

PolicyPennings by Dr. Daryll E. Ray

How can it be? A NON-farm-dependent county derives 65% of economy from agriculture

As we remarked in our last column, we have been baffled by USDA maps that show that Tennessee has only one farming-dependent county and that a major corn/soybean producing state like Illinois has only two. We learned that the reason that few counties show up as farm-dependent is because the USDA only counts on-farm occupations and ignores the earnings of those who work for implement dealers, farm supply firms, grain elevators, feed mills, ethanol cooperatives, and all those other industries that process farm products.

That doesn't make sense to us. We doubt that few would only count the wages of Saturn and other automobile assembly plants in Tennessee as the auto sector's total impact on the Tennessee economy. The scores of Tennessee firms that supply parts for auto assembly in Tennessee would be especially shocked to learn that they have no auto-based effect on Tennessee income and employment. State governors and economic development directors would be sure not to leave out satellite plant numbers when they pitch the benefits of attracting a new assembly plant.

What if we were to estimate the impact of agriculture as it exists the same way an economic development director would estimate the economic impact of a "new plant." What computations would be involved?

The first task would be to estimate how many jobs are generated and what the initial payroll will be. The total payroll of the facility is considered the direct economic impact of this new industry. This on-the on-farm payroll and farm proprietors' net income—is the basis used to determine USDA's farm-dependent counties.

But since the economic impact is much larger than just the payroll, economic development directors compute the locally purchased supplies and services that the industry requires in its ongoing operation. The value of these goods and services constitute what are called the indirect economic impact.

And then there are the induced economic impacts, the purchases made by employees of the industry—houses, groceries, automobiles, etc. The indirect and the induced economic impacts of the industry increase its economic impact well beyond the direct payroll.

We wondered what the map would look like if we treated farming in the same way that a county economic development director might do a new industry analysis. To help with this, we turned to our colleagues across the hall, Burt English, agricultural economics professor, and research associate Jamey Menard, who study the economic impact of various farming activities.

They suggested that we use the concept of agriculturally-dependent counties instead of the more limiting term "farming-dependent counties" because of all of the agriculturally related activities that farming generates with the purchase of inputs and the sale and processing of farm products. As a part of the direct impact of agriculture on a county, we counted primary agricultural activities like crop and animal farming as well as specialty crop production and nursery and greenhouse production.

The next area we included was secondary agriculture—milling, agricultural chemical sales and application

services, grain elevators, equipment dealers, animal and human food production facilities, oilseed processing, dairies, cheese plants and the like. In most cases these activities are dependent upon locally produced agricultural products. The last general category of economic activities that we included in our analysis was agricultural inputs—agricultural chemical manufacturing and farm, lawn, and garden machinery/equipment manufacturing. The one significant area that we could not separate out and thus did not include the transportation of agricultural products.

We then asked English and Menard to use an input/output model (IMPLAN) to quantify the total economic activity generated by agricultural activities in 21 counties in West Tennessee in 2003. Under the USDA criteria none of these counties were identified as being farming dependent. When we received the results back, our suspicion that the USDA methodology misses the importance of agriculture on many counties was confirmed.

Of the 21 west-most counties in Tennessee (fig. 1), nearly half—9 out of 21—are agriculturally dependent when the "new plant" methodology commonly applied by economic development directors is used to measure the total economic activity of the existing agriculture in the counties.

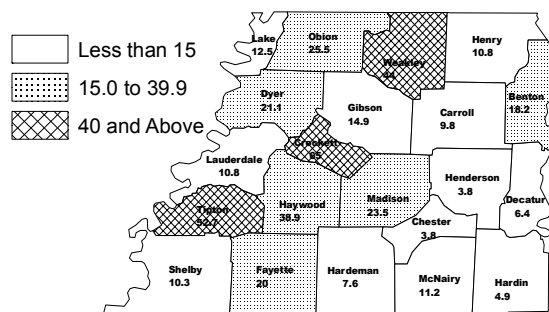


Figure 1. West Tennessee agriculturally-dependent counties, 2003. The percentage of total economic activity resulting from agricultural activities is derived from an IMPLAN model using 2003 data for 21 West Tennessee Counties. Counties were determined to be agriculturally-dependent if 15 percent or more of total economic activity is results from primary agriculture, secondary agriculture and agricultural inputs.

Even though none of the 21 counties show up as farm-dependent counties using USDA's definition, one, Crockett County, traces 65 percent of its economic activity to agriculture. IMPLAN estimates suggest that over 40 percent of the economic activity of two additional counties is rooted in agriculture.

No other sector comes close to threatening agriculture's economic dominance in those three counties.

Daryll E. Ray holds the Blasingame Chair of Excellence in Agricultural Policy, Institute of Agriculture, University of Tennessee, and is the Director of UT's Agricultural Policy Analysis Center (APAC). (865) 974-7407; Fax: (865) 974-7298; dray@utk.edu; <http://www.agpolicy.org>. Daryll Ray's column is written with the research and assistance of Harwood D. Schaffer, Research Associate with APAC.