

Ohio Crop Production and Enterprise Benchmarking for 2022

Xiaoyi Fang, Ani L. Katchova, and Clint Schroeder

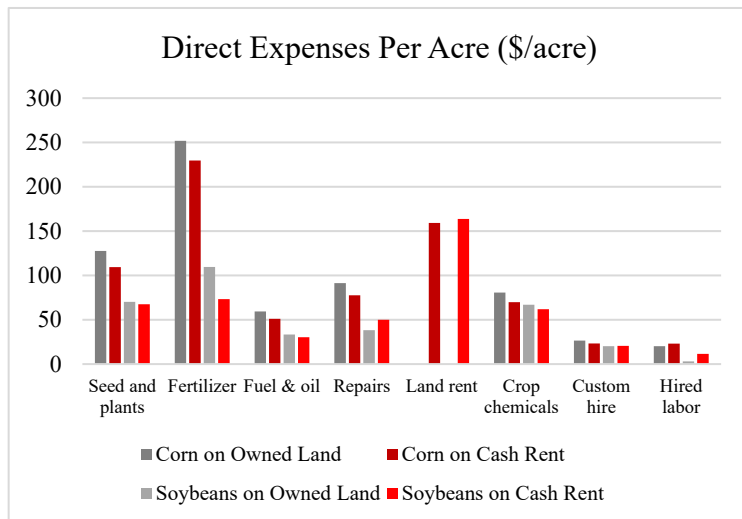
The Ohio Farm Business Analysis and Benchmarking Program, conducted by the Ohio State University Extension, offers benchmark reports for Ohio farms, summarizing farm business management, particularly in crop production. These reports provide insights on 38 key measures from crop enterprise analysis, covering income, expenses, and efficiency measures. In 2022, the program included 36 corn enterprises and 31 soybean enterprises, allowing participants to compare their performance against similar Ohio enterprises. Benchmark reports are tailored to crop type (corn or soybeans) and land tenure (owned or cash rented). The data on physical production, gross returns, direct and overhead costs, and net returns per acre offers valuable insights to farmers.

Corn and Soybean Production for Owned Land and Cash Rented Land

Crop	Land Type	Average Farm Size (Acres)	Yield (Bushels per Acre)	Value per Bushel	Gross Return per Acre
Corn 16 enterprises	Owned	127.00	191.96	\$5.98	\$1155.89
Corn 20 enterprises	Cash Rent	195.87	188.78	\$6.10	\$1166.69
Soybeans 12 enterprises	Owned	133.47	51.43	\$13.60	\$704.13
Soybeans 19 enterprises	Cash Rent	279.30	55.08	\$13.79	\$769.33

In 2022, 16 Ohio corn producers with owned land, with an average of 127 acres per enterprise for corn production, had a yield of 191.96 bushels per acre and an average corn value of \$5.98 per bushel. This resulted in an average gross return of \$1155.89 per acre. For the 20 corn enterprises on cash rented land in Ohio, the average enterprise size was 195.87 with a yield of 188.78 bushels per acre and a corn value of \$6.10 per bushel, leading to an average gross return of \$1166.69 per acre.

*Xiaoyi Fang is Ph.D. student and Ani L. Katchova is Professor and Farm Income Enhancement Chair in the Department of Agricultural, Environmental, and Development Economics at The Ohio State University. Clint Schroeder is Farm Business Analysis Program Manager, Ohio State University Extension.



In Ohio, 12 soybean enterprises on owned land operated at an average of 133.47 acres in 2022. They had a gross return of \$704.13 per acre, with a yield of 51.43 bushels per acre and an average soybean value of \$13.6 per bushel. The 19 soybean enterprises on cash rented land had an average operation size of 279.3 acres. These enterprises earned an average return of \$769.33 per acre, with a yield of 55.08 bushels per acre and an average value of \$13.79 per bushel.

Gross return per acre includes the value of the crop produced as well as any other income directly associated with the crop's production. This may include proceeds from crop insurance and related patronage dividends.

