

Table 1. Consumption of supplemental feed relative to harvested cropland area (cattle, swine [*Sus scrofa*], sheep [*Ovis aries*], and poultry), average yield of harvested crops (food grains and feed crops), and their ratio in the U.S. in 1920 and currently in the U.S., Ohio, and Holmes and Wayne Counties (Ohio).

Indicator	Current			U.S. 1994	U.S. 1920
	Holmes 1997	Wayne 1997	Ohio 1997		
	-----Mg CFU/ha ¹ -----				
Relative feed demand	8.8 ²	6.7 ²	1.9 ²	2.8 ³	0.9 ⁴
Average crop yield	4.3 ⁵	5.1 ⁵	5.5 ⁵	5.1 ³	1.5 ⁶
	-----unitless-----				
Ratio, feed/crops ⁷	2.0	1.3	0.35	0.55 ⁸	0.60 ⁹

More detailed calculation of reported numerical values in this table is at Web site, <http://www.landinstitute.org/texis/scripts/vnews/newspaper/+/ART/2000/08/10/3a3a508a9>.

¹ Corn-equivalent feed units (CFU) is the substitution value of feeds for corn (13.5% moisture), as determined in feeding trials. Crop weights were converted to CFU by factors reported as corn-equivalent weight per unit weight of crop (Hodges, 1964). Both indicators are averaged across the same land area, namely harvested crops (sum of food grains and feed crops).

² Crampton and Harris, 1969; USDA 1996a; USDA, 1999a.

³ USDA, 1996a.

⁴ Jennings, 1949; USBC, 1960; USDA, 1922.

⁵ USDA, 1999a.

⁶ USBC, 1960; USDA, 1922.

⁷ Since the two indicators have the same denominator, this is also a ratio of their numerators, namely supplemental feed consumption to harvested crop production for the entire location.

⁸ This proportion of harvested crops provides nearly two-thirds (0.67) of total feed consumption by these animals in the U.S., while grazing of pasture accounts for the other third (USDA, 1996a, p. I-47).

⁹ In agreement with a value of 0.58 for domestic use of cropland, from Anderson et al. (1957).

Table 2. Calculation of the proportion of cropland area devoted to supplemental feed for work and replacement stock in current Holmes County and in the U.S. during 1920 and now, the latter time conceivably including the 1920 national horse and mule population on farms.

	U.S. 1920	Holmes Co. 1997	U.S. 1994 with 1920 stock
Number of horses & mules per 100 ha of cropland	15 ¹	38 ²	16 ³
Crop productivity (Mg CFU ha ⁻¹) ⁴	1.5	4.3	5.1
Proportion of cropland for horse and mule feed	0.22 ⁵	0.19 ⁶	0.07 ⁷

More detailed calculation of reported numerical values in this table is at Web site, <http://www.landinstitute.org/texis/scripts/vnews/newspaper/+/ART/2000/08/10/3a3a508a9>.

¹ Anderson et al., 1957.

² Craumer, 1977; USDA, 1999a.

³ USDA, 1999b.

⁴ Table 1, corn-equivalent feed units per ha of harvested cropland.

⁵ Anderson et al., 1957.

⁶ (0.22)(38/15)(1.5/4.3).

⁷ (0.22)(16/15)(1.5/5.1).

