

Comparison of the Farmgate Report, the Census of Agriculture and Agricultural Facts 1994-1998

Brigid A. Doherty and John C. McKissick¹
Center for Agribusiness and Economic Development
The University of Georgia

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INTRODUCTION

Users of agricultural data in the state of Georgia have a variety of resources for agricultural data. These sources include the United States Department of Agriculture (USDA) and their publication, the Census of Agriculture, the Georgia Agricultural Statistics Service (GASS) and their main yearly summary publication, Georgia Agricultural Facts, and the Georgia Cooperative Extension Service which publishes the Farmgate Value Report.

USDA compiles data into the Census of Agriculture every five years. The Census covers a diverse group of agricultural facts and statistics. Items measured range from corn acreage planted to age and tenure of farm operators. Economic data, such as production expenses and market value of products, is an important subset of the collected data. The Census of Agriculture is widely regarded as highly accurate. The Census is a very in-depth publication providing more types of data than other more frequently published resources. However, the Census is only released every fifth year and experiences a lag in publication.

GASS provides a wide variety of publications to disseminate agricultural data. Georgia Agricultural Facts (Ag Facts) is the main publication and is released on an annual basis. However, GASS also releases the bimonthly Farm Reports and other regular reports. Further, GASS communicates its information with the National Agricultural Statistics Service (NASS) and these data are pooled by state and published by NASS.

The Georgia Cooperative Extension Service distributes, among other items, the Farmgate Value Report. The Farmgate Report was first published in 1992 by Darrell Dunn, Extension District Director. Data used in the report is collected in a simple written survey of extension agents. The 1998 Farmgate Report was compiled by the Center for Agribusiness and Economic

¹ Brigid A. Doherty is a Research Coordinator and John C. McKissick the Interim Coordinator, both with the Center for Agribusiness and Economic Development, The University of Georgia, Athens, Georgia 30602; phone (706) 542-9813; fax (706) 542-0739; e-mail bdoherly@agecon.uga.edu.

Development. Slightly different methods were used in the surveying and reporting process in 1998. The data collected are comparable with other years.

Each source, while providing some of the same information, has a unique role for researchers and decision makers. The goal of this article is to compare and contrast the methods of collection and reporting by each publication. The first section of this paper will focus on the sources and coverage of data in each report. The second section will be a comparison of actual reported data.

COMPARISON OF DATA SOURCES AND COVERAGE

The publications differ in three basic ways. First, the source of their data (producers, extension agents, etc.) varies. Second, the calculations performed on the raw data to get some of the aggregate data (value of production, etc.) are different. Third, items covered, although similar, are not the same in each publication.

Data Sources

The type of individual surveyed is the basic contrast point between Ag Facts and the Farmgate Report. The Farmgate Report relies exclusively on the extension service to provide information. For crops, the individual agent is asked county acreage and yield. A suggested price for each crop (determined by extension specialists) is provided. Individual agents have the option of adjusting the price based on county experiences. For livestock, inventory numbers are requested. A formula is then used to calculate average production and thus value of production for the county.

The Agricultural Facts publication is based on surveys over a range of individual farmers and agribusinesses. The type of survey and the methodology vary by commodity. Ag Facts performs a monthly estimate of prices based on the sales of a commodity. Yield data is collected, in part, by enumerators who actually measure yields on a sampling of individual farms. The entire system of data collection is integrated. More detail on NASS and GASS surveying is available on their website.²

The Census of Agriculture is similar to Ag Facts in targeting individuals and agribusinesses for data. In 1997, approximately 3.2 million report forms were mailed out. As the reports are mailed out, a large scale promotion also occurs. Two different forms are mailed out. The majority surveyed receive a shorter version of the form. The questions on the form are detailed and most data reported in the Census are requested directly from the respondent.

² The NASS website is <http://www.usda.gov/nass/>. Look under NASS information for further details.

Calculations

A few simple calculations are necessary to transform the information gathered into value of production or farmgate value figures. Row crop calculations are straightforward. Both Ag Facts and the Farmgate Report multiply harvested acres by yield per acre to arrive at a production number. This production figure is then multiplied by price per unit to arrive at a value of production. The Census of Agriculture does not perform any direct calculations (although estimates were made) on its reported data. Data in the Census are as reported (i.e., respondents are directly asked to provide sales figures).

Livestock value is derived in a more complicated manner. A critical distinction should be noted before the calculations are explained. Ag Facts provides value of production for a few items. However, for most livestock commodities, cash receipt data are given instead. Cash receipts are based on marketings for the year. Marketings during the current year can include sales of livestock actually produced in the previous year. Thus, cash receipts data can capture more than value of production for the given year. The Census of Ag reports sale figures. Sales figures differ from value of production because they only measure the value of commodities sold during the year. Sales data can also include dollars received for livestock produced in previous years. The Farmgate Report focuses only on the value of production that occurs in the current year, regardless of whether the commodity is sold in the current year.

