whereas the city population is more like a beehive. The inference is clear therefore that the city is receiving migrants from the town and country who are predominantly in the youthful ages.

The differences in age composition of the three segments of Minnesota's population are readily seen by computing the ratios of various age groups in the respective areas. (Table 1.)

TABLE 1  
NUMBER OF PERSONS PER 1000 POPULATION IN THREE AGE GROUPS, RURAL AND URBAN, MINNESOTA, 1940

Age	State	Urban	Rural Nonfarm	Rural Farm
Under 20	339	300	343	397
20-64	585	624	559	539
65 and over	76	76	98	64

Source: 16th U.S. Census, *Population*, Vol. IV.

In what may be considered the working ages (20-64) the city has a marked advantage over the country. It is better supplied than the rural nonfarm, while the latter shows superiority over the farm group. Meanwhile, the farm has larger numbers of children to care for, although its proportion of aged is lower than either the urban or rural nonfarm. In this age group (65 and over) the villages show high proportions, because of the well-known pattern of in-migration of retired farmers.

The age-selective effect of migration from farms is further shown by data from the special report of the census on Internal Migration. The data are based upon the replies to a question in the 1940 census as to the location of individuals in 1935. In Minnesota, for example, there were 48,328 males and 38,922 females in the farm population in 1940 who had moved since 1935. Some of them were urban in 1935, others lived in rural nonfarm areas, some came from other farms, and still others came from other states and foreign countries. We are also able to determine from these data the number and characteristics (age, sex, education, and occupation) of the persons who lived on farms in 1935, but were in a new location in 1940.

The numbers of rural farm migrants and nonmigrants and their place of living in 1940 are shown in Table 2. The age characteristics of rural farm migrants compared with nonmigrants is shown in Table 3.

TABLE 2  
PERSONS LIVING ON FARMS IN 1940 BY MIGRATION STATUS AND SEX,  
RURAL AND URBAN, MINNESOTA

Migration Status	Total		Male		Female	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Total .....	905,440	100.0	500,065	100.0	405,375	100.0
Nonmigrants ....	808,743	89.3	446,236	89.2	362,507	89.4
Migrants .....	87,820	9.6	48,328	9.7	38,922	9.6
Immigrants .....	679	0.1	384	0.1	295	0.1
Migration Status Not Reported .	8,768	1.0	5,117	1.0	3,651	0.9
Total .....	87,250	100.0	48,328	100.0	38,922	100.0
Urban, 1935 .....	12,634	14.5	6,661	13.8	5,973	15.3
Rural Nonfarm, 1935 .....	5,792	6.6	2,960	6.1	2,832	7.3
Rural Farm, 1935.	34,921	40.0	19,360	40.1	15,561	40.0
Rural, No Report on Farm or Nonfarm, 1935 .....	3,828	4.4	2,043	4.2	1,785	4.6
No Report on Urban or Rural, 1935..	259	0.3	135	0.3	124	0.3
From Contiguous States .....	22,523	25.8	12,843	26.6	9,680	24.9
From Noncontiguous States .....	7,293	8.4	4,326	9.0	2,967	7.6

Source: 16th Census. *Population: Internal Migration 1935 to 1940, Social Characteristics of Migrants*. pp. 150-151.

TABLE 3  
AGE COMPOSITION BY PER CENT OF RURAL FARM MIGRANTS COMPARED WITH  
NONMIGRANTS BY SEX, 1940, MINNESOTA

Age	Total		Male		Female	
	Migrants	Nonmigrants	Migrants	Nonmigrants	Migrants	Nonmigrants
Total	100.0	100.0	100.0	100.0	100.0	100.0
5-13	17.2	21.1	17.4	20.6	16.9	23.2
14-17	7.6	9.0	7.4	8.8	7.8	9.2
18-19	6.1	5.0	4.4	4.7	7.8	5.2
20-24	17.3	13.3	13.9	12.5	20.8	14.3
25-29	12.2	10.8	12.3	10.5	12.1	11.3
30-34	8.4	8.9	9.4	9.2	7.5	8.3
35-44	11.9	13.4	13.3	13.8	10.6	12.9
45-54	8.9	9.7	10.1	10.3	7.7	8.9
55-64	5.6	5.3	6.3	6.1	4.9	4.3
65 and over	4.7	3.0	5.4	3.5	4.0	2.4

The differences in the age composition indicate the age selectivity of farm to city migration. The inferences from the table are these:

1. Migrants from Minnesota farms during the period were, as

compared with nonmigrants, predominantly in the age groups from 18 to 30 and 55 and over; that is, in the younger working ages and in the retirement period of life.

