

HO-108

Economic Impacts of the Kentucky Green Industry

Dewayne L. Ingram, Horticulture, University of Kentucky; and Alan Hodges, Food and Resource Economics, University of Florida

The Green Industry has a significant impact on Kentucky's economy. Green Industry enterprise owners, managers and employees should be aware of their economic impacts, and policy makers and other state leaders need to know the importance of this industry as potential laws, regulations and resource allocations are considered. This publication is intended to provide a brief summary of the 2007 economic impacts of the Green Industry in Kentucky.

The Green Industry Research Consortium is a group of horticulturists and economists conducting a multistate research project through the Agriculture Experiment Stations at land-grant universities throughout the U.S. Drs. Alan Hodges, Charlie Hall and Marco Palma, project team members, recently published Southern Cooperative Series Bulletin #413, entitled "Economic Contributions of the Green Industry in the United States, 2007." The majority of the data utilized for this report is from the 2007 U.S. Economic Census that became publicly available in 2010. These data were augmented with information gleaned from the National Nursery Survey for 2008 that was also conducted by the consortium. The study results for Kentucky are summarized in this circular. For more background and details, please consult the original circular at <http://www.greenindustryresearch.org>.

At the national level, the U.S. Green Industry in 2007 was estimated to generate \$175.26 billion in output (revenue) and to employ 1.95 million people in full-time and part-time jobs, which resulted in \$53.16 billion in labor earnings and \$107.16 billion in value added to the product and service economy. Some terms used in the report, particularly **output**, **output impact** and **value added**, require some explanation. Total output or revenue is basically total sales throughout the revenue stream, except that the gross margin of sales in the retail sector was included to avoid double counting with wholesale sales to retailers. The output impact and employment impact measures include the ripple (multiplier) effect of Green Industry sales on other sectors of the economy. Value added impact by the industry is a measure of the net contribution to the U.S. Gross Domestic Product, calculated as total sales (output) minus the intermediate sales in the supply chain (cost of inputs to the sector).

The industry groups related to the Green Industry that were evaluated in this study included Production and Manufacturing, Horticultural Services and Wholesale and Retail Trade. The Production and Manufacturing group includes sectors for Nursery and Greenhouse Production and Lawn and Garden Equipment Manufacturing. The Horticultural Services group encompassed Landscape Services and Landscape Architectural Services.

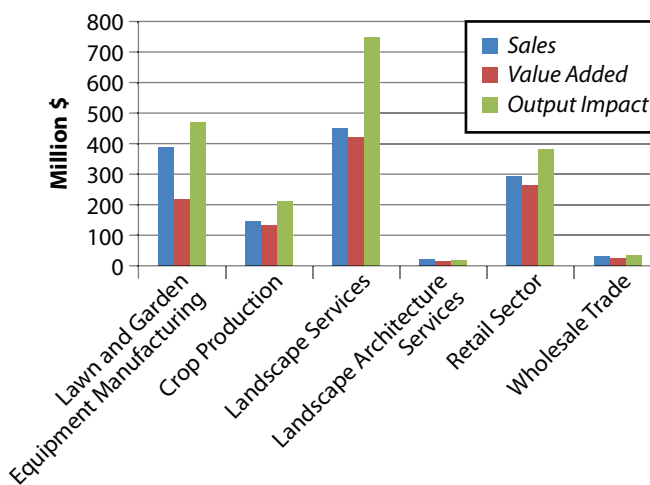


Figure 1. Green Industry sales, value added and output impact in Kentucky, 2007-2008.

tural Services sectors. The Wholesale and Retail Trade group accounted for Green Industry-related sales and economic impacts from 12 sectors, including wholesale establishments that distribute horticultural products (durable and non-durable) to retailers and end-users, building material and supply stores and home improvement centers such as Lowe's, Home Depot and Ace Hardware, general merchandise stores such as Wal-Mart and Target, as well as other retail establishments that offer horticultural goods as a minor sideline, such as food and beverage stores, electronics stores, furniture stores and sporting goods stores. Activity of independent garden centers and garden chain stores are captured in the data for building material and garden supply stores.

Kentucky's Green Industry in 2007 generated 20,081 jobs and accounted for \$1.07 billion in value added and \$1.86 billion output impacts to the state's economy, based on total sales of \$2.06 billion. The total output (revenue) impacts were \$677 million for the Production and Manufacturing group, \$772 million for Horticultural Services and \$412 million for the Wholesale and Retail Trade. Value added impacts to the economy by industry segment were \$350 million for Production and Manufacturing, \$440 million for Horticultural Services and \$280 million for Wholesale and Retail Trade. The sales, value added impact and output impact are segregated by Lawn and Garden Equipment Manufacturing, Nursery and Greenhouse Crop Production, Landscape Services, Landscape Architectural Services, Wholesale Trade and Retail Sector groups in Figure 1.