To help the Farmgate Report maintain the focus on production in the current year, extension agents are asked to provide specific data. For example, in the survey agents list the number of beef cattle in the county. This is then multiplied by a figure designed to capture the average number of calves produced per cow. Essentially, the number of calves born is estimated based on the number of cows. The number of calves born is then multiplied by an average weight gain figure to arrive at production. Production is subsequently multiplied by price to get a value of production figure. A similar procedure is used for all livestock.

Items Covered

While the Farmgate Report, Ag Facts and the Census contain similar data for a variety of commodities, there are some differences in the content of each report. Ag Facts has county level production data (i.e., acreage, yield, etc.) on corn, oats, rye, sorghum, soybeans, wheat, peanuts, tobacco and cotton. Inventory numbers are available on a county basis for cattle, calves and hogs. For other commodities, such as poultry, and vegetables, production data is only available on the state level. Value of production and cash receipt data are only for the state. In addition, Ag Facts has weather summaries and price data.

The Farmgate Report contains value of production figures for most Georgia agricultural products. These values are all provided at a county level. Much of the county level data found in the Farmgate Report, notably poultry and vegetables, cannot be found in Ag Facts.

The Census of Agriculture contains basically two forms of commodity information on a county basis. Inventory numbers are available for livestock and acreage and production numbers for crops. Sales figures are also found for most commodities. The Census covers many more topics. Irrigated acres are one piece of information hard to find elsewhere. An exhaustive listing cannot be provided here.

Table one is designed to highlight the major points of difference among the three sources. The table essentially shows the Farmgate Report as a source of county level value of production for the current year, regardless of sales. The Census is almost its opposite, providing only sales figures. Ag Facts remains somewhere between the two, providing some cash receipt data and some value of production figures, but mainly on a state level.

Table 1: Data Available in Ag Facts, Farmgate Report and the Census of Agriculture

Commodity	Agricultural Facts	Farmgate Report	Census of Ag (1997)
Beef Cattle	State - cash receipts County - inventory	County - value of production	County - mkt value of ag products sold, inventory and sales
Broilers	State - inventory, value of production and cash receipts	County - value of production	County - mkt value of ag products sold (all poultry), inventory and sales
Catfish	None	County - value of production	County - inventory and sales
Corn	State - value of production and cash receipts County - production	County - value of production	County - mkt value of ag products sold, harvested and irrigated acreage
Cotton	State - value of production and cash receipts County - production	County - value of production	County - mkt value of ag products sold, harvested and irrigated acreage
Crop Insurance	None	County - value	None
Eggs	State - value of production, cash receipts and eggs produced	County - value of production	None
Forestry	State - forest products sold	County - sales estimated from taxes collected	County - sales
Goats	None	County - value of production	County - inventory and sales
Greenhouse	State - cash receipts (with nursery and turf) and sales	County - value of production	County - acres and sales (more detail)
Hogs	State - production and cash receipts County - inventory	County - value of production	County - mkt value of ag products sold, inventory and sales

Commodity	Agricultural Facts	Farmgate Report	Census of Ag (1997)
Horses	None	County - value of production	County - inventory and sales
Hunting Leases	None	County - value	None
Dairy products	State - cash receipts and production	County - value of production	County - mkt value of ag products sold, sales, inventory of milk cows
Apples	State - production and value of production	County - value of production	County - acres and production
Blueberries	State - production and value of production	County - value of production	County - acres, irrigated acres and production
Grapes	State - production and value of production	County - value of production	County - acres and production
Barley	None	County - value of production	County - mkt value of ag products sold, harvested and irrigated acreage
Oats	State - cash receipts, value of production County - production	County - value of production	County - mkt value of ag products sold, harvested and irrigated acreage
Rye	State - cash receipts, value of production County - production	County - value of production	County - harvested and irrigated acreage
Sorghum	State - cash receipts, value of production County - production	County - value of production	County - mkt value of ag products, harvested and irrigated acreage
Nursery	State - cash receipts (with greenhouse and turf) and sales	County - value of production	County - sales and acreage (more detail)