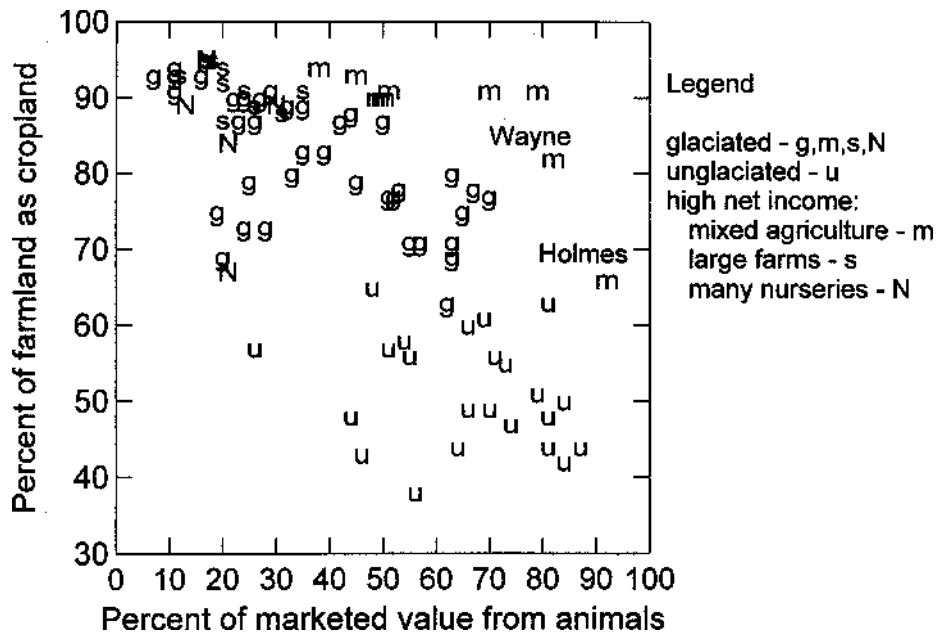


Figure 1. Some agricultural characteristics averaged over 1987, 1992, and 1997 for 86 Ohio counties including 3 groups of counties having net farm income of \$200 or more per ha of farmland (see results section and Fig. 4). Glaciated, half or more of the county land area, and unglaciated, little or none was glaciated.

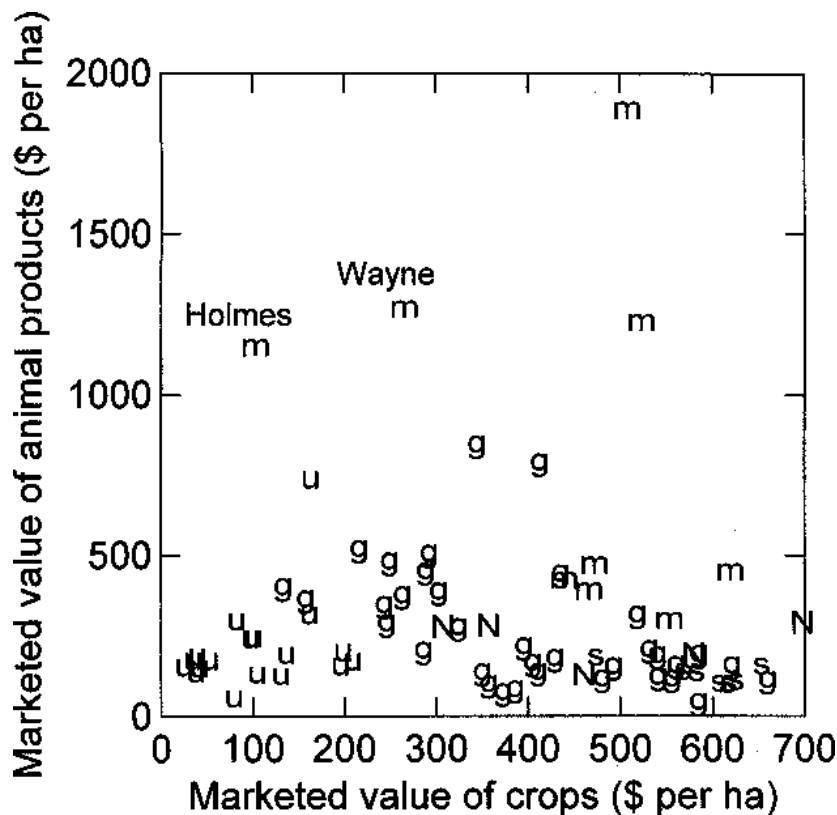


Figure 2. Marketed values of crops and animal products per ha of farmland (1997\$) averaged over 1992 and 1997 for 74 Ohio counties (symbols in Fig. 1). Because of withheld data on nursery and greenhouse products, these could not be separated from crops reported by the federal census for many counties in 1987 and 12 counties in 1992 and 1997.