2. The patterns for women and men migrants differ slightly. Women tend to leave at earlier ages than the men, beginning with ages 18-19, whereas the men migrants show larger proportions with nonmigrants first in the group 20-24. Moreover the differences between proportions between migrants and nonmigrants are greater for women. For example, in the age group 20-24 there are 20.8 per cent of female migrants compared with 14.3 per cent of the nonmigrants, a difference of over 6 points. In the case of the males in the same ages the corresponding figures are 13.9 and 12.5, a difference of only one and a half points.

#### SEX SELECTIVITY OF MIGRATION

There are significant differences in the proportions of males and females who leave the farm. Again this can be shown by reference to differing proportions of the sexes in the urban and rural sections as shown by the federal census. The simplest way to make this comparison is by means of the sex ratio, the number of males per 100 females. In Minnesota the ratios for the three population groups 15 years old and over in 1940 were: urban, 92; rural nonfarm, 103; rural farm, 132. For the total population of these ages, the ratio was 105 men per 100 women. The differences are due to migration in which the farm population loses women disproportionately and the cities get them. The ratio in the villages is about the same as that for the total population.

It is well to point out also that in its great excess of men Minnesota's farm population ranks among the highest in the nation being exceeded only by Nevada, Montana, Wyoming, California and North Dakota. That this disproportion of the sexes in farm and city influences marriage rates is clear from the fact that in rural farm areas where there is an excess of men only 50.6 per cent of them were married, compared with 65.7 per cent of the women. In the urban population where men are relatively scarce, 60 per cent of them were married contrasted with only 55 per cent of the women.

To put the situation in another way, there were 72,272 more single men than single women 20-49 years of age in the state as a whole, but 65,035 of the total, or 90 per cent were on farms. That the situation is "worsening" is indicated by comparison with 1930, when only 78 per cent of the excess unmarried men were on farms. The extraordinary condition in Minnesota can be seen by comparison with the United States figures. For the nation as a whole, the per cent of the excess males which was rural farm in 1940 was only 40.2, and in 1930 only 32.3.

The sex ratios by age also indicates age selectivity. In Table 4

are the ratios for rural farm and urban groups in Minnesota as of 1940.

Turning briefly to the data from the special report on internal migration, we find that for each 100 females 14 years of age and

TABLE 4  
SEX RATIOS BY AGE GROUPS FOR URBAN AND RURAL FARM POPULATIONS,  
MINNESOTA

Age	SEX RATIOS	
	Urban	Rural Farm
Under 5	106.1	104.5
5-9	103.6	105.5
10-14	101.8	107.0
15-19	92.6	118.4
20-24	82.1	146.5
25-29	86.8	135.0
30-34	89.4	127.1
35-39	88.6	123.4
40-44	92.3	122.7
45-49	97.8	126.6
50-54	102.8	131.4
55-59	105.1	134.6
60-64	98.3	142.4
65-69	93.0	153.1
70-74	93.2	165.3
75 and over	89.5	143.7
Total .....	94.4	123.4

over who left Minnesota farms between 1935 and 1940 for the urban centers there were only 72 males. Only four states had a higher proportion of women migrants: Mississippi, Nebraska, Wisconsin and North Dakota. Of those who left farms for rural villages there were 92 males per 100 females; and again there were only four states with lower sex ratios. This time the states were Rhode Island, Mississippi, Iowa and North Dakota. (See Table 5.)

It is quite clear, therefore, that cityward migration is selective on the basis of age and sex.

#### MIGRATION AND EDUCATION

In general, persons with high education or better are more mobile than those with less schooling. Migrants from rural farm areas compared with nonmigrants showed the following differences: of the male migrants 25-34 years of age 28.7 per cent had high school or more education, compared with 23.7 per cent for nonmigrants of the same age group. For females, the corresponding figures were 50.7 and 41.4 per cent.

Moreover, migrants differ in education according to their destination, whether urban or rural. In general, the larger the place to which farm migrants go, the higher the level of formal schooling.