Commodity	Agricultural Facts	Farmgate Report	Census of Ag (1997)
Vidalia Onions	State - production and value of prod.	County - value of production	County - harvested and irrigated acres
Government Payments	State	County - value	County
Misc. Income	None	County - value	County (various)
Peaches	State -cash receipts, production and value of production	County - value of production	County - acres and production
Peanuts	State - cash receipts, value of production County - production	County - value of production	County - harvested and irrigated acreage
Pecans	State - cash receipts, value of production and production	County - value of production	County - acreage and production
Soybeans	State - cash receipts, value of production County - production	County - value of production	County - mkt value of ag products sold, harvested and irrigated acreage
Tobacco	State - cash receipts, value of production County - production	County - value of production	County - mkt value of ag products sold, harvested and irrigated acreage
Turfgrass	State - cash receipts (with nursery and greenhouse), sales (sod)	County - value of production	County - sales and acreage (sod)
Snap Beans	State - value of production	County -value of production (1998)	County - harvested and irrigated acreage
Cabbage	State - value of production	County - value of production (1998)	County - harvested and irrigated acreage
Carrots	None	County - value of production (1998)	County - harvested and irrigated acreage
Sweet Corn	State - value of production	County - value of production (1998)	County - harvested and irrigated acreage

Commodity	Agricultural Facts	Farmgate Report	Census of Ag (1997)
Cucumbers	State - value of production	County - value of production (1998)	County - harvested and irrigated acreage
Eggplants	None	County - value of production (1998)	County - harvested and irrigated acreage
Greens	None	County - value of production (1998)	County - harvested and irrigated acreage
Okra	None	County - value of production (1998)	County - harvested and irrigated acreage
Bell Peppers	None	County - value of production (1998)	County - harvested and irrigated acreage
Irish Potatoes	None	County - value of production (1998)	County - harvested and irrigated acreage
Sweet Potatoes	State - value of production	County - value of production (1998)	County - harvested and irrigated acreage
Yellow Squash	None	County - value of production (1998)	County - harvested and irrigated acreage
Tomatoes	State - value of production	County - value of production (1998)	County - harvested and irrigated acreage
Zucchini	None	County - value of production (1998)	None
Watermelon	State - value of production	County - value of production	County - harvested and irrigated acreage
Wheat	State - cash receipts, value of production County - production	County - value of production	County - mkt value of ag products sold, irrigated and harvested acreage

COMPARISON OF DATA REPORTED

The first section of this paper highlighted the major differences in the type of data collected in each report. Although these discrepancies can be quite notable for certain commodities, a comparison of the actual state level data reported can still be useful. This section provides a commodity by commodity comparison (for those major commodities reported by both sources) of the values listed in Ag Facts and the Farmgate Report from 1994 to 1998.

Row Crops

Ag Facts and the Farmgate Report reported very similar figures for the major row crops of peanuts, tobacco and cotton. The two sources were consistently within 10 percent. Furthermore, both Ag Facts and the Farmgate Report reveal similar trends for those three crops (see figures 1-3). Corn, soybean and wheat values tend to diverge a bit more under the two sources. The general trends reported, however, are very similar (see figures 4-6). The Farmgate Report appears to be quite different from Ag Facts in the small grains category. Until 1998, small grain values were lumped into one grouping in the Farmgate Report. In 1998, they were broken out into oats, rye, sorghum and barley. The Farmgate Report highly overestimated the value of those crops in 1998 as compared to Ag Facts. However, overall, Ag Facts and the Farmgate Report track fairly well in the row crops category. This can be attributed to, in part, the fact that both sources relay value of production.

Livestock

Ag Facts and the Farmgate Report appear to estimate milk production value very closely. Statistically, there is less than a 10 percent difference over the years in the numbers reported. However, looking at the trend, Ag Facts shows much more volatility in dairy value than the Farmgate Report (see figure 7). Beef cattle and calves are, in general, numerically close in both sources. The Farmgate Report values were below Ag Facts in 1996 and 1997 (see figure 8). Hog value is consistently reported higher by the Farmgate Report, however, the trend mimics Ag Facts (see figure 9). The upward trend in broiler value is apparent in both the Ag Facts and Farmgate Report numbers. However, the Farmgate Report value is regularly above Ag Facts by around 20 percent. While 20 percent is not an extremely high percentage, the Farmgate Report is millions of dollars over Ag Facts (figure 10). While broiler value is consistently higher in the Farmgate Report, layer value is routinely 45 percent below Ag Facts (figure 11). In general, Farmgate Report values average higher than Ag Facts in the livestock production category. The discrepancies between the two sources may be partially explained by realizing that Ag Facts reports cash receipts data for most livestock and the Farmgate Report lists value of production.

Fruits, Nuts and Vegetables

Ag Facts and the Farmgate Report varied the most in their estimates of fruit, nut and vegetable value. The Farmgate Report overestimated vegetables compared to Ag Facts from 1994-1996. In 1997 and 1998, however, the Farmgate estimates were below Ag Facts. Further,

in 1997 and 1998 the two sources did not follow a similar trend (figure 12). Both Ag Facts and the Farmgate Report show a very similar trend in pecan value. The Farmgate report value is continually about 20 percent higher (figure 13). Watermelon value in the Farmgate Report is consistently above Ag Facts, at times by as much as 100 percent (figure 14). The trends shown in peach value by both Ag Facts and the Farmgate Report are similar (figure 15). However, the Farmgate Report numerical values are higher than Ag Facts in every year except 1998. The Farmgate Report only collected apple data for three years, and in those three years, the Farmgate values were above Ag Facts. Overall, the Farmgate Report values for fruits, nuts and vegetables are consistently over the values reported by Ag Facts.

