PATTERNS OF FARMING AMONG THE AMISH

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Merton D. Oyler

Departmental Series
A.E. 326

Department of Agricultural Economics and Rural Sociology

Ohio State University

January, 1963

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The last stronghold of the pre-mechanized family-sized farm in Ohio is seen in Amish communities. The 1961 Mennonite Yearbook lists a total of 6,657 Old Order Amish members in Ohio. Estimating 2.5 church members per family would give about 2,500 families or farms. (See Appendix). This total is more farms than were reported for all of Holmes County in the 1959 U.S. Census of Agriculture; it is nearly two percent of the 140,353 Ohio farms as of 1959. These Amish farms include a considerable investment of land, equipment and manpower. They are grouped in tightly knit communities in areas seldom encroached on by the metropolitan sprawl.

A previous report in this series described the "Patterns of Belief Among the Amish".[3] For the present study, an intensive analysis of a local small sample is extended to two counties by use of U.S. Census data for selected townships.

[1]This study was financed by research funds in the Department of Agricultural Economics and Rural Sociology, as a part of the general University budget. Many staff members furnished data, suggestions and assistance. The unpublished township data from the U.S. Census of Agriculture are part of this department's library data, purchased each decade from the U.S. Bureau of the Census.

[2]This study was designed jointly by the author and by Robert H. Blosser, Associate Professor of Farm Management, Ohio Agricultural Experiment Station. The latter made the 1937-41 study and conferred on each step of the subsequent data-collecting and analysis.

[3]Merton D. Oyler, <u>Patterns of Belief Among the Amish</u>, Mimeo. Bulletin No. A.E. 293, Department of Agricultural Economics and Rural Sociology, July, 1958.

The Coshocton-Holmes Watershed Study

For the five-year period 1937-41, 66 farms were surveyed by a representative of the College of Agriculture. These same 66 farms were re-surveyed in 1958 to determine changes in crop yields, livestock numbers and extent of adoption of improved farm practices. (Table 1)

The 66 farms were classified into three distinct groups. The first group included 13 farms that were operated by Amish farmers in 1938-41 and continued through 1958. The second group included 37 farms that were operated by Non-Amish farmers in 1938-41 and continued through 1958. The other group included 16 farms that were operated by Non-Amish farmers in 1938-41 and were subsequently purchased by Amish farmers who operated them in 1958 (Recent-Amish).

Corn. Yields per acre increased approximately 50 percent in the 20-year period on all three groups of farms. Fewer farmers were growing corn in 1957, a decline of one-fourth of the farmers during the 20-year period. Countywide estimates for the 20-year period show similar trends in reduced acreage and increased yields.

Oats. Yields per acre increased approximately 50 percent in the 20-year period on all three groups of farms. In 1957 fewer of the Non-Amish farmers and more of the Recent-Amish were growing oats. County-wide estimates for both counties show a decline in acreage and an increase in yield for 1957, compared with the 1937-40 acreage.

Wheat. Yields per acre increased approximately 30 percent in the 20-year period. The Non-Amish started with lower yields in 1937-41, but achieved a nearly 30 percent increase for 1957. All Recent-Amish farmers and all but one Amish farmer were growing wheat in 1957. The Non-Amish farmers had a decline of nearly one-fifth in the number growing wheat in 1957.