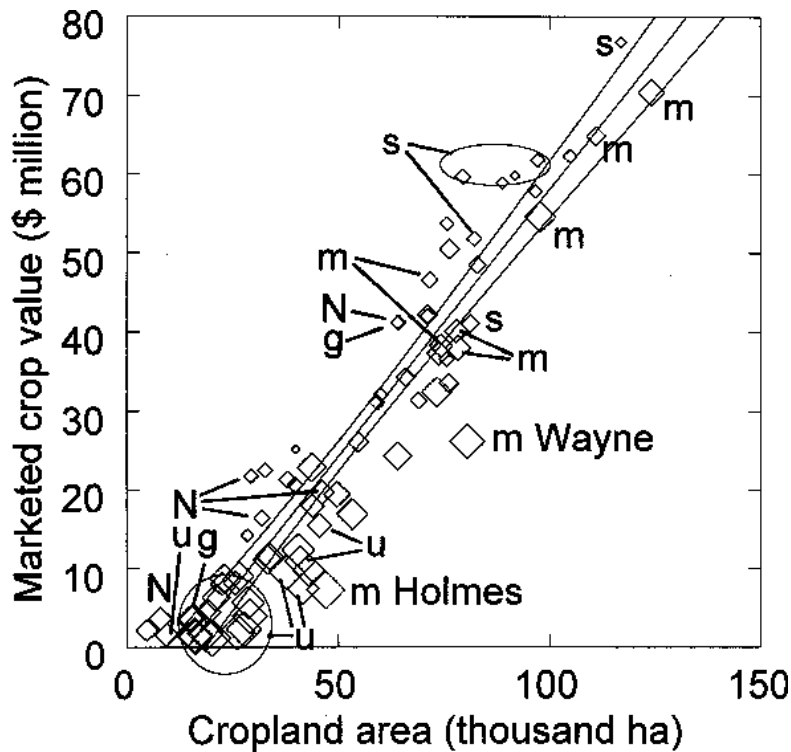


Figure 3. Linear regression (inner line; $r^2 = 0.89$) and 95% confidence bands (outer two curvilinear lines) for marketed crop value (1997\$) against cropland area averaged over 1992 and 1997 for 74 Ohio counties (withheld data noted in Fig. 2 and symbols as in Fig. 1 with unlabeled data points being symbol, g, although two of these points were labeled due to overlap). The area of each diamond represents the proportion of on-farm crop production fed directly to animals.

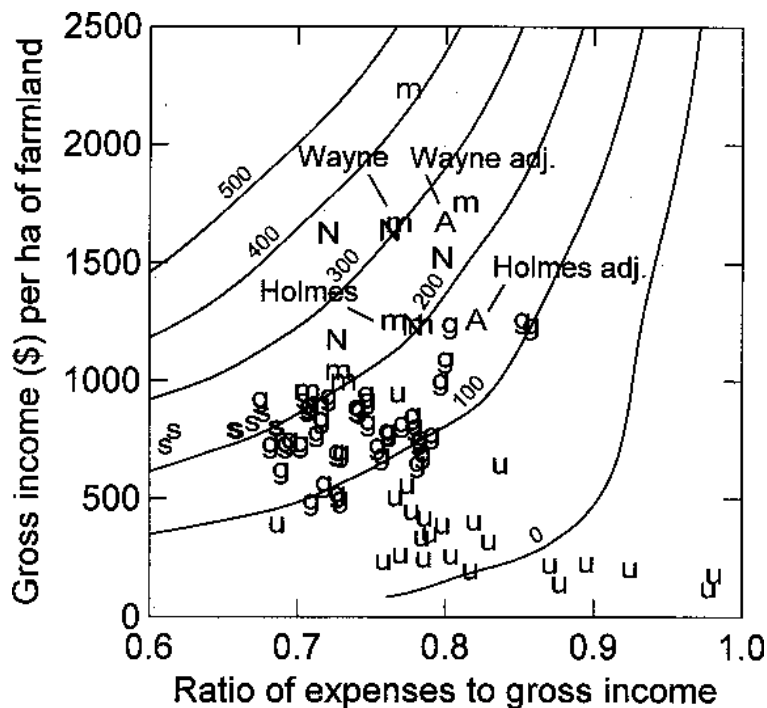


Figure 4. Net income per ha of farmland (contours) in relation to gross income and expense ratio averaged in 1997\$ over 1987, 1992, and 1997 for 86 Ohio counties (symbols in Fig. 1). Also, the adjusted (adj.) net income and expense ratio for a conventional charge applied to uncharged Amish farm labor in Holmes and Wayne Counties (symbol, A; see text).