Of the total employment impacts, Production and Manufacturing, Horticultural Services, and Wholesale and Retail Trade accounted for 3,960, 10,524 and 5,597 jobs, respectively in 2007. Direct jobs in the Green Industry and total employment impacts, including indirect and induced jobs generated in other economic sectors through the multiplier effect, are presented by the various industry groups in Figure 2.

The two industry sectors most recognized as part of the Green Industry, Nursery and Greenhouse Crop Production and Landscape Services, together had 7,617 direct jobs and an overall employment impact of 13,109 jobs, with \$595 million in total sales and value added impact of \$558 million to Kentucky's economy in 2007-2008. The Nursery and Greenhouse Crop Production sector was comprised of 238 firms, had revenues (sales) of \$147 million, directly supported 2,095 jobs and had an overall employment impact of 2,774 jobs and value added impact of \$132 million to the state's economy in 2007. The Landscape Service sector, excluding Landscape Architectural Services, was comprised of 884 firms, had revenues (sales) of \$448 million, supported 5,522 jobs directly, had an overall employment impact of 10,335 jobs and generated a value added impact of \$426 million for the economy.

Lawn and garden equipment manufacturers in Kentucky generated \$387 million in total sales with 737 employees and an output impact of \$469 million. Although sales from Kentucky's Nursery and Greenhouse Production were less than for the Lawn and Garden Equipment Manufacturers (\$147 million vs. \$387 million), crop production accounted for more than twice the number of jobs (2,774 vs. 1,159) while Landscape Services accounted for almost nine times the number of jobs (10,335 vs. 1,159) and more than five times the earnings impact (\$220 million vs. \$41 million) of equipment manufacturing, due to the labor intensive nature of crop production and landscape services.

The Wholesale and Retail Trade industry group is comprised of 12 individual sectors as described above. Of the total Kentucky Green Industry, the Wholesale and Retail Trade industry group represented 34 percent of direct jobs, 26 percent of the value added impact and 22 percent of the output impact. Wholesale establishments are those that distribute horticultural products to retailers, including plants, chemicals, fertilizers and other supplies and various types of lawn and garden equipment. The Retail Sector firms are those that sell directly to consumers. In Kentucky, sales of durable and nondurable horticultural goods by the Wholesale and Retail Trade industry group totaled \$315 million in 2007, which supported 4,401 jobs directly in the industry and a total employment impact of 5,597 jobs, generated value added impacts of \$280 million to the economy and resulted in an overall output impact of \$412 million. Of that, the Retail Trade accounted for \$290 million in sales and supported directly 4,312 jobs.

In fact, Retail Trade represents 33 percent of all Kentucky's Green Industry jobs and 21 percent of the output impact to the economy, compared to 22 percent and 13 percent, respectively, for the U.S. The Retail Trade group had 12.7 times the output

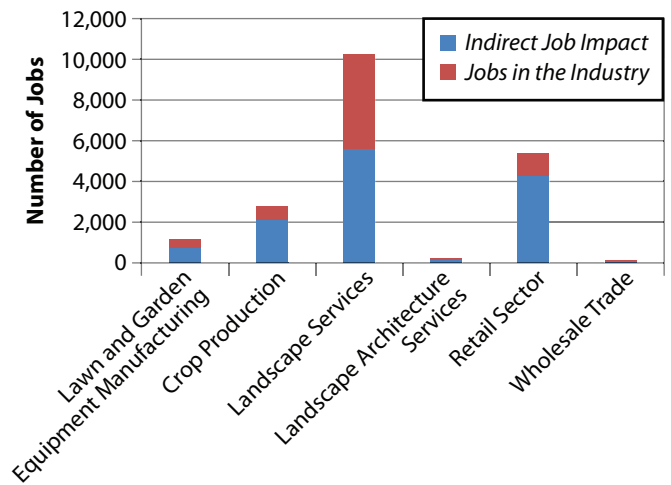
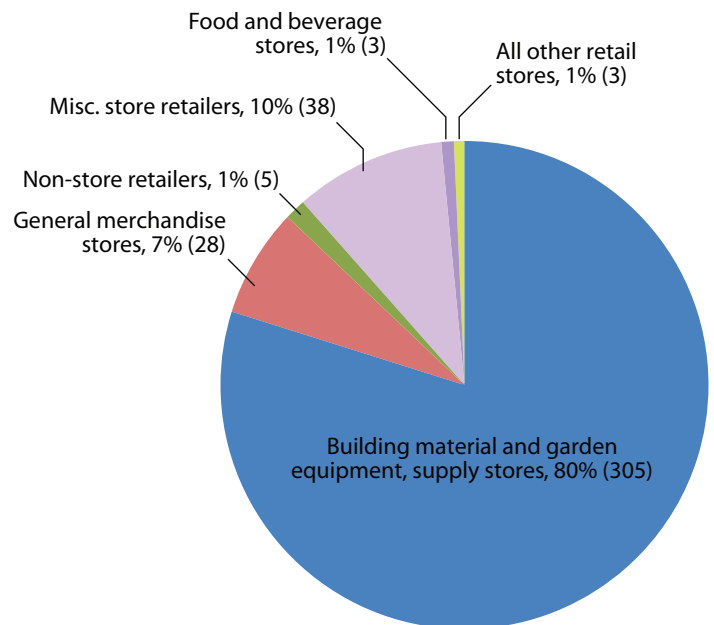