TABLE I. A COMPARISON OF THREE GROUPS OF FARMS

IN THE COSHOCTON-HOLMES WATERSHED

		Amish-group Amish continuously N = 13				Non-Amish-group Non-Amish continuously N = 37				Recent-Amish-group Non-Amish to Amish N = 16			
		1938-41		1958		1938-41		1958		1938-41		1958	
		No.	Amt.*	No.	Amt.*	No.	Amt.*	No.	Amt.*	No.	Amt.*	No.	Amt.*
1. Corn yield	bu.	13	41.0	11	60.0	37	46.8	28	75.0	16	41.1	10	63.4
2. Oats yield	bu.	13	34.0	13	52.7	30	34.3	23	50.0	12	33.8	16	52.5
3. Wheat yield	bu.	13	22.6	12	28.7	37	19.4	30	25.0	15	20.7	15	25.0
4. Alfalfa yield	Tons.	9	2.29	8	2.0	14	1.56	24	2.25	2	2.38	13	2.66
5. Clover-Timothy Hay	Tons.	13	1.25	10	2.0	37	1.3	24	2.0	14	1.41	12	2.0
6. Dairy cows	No.	13	7.0	13	10.0	37	6.4	31	9.0	14	5.6	16	8.0
7. Brood sows	No.	13	2.4	13	4.0	35	1.8	23	5.0	12	2.0	13	3.0
8. Pigs raised per sow 12 mo.	No.	13	13.6	13	10.0	33	12.0	23	11.25	12	14.7	13	9.0
9. Ewes in Flock	No.	8	6.44	6	8.0	32	24.9	18	29.5	9	24.0	5	12.0
10. Hens	No.	13	133.0	13	200.0	37	110.0	31	150.0	15	73.3	16	262.5
11. lbs. milk produced per cow				11	8,000			25	6,000			16	6,640

* These are medians for the entire range of producers. The average of the data for each of the five years 1938-41 was arrayed to obtain the median.

Alfalfa. The Non-Amish had a 70 percent increase in the number growing alfalfa for hay and nearly a 50 percent increase in yield per acre. The Recent-Amish changed from only two farmers in 1937-41 to 13 in 1957, who were growing alfalfa hay. Their yields increased slightly and were higher than those of the other two groups. The Amish declined very slightly (from 9 to 8) in number of growers and in yield per acre (from 2.3 to 2.0 Tons).

Clover-Timothy Hay. In each of the three groups there was a decrease in the number of growers of this kind of hay, but an increase in yield per acre of from 40 to 60 percent among the three groups.

Total Hay Production. The Non-Amish group shifted production from clover-timothy to alfalfa hay. The Amish made little change. Most of the Recent-Amish farmers moved into alfalfa production and retained their production of clover-timothy hay.

Total Grain Production. Yields increased for each of the three grain crops among all three groups of farmers. Decline in number of growers was very slight for Amish. Decline and increase were off-setting in Recent-Amish-Group oats, growers replacing corn growers. Marked decline in the number of growers of all three grain crops occurred among Non-Amish. In this group the increase in yields offset the decrease in number of growers, so that their total production of grain probably did not decline in this Group. Total production actually increased in the Amish Groups.

Dairy Cows. All the Amish farms had dairy cows and they increased almost 3 cows per herd in the 20-year period. In the Non-Amish Group the decline in the number of dairy farmers from 37 to 31 was more than offset by increase in size of herds for those remaining. The Recent-Amish group increased in both number and size of herd (from 14 to 16 herds and from 5.6 to 8.0 in median size).

Half the Non-Amish farmers were using artificial insemination. None of the others were using this service.

Brood Sows. All of the 13 farmers in the Amish Group remained in hog production and the median number of sows increased from 2.4 to 4. The Recent-Amish Group had fewer sows, but increased their median numbers in similar proportion (from 2 to 3), and their number of producing farmers from 12 to 13.

The number of Non-Amish farmers producing hogs declined drastically from 35 to 23, but the number of brood sows in the group increased more than enough to offset the number of growers (from 1.8 to 5.0 in median number of sows). This resulted in an 80 percent increase in total number of brood sows (from 64 to 115).

All three groups reported a slight decline in number of pigs raised per sow.

Ewes in Flock. In each group of farms the decline in number of sheep farmers was not quite offset by increase in median size of herd. The Recent-Amish group had a drastic decline in sheep (from 9 to 5 in number of flocks and from 24 to 12 in median size of flock).

Laying Hens. All three groups had an increase in size of laying flocks. All farmers in Amish and Non-Amish Groups kept laying flocks. The Amish Group increased their number of hens 50 percent. Recent-Amish Group increased their hens over three-fold to the largest size of flocks. The Non-Amish Group had a decline of 17 percent in number of flocks and a much more than offsetting increase in size of flock, which resulted in a net increase of 14 percent in combined number of laying hens for this group.

Horses and Tractors. All the Amish and Recent-Amish are horse farmers, with a median of four horses each. Almost all the Non-Amish farmers are depending on tractor power.