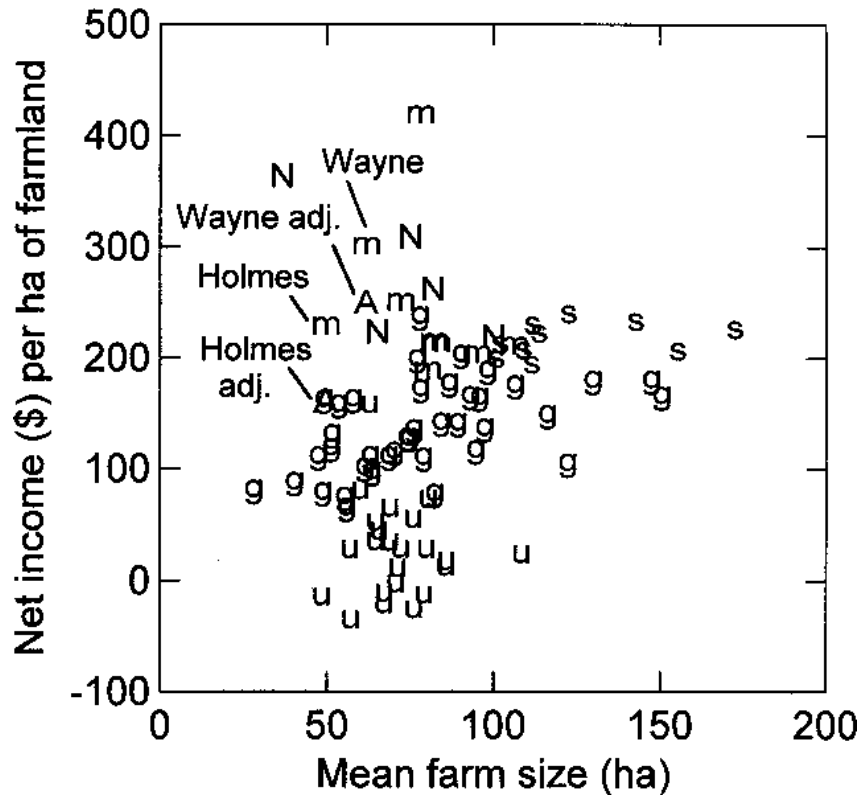


Figure 5. Net income per ha of farmland (1997\$) in relation to mean farm size averaged over 1987, 1992, and 1997 for 86 Ohio counties (symbols in Figs. 1 and 4).

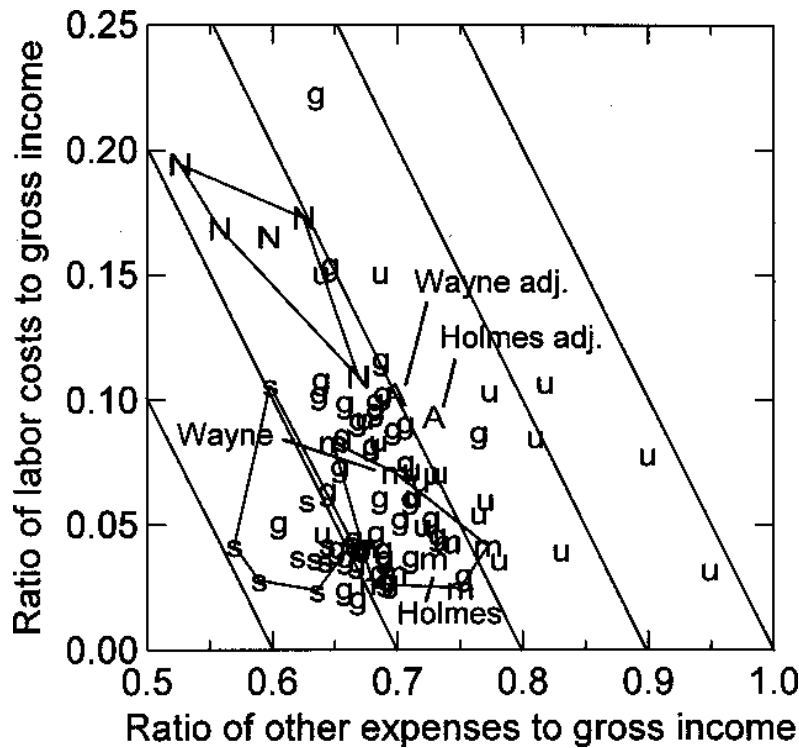


Figure 6. Farm expense ratio (contours) in relation to labor ratio and other expense ratio averaged in 1997\$ over 1987, 1992, and 1997 for 86 Ohio counties (symbols in Figs. 1 and 4). Since expenses equal labor costs plus other expenses, the values of the contour lines are the same as their x-intercepts where labor costs equal zero. Convex polygons surround the three agricultural groups of counties with net incomes of \$200 or more per ha of farmland.