CONCLUSION

In this brief review of Farmgate Report, the Census of Ag and Ag Facts data, several items become apparent. First, the three reports appear to cover the same topics. However, upon deeper review, each report provides a slightly varied angle on agricultural production and value in Georgia. The most apparent divergence is sales versus value of production. Second, the two sources (the Farmgate Report and Ag Facts) are fairly consistent in the value figures reported. There are certain areas in which the two sources vary. These areas need to be examined more closely to determine what is driving the differences. Third, the two reports each play an important role in providing data to researchers and producers. The Farmgate Report contains county level data which is unavailable elsewhere. In addition to being helpful to decision makers at a county level, having this data allows researchers to aggregate the data as desired. For instance, with county level data, it is simple to examine changes in extension and congressional districts. Ag Facts also has data needed in research such as acreage and price information. The Census of Ag contains crucial information such as irrigation.

Figure 1: Georgia Peanut Comparison

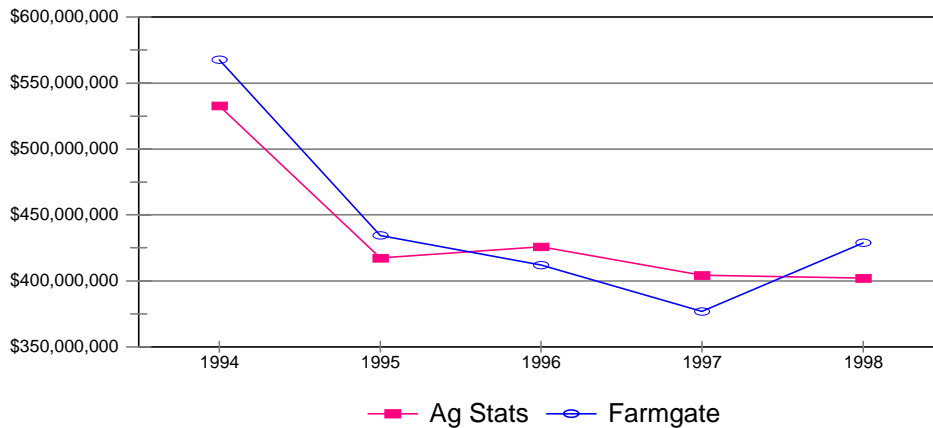


Figure 2: Georgia Tobacco Comparison

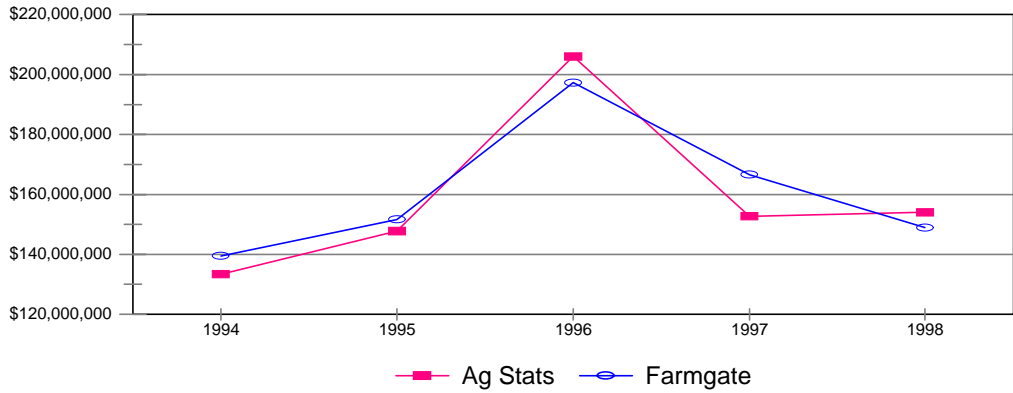