<u>Strip Cropping</u>. The proportion of farmers who practiced strip cropping in 1957 was nearly double among Non-Amish and Recent-Amish compared with the Amish. The Non-Amish had slightly fewer acres strip-cropped per farm, but they had twice the number of acres in permanent pasture per farm.

<u>Type of Farming</u>. The Amish and Recent-Amish were mainly dairy, hog, and poultry farmers. Only one Amish farmer hired labor in addition to the family; three farmers in the Recent-Amish Group hired additional labor.

Non-Amish farmers cropped less intensively. They changed from row-crops to pasture. More than two-fifths of them raised beef cattle. Approximately one-half of the Amish and Recent-Amish farmers raised sheep, but their flocks averaged two to three times as large.

<u>Work off the Farm</u>. Nine of the 13 Amish farm families worked only on their farms while 4 farm families totalled 78 months work off the farm. In the Recent-Amish group of 16 farms, nine families worked only on their farms while seven families totalled 84 months of work off their farm. The Non-Amish group of 37 reported 20 families worked only on their farms and 17 families had 81 months of work off their farms.

The three groups of farms therefore had similar extent of work off the farm, proportional to the number of farms in each group.

<u>Summary</u>. The 13 Amish farmers who operated their farms continuously over the 20-year period up to 1958 differed markedly when compared with their Non-Amish neighbors. They practiced more intensive types of farming, with horse power rather than tractor power. None of them used artificial insemination, as did half of their neighbors who were dairy farmers. They less fully practiced contour strip cropping, but those Amish who purchased their present farms within the 20-year period more nearly approached their Non-Amish neighbors in extent of contour strip cropping, possibly because they purchased farms with the

strips already in use. The Non-Amish were farming less intensively and their increased pasture acreage reduced the importance of strip-cropping as a soil-saving practice.

