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Benchmarking Labor Efficiency and Productivity

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It takes a lot of family and hired labor to run modern farms. Labor is an important and costly input and farm managers need to ask if they are getting the efficiency and productivity needed from that labor to be competitive. One way to evaluate this question is to use benchmarks created using data from similar farms. Labor benchmarks should include family and operator labor as well as hired labor. This article focuses on two labor benchmarks: labor efficiency (a cost measure) and labor productivity (an output measure).

Key Labor Benchmarks

Labor efficiency is computed by dividing total labor cost (hired labor plus family and operator labor) by gross revenue. Hired labor cost and gross revenue can be found on the farm's income statement. Family and operator labor can be represented by family withdrawals, which can be found on the farm's sources and uses of funds statement.

Labor productivity is computed by dividing gross revenue by the number of workers. If all of the employees, including the operator or operators, are fully employed, it is relatively easy to compute the number of workers. It is relatively more difficult to compute this figure when employing part-time or seasonal workers. If some of the hired labor is seasonal or part-time, the total months worked by all hired and seasonal employees should be summed and then divided by 12 to arrive at the number of workers.

If labor efficiency is relatively high and labor productivity is relatively low, it may indicate that the farm is going to have difficulty supporting all of the farm employees. Timeliness of operations should be incorporated into the evaluation of whether a farm has excess labor. Conversely, if labor efficiency is relatively low and labor productivity is relatively high, it is important to check the efficiency of machinery use. Sometimes a farm will be efficient with respect to labor, but have relatively high machinery benchmarks, or be inefficient with respect to labor, but have relatively low machinery benchmarks. Ideally, a farm would like to be competitive with respect to both labor and machinery.

Case Farm Illustration

Labor efficiency and productivity for a case farm in west central Indiana is presented in table 1. This case farm has 1500 acres of corn and 1500 acres of soybeans. The number of workers represents the operator, one full-time hired employee, and several part-time employees.

Table 1. Labor Efficiency and Productivity for White County Farms, 2014

Measure	
Labor Efficiency	
Hired Labor	41,201
Operator and Family Labor	86,663
Total Labor	127,864
Gross Revenue (GR)	2,064,324
Labor Efficiency (Total Labor / GR)	6.19%
Labor Productivity	
Gross Revenue (GR)	2,064,324
Number of Workers	2.09
Labor Productivity (GR / Number of Workers)	$989,609

Labor efficiency for this farm is approximately 6.2 percent. Gross revenue per worker is approximately $990,000 for the case farm. Information available from farm management association programs in Illinois and Kansas suggest that for this size and type of farm, labor efficiency should be below 10 percent and labor productivity should be above $500,000 per worker. The benchmark values for the case farm achieved these targets. As noted above, this farm should also check its machinery benchmarks to determine whether it is doing a good job of controlling both machinery and labor costs. It is also important to use more than one year of data for benchmarks. This would be particularly important for farms that have made major changes in their work force in recent years (e.g., had a son or daughter return to the farm).

Conclusions

This article defined, described, and illustrated labor efficiency and productivity benchmarks for a case farm. The case farm had labor benchmarks that met the specified targets. In order to more fully gauge farm efficiency, it would be helpful to also compare the farm's profitability, financial efficiency, and machinery investment and cost benchmarks to farms of the same type and similar in size. Additional information pertaining to benchmarks can found on the web site for the Center for Commercial Agriculture (here).