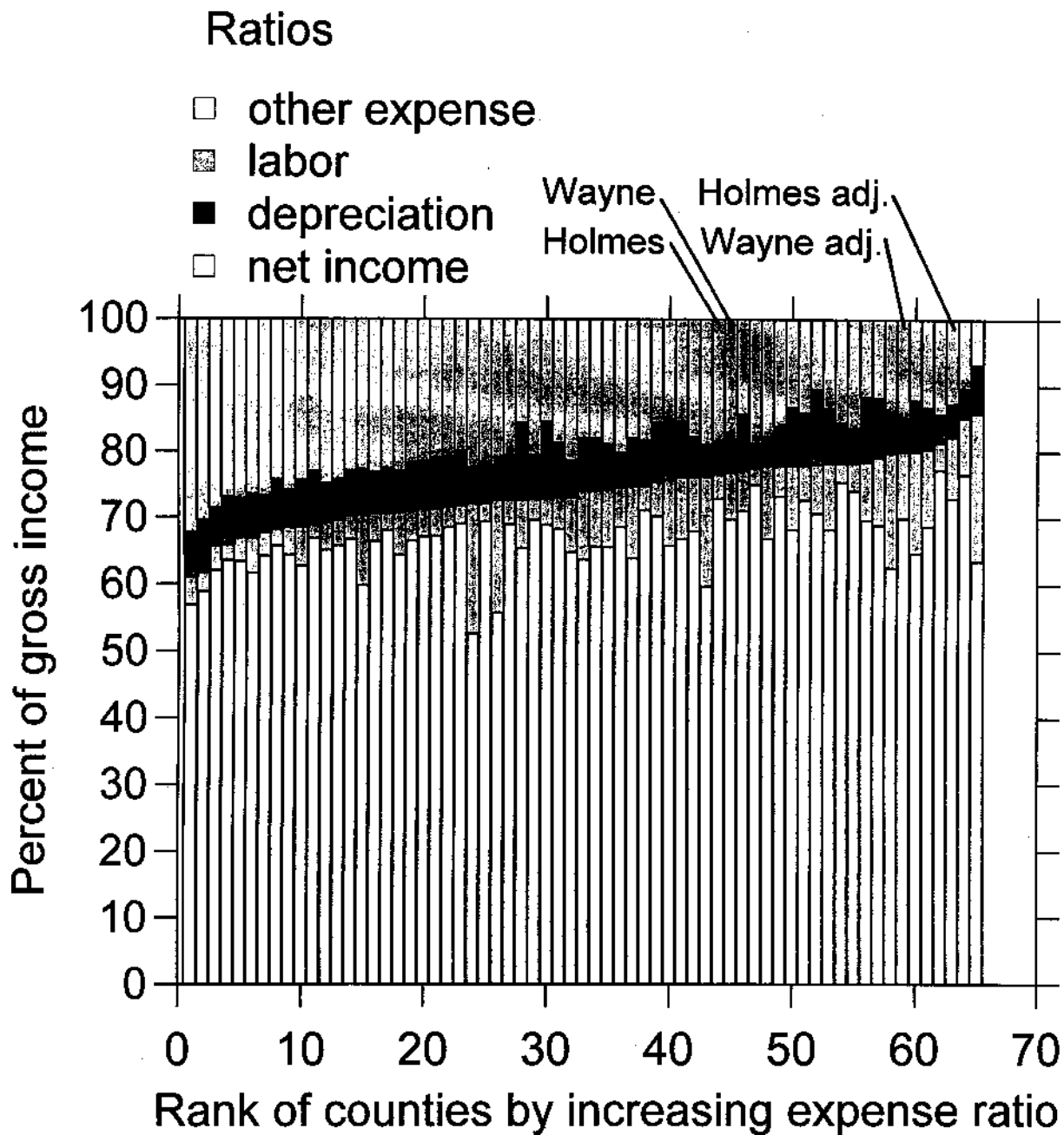


Figure 7. Farm financial efficiency measures averaged in 1997\$ over 1987, 1992, and 1997 for glaciated Ohio counties, showing the adjustment (adj.) in rank for a conventional charge applied to uncharged Amish farm labor in Holmes and Wayne Counties.