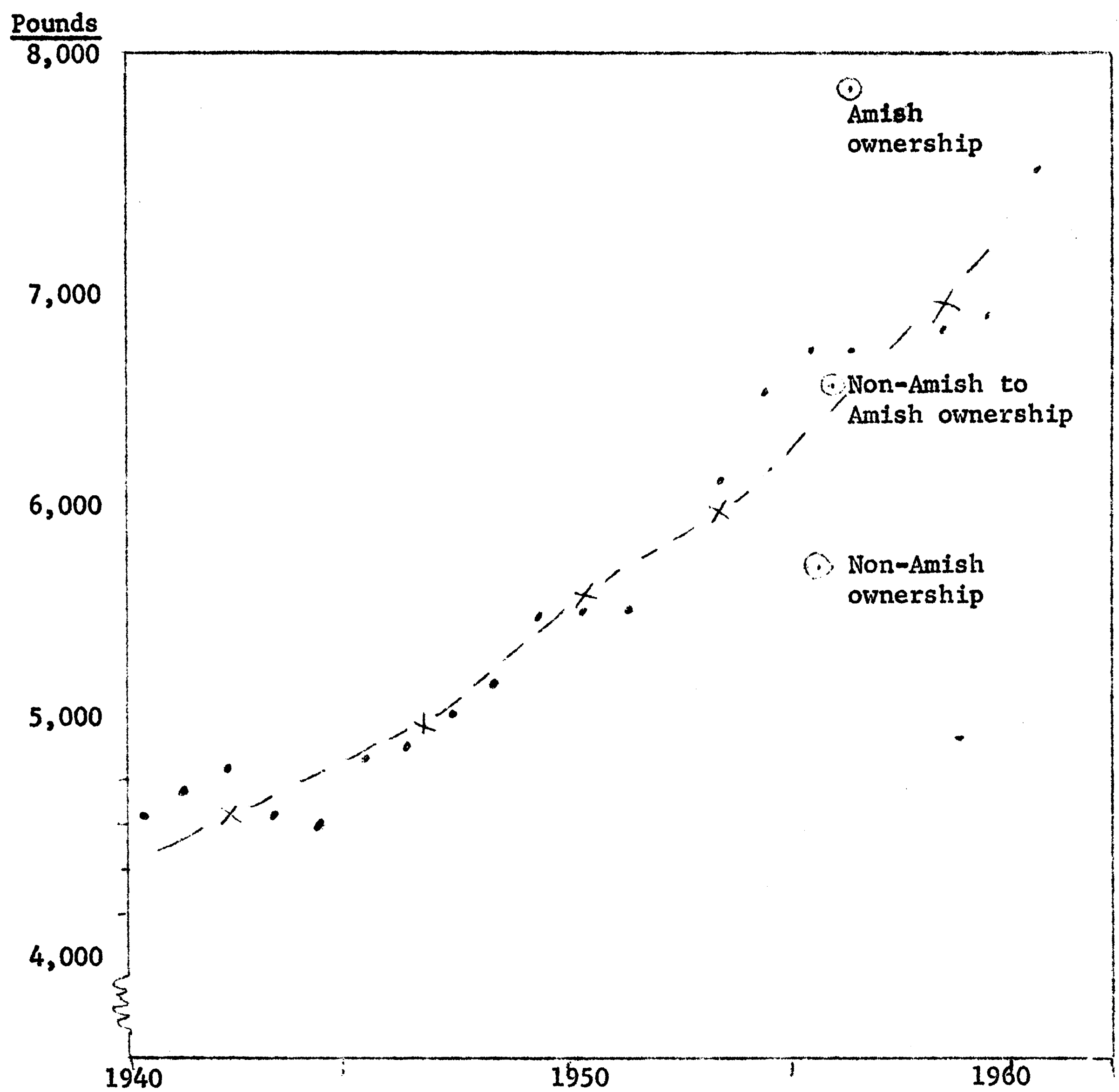
Comments. The Amish are buying farms in this watershed area on the periphery of the Holmes County Amish area. It is hilly land and is less suitable for intensive farming than is the area in which they were born. Their desire to own their land is inducing these purchasers to intensify the present use of this land. There is no evidence that horse-farming is at a disadvantage in contrast to tractor farming on farms having a surplus of unpaid family labor. The avoidance of artificial insemination may in the near future be a handicap, especially on family-sized farms, unless they obtain some advantage through kin-group cooperative bull-rings for up-grading of their herds. The Ohio milk production per cow has increased 48 percent from 1940-44 to 1956-60. If the Amish are to share in this technological gain, they must find a way to up-grade their small-farm herds. Their milk production averaged higher in 1958 than that of their Non-Amish neighbors. Will they continue this lead in the face of their reliance on the herd-bull system?

Some Amish in Holmes County began to use artificial insemination in 1946. (See Appendix). The telephone company installed a public booth in the Amish area and now a few Amish farmers are telephoning in their requests for insemination service.

Township Census Data

Data from the United States Census of Agriculture were analyzed for selected townships of Holmes and Tuscarawas Counties to measure trends from 1940 to 1960. Two groupings of townships were made, to compare those having few or no Amish and those having concentrated Amish farms. (Appendix Table 2).

OHIO MILK PRODUCTION PER COW



Three samples from the Coshocton-Holmes Watershed Study

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During this 20-year period the number of farms increased eight percent in the concentrated Amish townships of Holmes County. In both counties the townships having few or no Amish farmers, the number of farms declined to 62 and 58 percent of the 1940 total.

Auburn township (the Amish area in Tuscarawas County) decreased the number of farms, 69% in 1960 compared to 1940. Why did the Tuscarawas Amish area show a decrease while the Holmes County Amish area had an increase?

When we examine the changes in enterprises within the farming systems of the two counties, we observe some trends. Holmes County was increasing its number of hogs and pigs during the 20-year period. The three Non-Amish townships increased to 183 percent in the number of hogs while the four concentrated Amish townships increased to 269 percent. Meanwhile, both kinds of townships in Tuscarawas County increased only to 141 and 130 percent of the 1940 census totals in the number of hogs and pigs. Corn and oats production increased generally in parallel with changes in swine production to provide the home-grown feed grains. Wheat production declined in all the selected townships of both counties, but the Holmes County Amish townships showed less decline than the one Amish township in Tuscarawas County and the Non-Amish in both counties.