TABLE 5

SEX RATIOS OF MIGRANTS 14 YEARS OLD AND OVER FROM RURAL FARM TO URBAN AND TO RURAL AREAS BY RANK OF STATES, 1935-1940

STATE	SEX RATIO AND RANK					
	Urban 1940		Rural Non Farm 1940		Rural Farm 1940	
	Ratio	Rank	Ratio	Rank	Ratio	Rank
Alabama	87	20	109	19	108	46
Arizona	97	9	116	10	137	14
Arkansas	83	33	100	33	115	35
California	118	1	158	1	187	2
Colorado	99	6	120	5	129	19
Connecticut	97	10	119	7	150	7
Delaware	88	18	119	8	143	10
Florida	93	14	125	4	122	28
Georgia	82	34	107	22	108	44
Idaho	83	32	110	18	126	22
Illinois	77	38	105	26	123	25
Indiana	86	24	100	37	117	33
Iowa	76	40	87	47	122	26
Kansas	77	39	94	42	114	40
Kentucky	85	27	106	24	114	37
Louisiana	77	37	105	27	113	41
Maine	75	41	97	39	114	39
Maryland	93	13	113	13	124	23
Massachusetts	102	5	107	21	144	8
Michigan	91	15	110	17	132	18
Minnesota	72	44	92	44	129	21
Mississippi	72	45	90	46	106	47
Missouri	78	36	100	34	118	30
Montana	84	30	114	12	161	4
Nebraska	70	46	93	43	120	29
Nevada	114	2	138	2	239	1
New Hampshire	94	12	102	31	133	17
New Jersey	102	4	119	9	159	5
New Mexico	87	21	111	16	129	20
New York	89	17	111	15	139	11
North Carolina	81	35	107	20	110	43
North Dakota	61	48	86	48	117	34
Ohio	86	25	104	29	123	24
Oklahoma	87	22	106	23	117	32
Oregon	86	26	116	11	138	12
Pennsylvania	84	31	100	35	134	16
Rhode Island	97	8	92	45	167	3
South Carolina	73	42	101	32	108	45
South Dakota	73	43	96	40	122	27
Tennessee	86	23	95	41	112	42
Texas	98	7	106	25	117	31
Utah	84	29	103	30	105	48
Vermont	91	16	97	38	135	15
Virginia	84	28	111	14	114	36
Washington	97	11	132	3	143	9
West Virginia	88	19	104	28	114	38
Wisconsin	70	47	100	36	138	13
Wyoming	105	3	120	6	154	6

The migrants who went to the Twin Cities, for example, had the largest percentage with high education or more; those listed as "urban" (which would include Twin Cities) ranked next; those who went to villages next, and those who went to other farm areas were lowest. (See Table 6.)

TABLE 6

PERCENTAGES OF MIGRANTS FROM MINNESOTA RURAL FARM POPULATION, 1935-1940, WITH HIGH SCHOOL EDUCATION OR BETTER, ACCORDING TO DESTINATION, BY SEX<sup>1</sup>

Destination of Farm Migrants	All Migrants 25-34		With High School or Better			
			Male		Female	
	Male	Female	No.	Per Cent	No.	Per Cent
Twin Cities .....	1,330	1,378	698	52.5	903	65.5
All Urban .....	1,827	1,787	787	43.1	1,067	59.7
Rural Nonfarm .....	1,191	1,154	412	34.6	623	54.0
Rural Farm .....	3,800	3,049	742	19.8	1,241	40.7

Source: 16th Census, *Internal Migration 1935-40; Social Characteristics of Migrants*, pp. 150-151; 247.

The generalization holds true for both males and females, although the disparity in the percentages for rural farm and the large center destinations is greater in the case of the males. Males who left farms for other farms during the period rated especially low on education with only 19.8 per cent with education beyond the 8th grade. The corresponding figure for female farm-to-farm migrants was 40.7. On the other hand, over half the males and about two-thirds of the females who left farms for the Twin Cities were educated beyond the 8th grade. The marked disparity between males and females is also apparent.<sup>2</sup>

It is interesting to compare also the rural farm migrants who came to Twin Cities during this period with those originating in other urban or in rural nonfarm areas. (See Table 7.)

For some unknown reason migrants into Minneapolis were relatively better educated than those who came to St. Paul; but the differences were not great, although consistent for all sources of migrants.

Distance of migration in relation to education can be measured roughly from the census data by comparing migrants "within the state," with those who went to contiguous and noncontiguous

<sup>1</sup> Migrants to Twin Cities includes those from out-of-state; all others are from within Minnesota.