Figure 3: Georgia Cotton Comparison

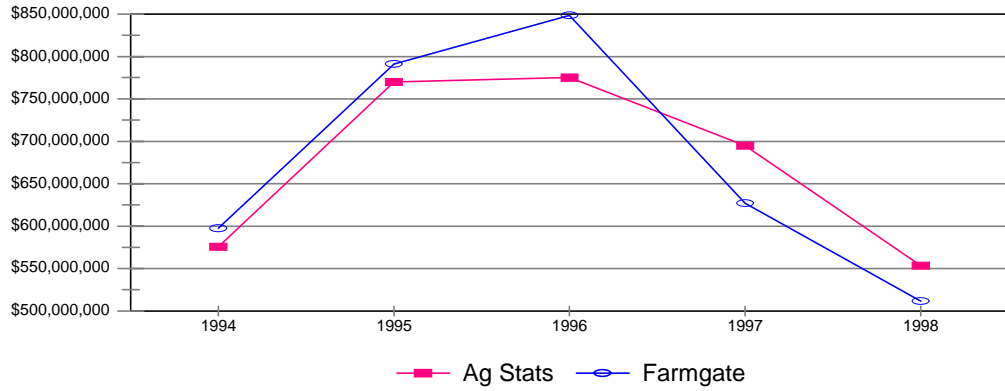


Figure 4: Georgia Corn Comparison

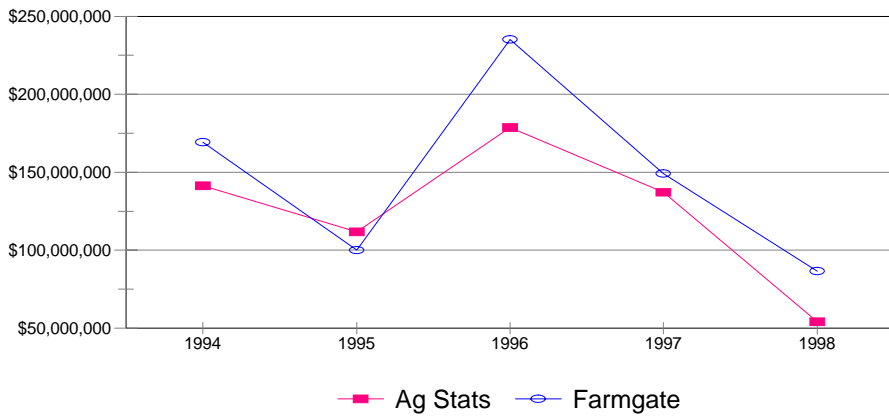


Figure 5: Georgia Soybean Comparison

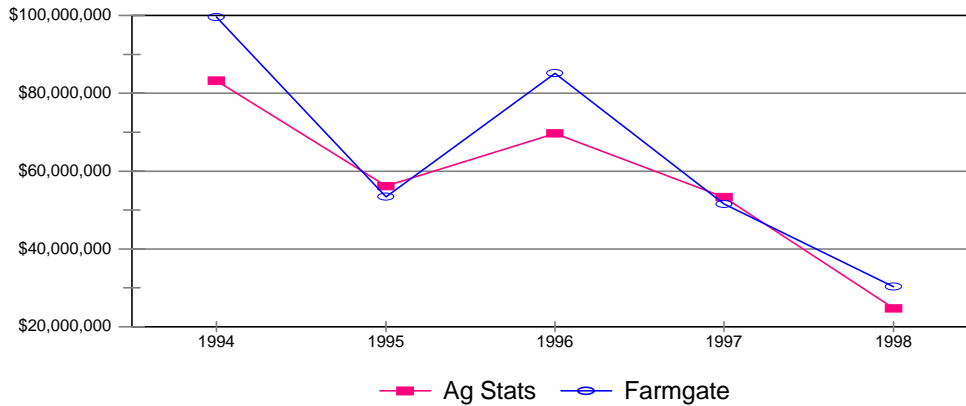


Figure 6: Georgia Wheat Comparison

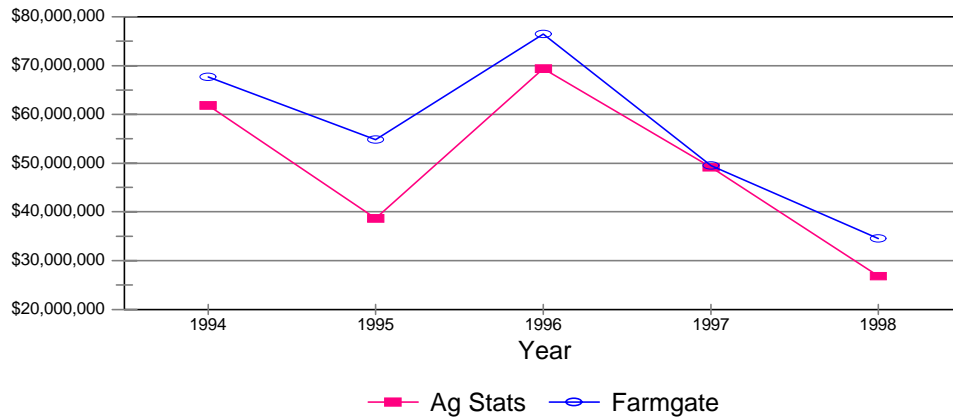


Figure 7: Georgia Milk Comparison

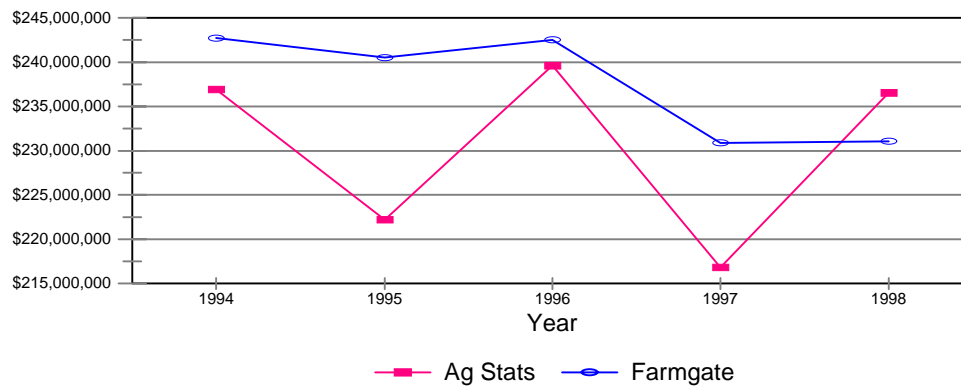


Figure 8: Georgia Cattle Comparison

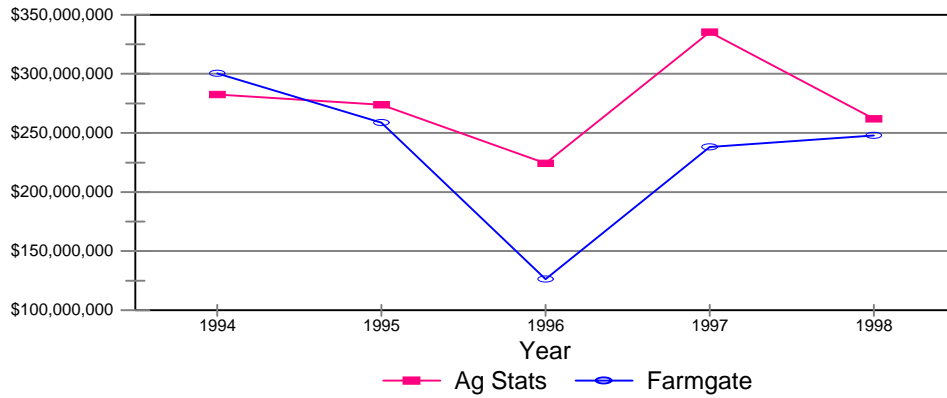


Figure 9: Georgia Hog Comparison

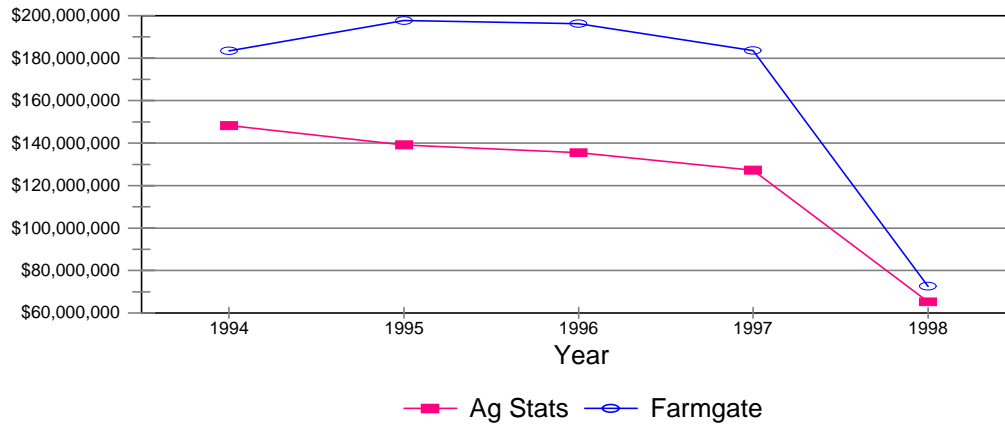


Figure 10: Georgia Broiler Comparison

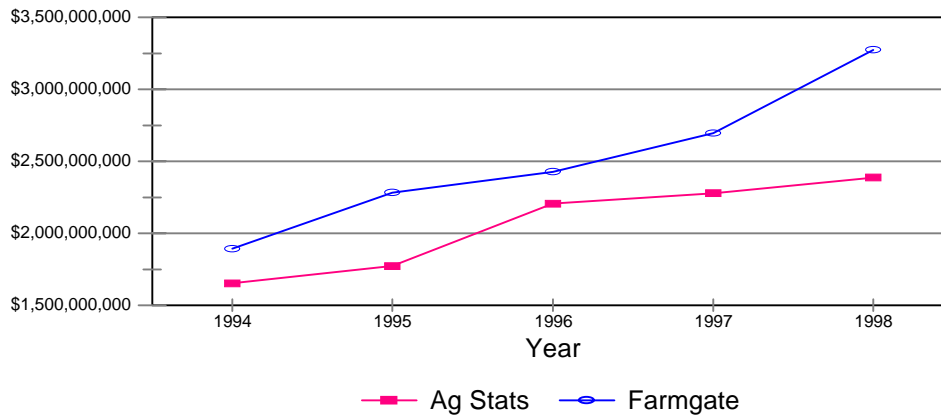


Figure 11: Georgia Egg Comparison