The **average value of crop per unit** is determined by the producer. For cash crops, the average value is based on the actual sales price for production sold or contracted before year-end, and on the inventory value for crops still in inventory at year-end.

The **average net return per acre** is the amount contributed toward operator labor, management, and equity capital.

Net return over labor and management is the return, including government payments, remaining after compensating the operator for their unpaid labor and management. This figure indicates the per acre return to equity capital.

Direct Expenses of Crop Production

Direct expenses are costs that are directly related to the production of a specific crop. Most of these expenses are directly assigned to the crop's production and are simply divided by the number of acres. However, some costs, like Fuel and Oil and Repairs, which are difficult to assign directly to specific fields or crops, are determined by allocating the total annual expense across all enterprises using specific allocation factors entered for each crop.

For cash rent corn enterprises, the **cost of production** for corn was \$5.43 per bushel in 2022, including labor and management charges. **Direct expenses** averaged \$807.45 per acre, with around 60% allocated to land rent, seed, and fertilizer.

Likewise, for cash rent soybean enterprises, the **cost of production** for soybeans was \$11.81 per bushel, also including labor and management charges. **Direct expenses** averaged \$520.91 per acre, with around 30% allocated to land rent.

For enterprises with owned land, the **cost of production** for corn was \$5.36 per bushel in 2022, including labor and management charges. **Direct expenses** averaged \$712.29 per acre, with more than half allocated to seed and fertilizer.

Similarly, for soybean enterprises with owned land, the **cost of production** for soybeans was \$11.77 per bushel, also including labor and management charges, with **direct expenses** averaging \$366.74 per acre.

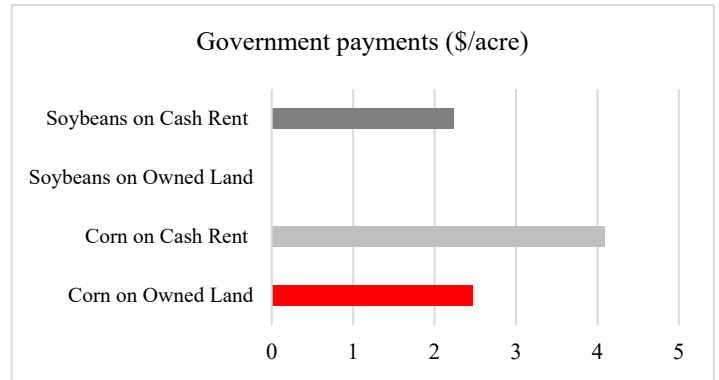
Enterprises with owned land typically incur lower overall production costs per bushel for both corn and soybeans compared to cash rent enterprises. Cash rent enterprises incur higher direct expenses per acre for both crops, primarily due to significant land rent costs. Notably, corn production tends to be less costly per bushel than soybean production for both enterprise types. Land rent is a crucial cost component for cash rent enterprises but is not a direct expense for owned land enterprises.

Government Payments for Crop Production

In 2022, government payments for corn producers on cash rented land averaged \$4.09 per acre, while soybean producers received an average of \$2.23 per acre.

References:

Schroeder C. and Shoemaker, H. "[2022 Ohio Farm Business Summary](#)." Ohio State University Extension, September 2023.



Government payments for corn producers on owned land averaged \$2.47 per acre. Conversely, due to the small sample size, government payments were not reported by the 12 soybean enterprises on owned land.

The Bottom Line of Crop Production

Net return over labor and management is the return, including government payments, remaining after accounting for the operator's unpaid labor and management. This amount is the per acre return to equity capital.

For Ohio's owned land corn enterprises in 2022, net returns averaged \$119.62 per acre, considering all direct, overhead and management expenses, as well as contributions from government payments. Notably, the net returns were lower than those observed in corn enterprises on cash rented land, where the net return over labor and management stood at \$127.28 per acre. The net returns for soybeans on owned land were \$94.26 per acre, which were lower than the net returns of \$109.13 per acre for soybean enterprises on cash rented land.