<sup>2</sup> For further information on this point see Lowry Nelson, "Education of the Farm Population in Minnesota," *Minnesota Agricultural Experiment Station Bulletin 377*; and Milo Peterson and Douglas Marshall, "Are Minnesota's Farm Youth in School," University of Minnesota Bureau of Educational Research and Agricultural Experiment Station, 1947. (mimeo.)



states. In this comparison those who went to noncontiguous states ranked highest with the intra-state migrants next. (See Table 8.)

There remains one other item which deserves attention in this brief treatment of migration in Minnesota, and that is the educational characteristics of those who moved from urban and rural

TABLE 7

INMIGRANTS TO THE TWIN CITIES 1935-1940, BY RURAL-URBAN ORIGIN, BY SEX, AND PROPORTIONS WITH HIGH SCHOOL EDUCATION OR BETTER<sup>1</sup>

ORIGIN	Per Cent with High School Education or Better					
	Twin Cities		St. Paul		Minneapolis	
	Male	Female	Male	Female	Male	Female
Other Urban .....	85.4	87.1	83.9	85.1	86.2	88.1
Rural Nonfarm ...	76.4	83.4	74.2	81.4	77.4	84.3
Rural Farm .....	52.5	57.4	46.9	60.1	55.1	66.4

TABLE 8

MIGRANTS FROM MINNESOTA FARMS ACCORDING TO DISTANCE OF MIGRATION AND PERCENTAGE WITH HIGH SCHOOL EDUCATION OR BETTER BY SEX

DESTINATION	Per Cent with High School Education or More	
	Male	Female
Within Minnesota .....	43.1	59.7
Contiguous States .....	35.7	57.5
Noncontiguous States .....	43.4	61.7

Source: *Internal Migration, 1935-1940*. Bureau of the Census.

TABLE 9

COMPARATIVE EDUCATION OF OUT- AND INMIGRANTS FROM AND TO MINNESOTA'S FARM POPULATION BY URBAN AND RURAL NONFARM, 1935-40, BY SEX

SEX	Per Cent of Farm Migrants with High School or More Education			
	Urban		Rural Nonfarm	
	To	From	To	From
Male .....	43.1	46.1	34.6	40.0
Female .....	59.7	63.2	54.0	59.6

nonfarm areas into the farm population. It is clear from the data submitted that migrants from the farms are generally better educated than those who remain. But, it must be remembered that there is a back flow of migrants from cities, towns and villages to farms which partially offsets the farm to city movement. For example, there were 3,018 males and 2,941 females 25-34 years of age

<sup>1</sup> All migrants, including out-of-state.

living in towns and cities of Minnesota in 1940, who were on farms in 1935. But there were 1,716 males and 2,247 females who were on farms in 1940 who were in towns and cities in 1935. There was a net loss in numbers to the farm population in this exchange, but it is important to know how their education compares with those who left the farms. On the whole the difference is not great, but return migrants seem slightly better educated than those who left. (See Table 9.)

Although the towns and cities get the better educated persons from the farm population, they return somewhat better than they get. However, they returned only slightly more than half as many as they received in this age group.

#### SUMMARY

Migration from Minnesota's farm population is selective in terms of age, sex, and education. Women are inclined to migrate at earlier ages than do the men—over half of the women who go to towns and cities are 14 to 24 years of age, while only one-third of the men are in this group.

There is little difference between the ages of male and female migrants who moved from one farm to another during the period under consideration. The sex ratio of the farm population in 1940 by age groups also reveals this age-sex selectivity. The ratio for the group 20-24 was 146. Minnesota, with a sex ratio of 132 for all farm persons 15 years old or over in 1940, suffers an extraordinary loss of women through migration. It is outranked in this respect by only five other states.

In terms of education the farm population tends to lose in greater proportion those with high school education or better. The metropolitan areas and the noncontiguous states seem to get those with most schooling, while migrants to smaller centers rank somewhat lower. Migrants from farm to farm, particularly the males, have markedly less education than those who go to towns, and cities.

However, the country gets back from towns and cities migrants with slightly higher average education, but only a little more than half as many as came from farms.

#### CONCLUSION

The patterns of migration in Minnesota are extraordinary from the standpoint of sex selectivity. There are few states where women leave the farms in such numbers. Moreover, because of the relatively low rank of Minnesota's farm population in regard to education beyond the 8th grade, the exodus of such large proportions of those with higher education tends to increase the educational disparity between city and country—a disparity which can be narrowed only by heroic efforts to improve attendance of farm boys and girls at high school, if not at college.