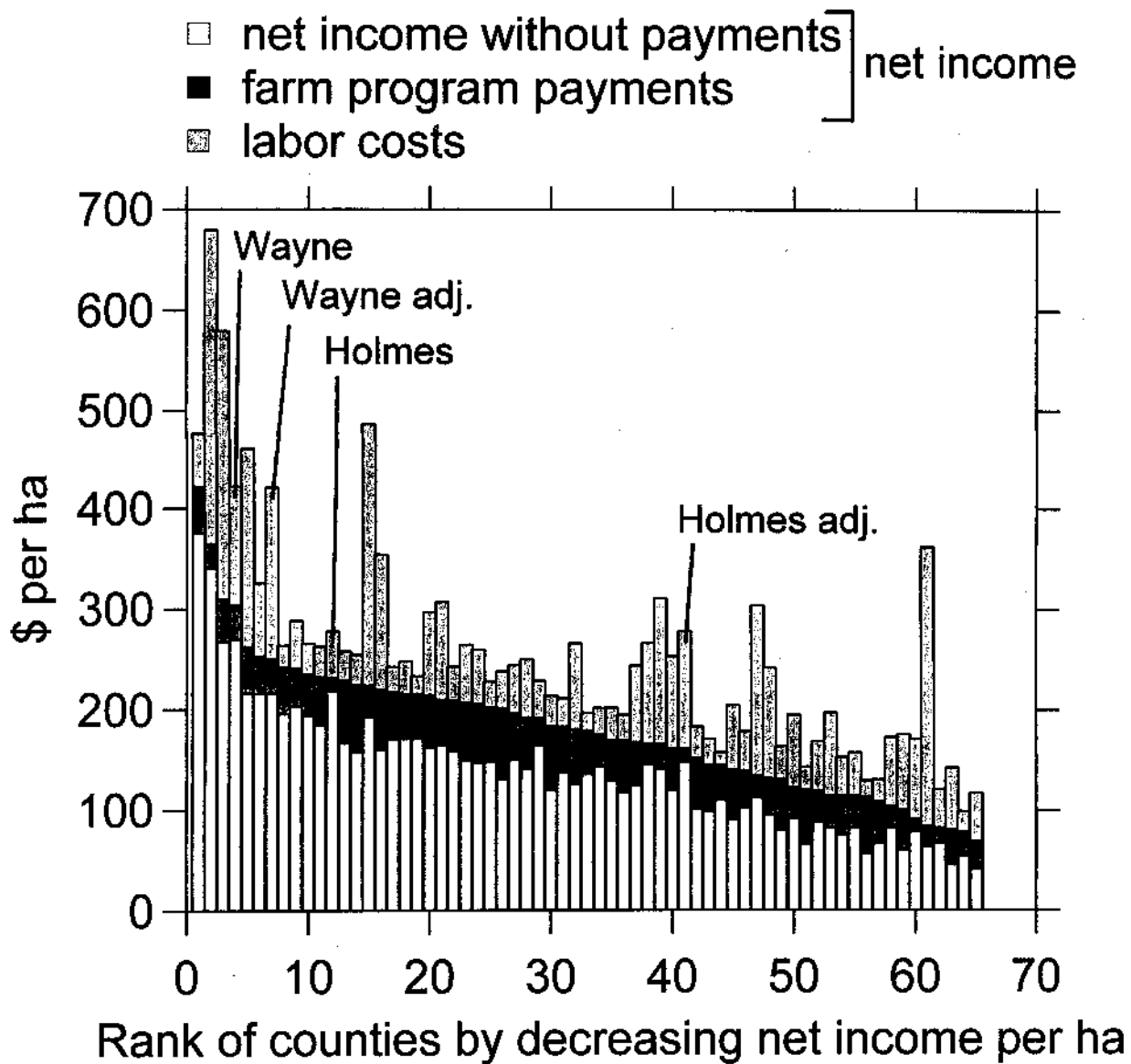


Figure 8. Net farm income and labor expense (1997\$) averaged over 1987, 1992, and 1997 for glaciated Ohio counties, showing the adjustment (adj.) in rank for a conventional charge applied to uncharged Amish farm labor in Holmes and Wayne Counties.