Figure 2. Kentucky Green Industry direct employment and total job impacts in 2007-2008.

impact in 2007 as the Wholesale Trade in Kentucky while the Retail Trade had only 3.6 times more output impact than the Wholesale Trade in the U.S., indicating that Retail Trade is proportionally more important to the Green Industry economy in Kentucky than it is for the U.S. as a whole.

The building material and garden equipment supply stores, including large home improvement stores such as Lowe's, Home Depot and Ace Hardware as well as independent garden centers, represented 80 percent of the output impact of all Kentucky Green Industry retail sectors and 74 percent of the jobs (Figure 3.). This type of firm represented 60 percent of the U.S. Green Industry retail sector output impact. Unfortunately, the available data would not allow the separation of independent garden

Figure 3. Economic impact of Green Industry goods through various retail sectors in Kentucky, 2007 (expressed as a percent of economic impact of the retail sectors and \$ million).



centers within this sector. General merchandise stores, including big box stores such as Walmart and Target, represented 7 percent of the Kentucky Green Industry retail sector output impact while miscellaneous retail stores represented 10 percent. While the percentage of the U.S. retail sector output impact from miscellaneous retail stores was similar to Kentucky's, general merchandise stores represented 17 percent of the U.S. retail sector, suggesting that general merchandise stores have less market penetration in Kentucky. Non-store retailers, food and beverage retailers and other retail stores were minor contributors to Kentucky's Green Industry retail sector, as they were at the national level.

Wholesale Trade represented less than 1 percent of Kentucky Green Industry jobs and 2 percent of value added impact and output impact to the economy. In the U.S. as a whole and in the Appalachian Region, Wholesale Trade also represented 1 percent of Green Industry jobs but 4 percent of value added and the output impact. The portion of North Carolina's Green Industry value added generated from the Wholesale Trade was 7 percent, while the portion of Tennessee's Green Industry value added to the economy from the Wholesale Trade (2%) was similar to Kentucky's.

The U.S. average output impact per crop production firm was \$2.07 million, while the Kentucky average was \$850,000. The U.S. and Kentucky average output impact per firm for the other sectors are similar, indicating that Kentucky's nursery and greenhouse firms are smaller than the national average but that landscape services firms and retailers are of similar size, which is generally expected because most such firms serve a local area.

Overall, the value added impact of the Green Industry in

Kentucky represented 0.705 percent of Gross Domestic Product in the state in 2007, ranking Kentucky 32nd among other states in terms of the Green Industry value added impact to the state's economy as a whole. By way of comparison, the value added to the economy by the Green Industry in Kentucky was greater than in West Virginia but less than in Tennessee, North Carolina, Ohio and Virginia. A previous study for 2002–2003 estimated total value added impacts of the Green Industry in Kentucky at \$651 million. The total value added impact in 2007 (\$1.07 billion) represented an increase of about 64 percent over that five-year period.

The Kentucky Green Industry is obviously an important element of Kentucky's economy. The diverse nature of the industry limits its visibility compared to some industries; however, the combined impact is important. Data presented here can be used to engage governmental, business and agricultural industry leaders in conversations about the needs and opportunities for the industry.

Bibliography

Hall, Charles R., Alan W. Hodges and John J. Haydu. 2007. The Economic Impacts of the Green Industry in the United States. *Southern Cooperative Series Bulletin #406*. 90 p. Available at www.greenindustryresearch.org.

Hodges, Alan, Charlie Hall and Marco Palma. 2011. Economic Contributions of the Green Industry in the United States, 2007. *Southern Cooperative Series Bulletin #413*. 61p. Available at www.greenindustryresearch.org.

Educational programs of Kentucky Cooperative Extension serve all people regardless of race, color, age, sex, religion, disability, or national origin. Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, M. Scott Smith, Director of Cooperative Extension Programs, University of Kentucky College of Agriculture, Lexington, and Kentucky State University, Frankfort. Copyright © 2012 for materials developed by University of Kentucky Cooperative Extension. This publication may be reproduced in portions or its entirety for educational or nonprofit purposes only. Permitted users shall give credit to the author(s) and include this copyright notice. Publications are also available on the World Wide Web at www.ca.uky.edu.

Issued 12-2012