In summary, the Holmes County Amish townships retained their number of farms, and the average size of farm therefore remained about the same. The farms increased their total grain production and used this increase to grow more than double the number of hogs and 59 percent more cattle and calves.

APPENDIX

	Amish concentration in townships of	
	Holmes County (a)	Tuscarawas County (b)
Densely Amish	Berlin Paint Salt Creek	Auburn Bucks Sugar Creek Wayne
Many Amish	Clark Hardy Prairie	
Few Amish	Killbuck Mechanic Monroe Ripley	Dover Franklin
No Amish	(All other townships)	

Sources of information:

(a) Nethers, John Lewis, B.Sc. in Ed., A Historical Study of the Amish People in the Holmes County Area of Ohio, M.A. Thesis, O.S.U., 1959, (Francis P. Weisenburger, Adviser)

(b) Information given by Lester Cronin, County Agricultural Agent of Tuscarawas County.

ESTIMATE OF AMISH FARMS IN OHIO. The Mennonite Yearbook lists local districts and their total membership. Continuing increases in members and unavoidable omissions of districts make the Ohio total of members too low. As an off-setting factor, many of the Amish members in Ohio are now farming, but are employed in non-farm occupations. Some younger Amish farmers have become transferred to Conservative and other Church-Amish sects not included in the Old Order. The children are listed as church members only after they reach the age of discretion. This ranges from age 16 to as high as age of marriage.

APPENDIX
TABLE 2.

Changes from 1940 to 1960 in number of farms, cattle and calves, hogs and pigs; bushels harvested of corn, wheat and oats - for selected townships of Holmes and Tuscarawas Counties, Ohio.

	Number of farms		Total number of				Bushels harvested					
			Cattle & calves		Hogs & pigs		Corn		Wheat		Oats	
	1940	1960	1940	1960	1940	1960	1940	1960	1940	1960	1940	1960
HOLMES COUNTY												
Townships having:												
Few or no Amish												
Mechanic	182	131	1,658	2,339	1,081	2,548	100,460	108,355	29,851	19,840	27,442	47,261
Killbuck & Richland	277	156	2,241	2,934	1,545	2,252	135,142	114,955	38,333	22,900	22,799	36,690
Total 3 Townships	459	287	3,899	5,273	2,626	4,800	235,602	223,310	68,184	42,740	50,241	83,951
1960 as % of 1940	62.5%		135.2%		182.7%		94.8%		62.7%		167.1%	
Concentrated Amish												
Walnut Creek	172	174	2,160	3,186	1,532	3,908	104,535	121,634	38,875	32,042	62,290	71,086
Berlin	160	186	2,066	3,410	1,736	4,598	114,398	150,483	45,712	39,117	66,395	87,322
Paint	176	190	2,044	3,140	1,389	4,621	112,229	144,674	38,653	40,097	68,455	92,081
Salt Creek	201	218	2,162	3,667	1,767	4,154	133,810	179,683	60,243	46,931	78,555	120,378
Total 4 Townships	709	768	8,432	13,403	6,424	17,281	464,972	596,474	183,483	158,187	275,695	370,867
1960 as % of 1940	108.3%		159.0%		269.0%		128.3%		86.2%		134.5%	
TUSCARAWAS COUNTY												
Few or no Amish:												
Jefferson & York	261	152	2,228	2,787	927	1,307	72,916	79,457	27,240	19,245	8,957	20,839
1960 aa % of 1940	58.2%		125.1%		141.0%		109.0%		70.6%		232.7%	
Concentrated Amish												
Auburn	303	210	3,511	4,726	2,361	3,069	127,572	121,729	52,018	33,999	57,064	54,673
1960 as % of 1940	69.3%		134.6%		130.0%		95.4%		65.4%		95.8%	

Supplement for Appendix:

Artificial Insemination. The Amish farmers in Ohio started using artificial insemination for dairy herds in 1948 when a private firm offered service for one dollar per call, instead of requiring a membership fee. This avoided the conflict that exists when "non-believers are yoked to believers", a strong principle among these people.

Consequently the two Ohio cooperatives expanded their services by a similar plan of participator fees for non-members. This use has been slowly but steadily increasing among the Ohio cooperative organizations for breeders.