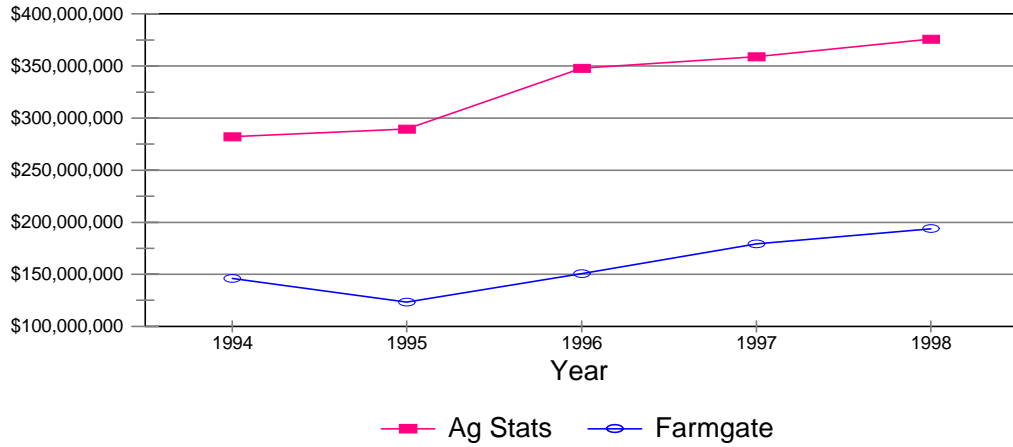


Figure 12: GA Vegetable Comparison

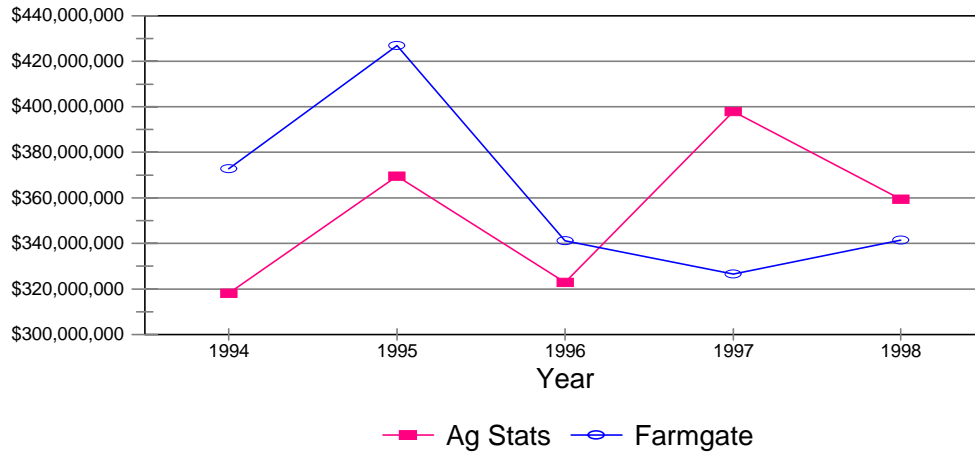


Figure 13: Georgia Pecan Comparison

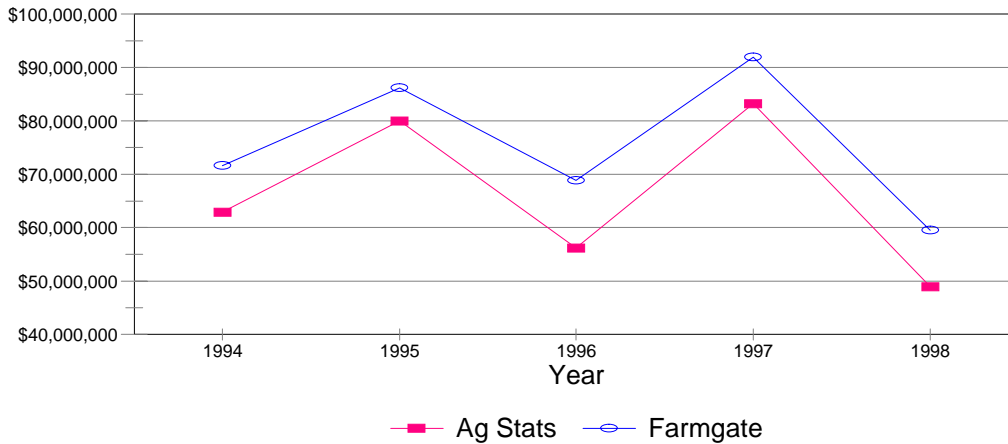


Figure 14: GA Watermelon Comparison

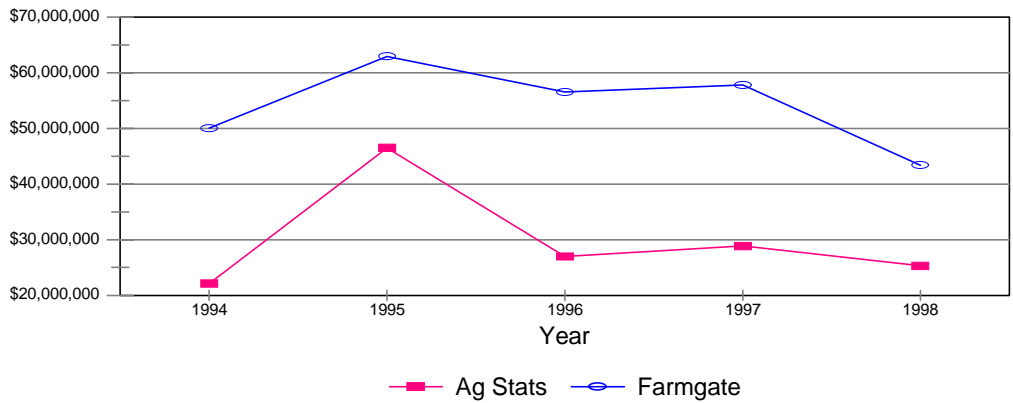
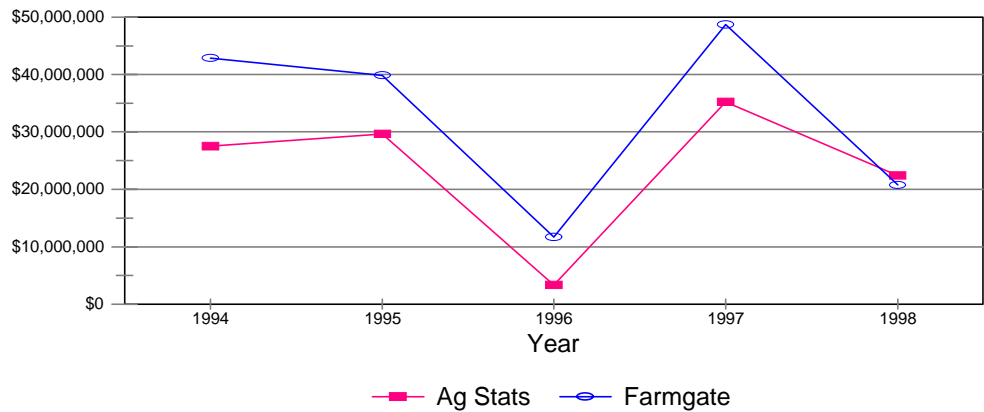


Figure 15: Georgia Peaches Comparison



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<u>1998</u>		<u>1999</u>		<u>1999 Cont.</u>	
Beef:	\$247,437,486	Beef:	\$301,347,007	Turfgrass	\$138,439,470
- Beef cows	\$188,144,710	- Beef cows	\$229,272,541	Vegetables:	\$520,333,981
- Beef stockers	\$59,292,777	- Beef stockers	\$61,221,216	- Snap Beans	\$39,650,648
Broilers	\$3,273,930,048	- Beef finished outside Co.*	\$10,853,250	- Cabbage	\$20,697,206
Catfish	\$7,398,114	Broilers:	\$2,840,730,923	- Carrots	\$12,172,866
Corn	\$86,501,613	- Producer*	\$2,493,206,901	- Sweet Corn	\$47,711,428
Cotton	\$511,515,891	- Grower*	\$347,524,021	- Cucumbers	\$48,240,900
Crop Insurance	\$89,510,116	Catfish	\$5,756,487	- Eggplants	\$8,431,620
Eggs	\$193,707,825	Corn	\$83,012,523	- Greens	\$17,156,976
Forestry	\$721,987,500	Cotton	\$584,524,694	- Okra	\$2,653,460
Goats	\$3,965,940	Crop Insurance	\$137,977,480	- Bell Peppers	\$49,545,810
Greenhouse	\$159,032,445	Dairy	\$281,459,970	- Sweet Potatoes	\$3,220,399
Hogs	\$72,498,014	Forestry	\$737,071,537	- Yellow Squash	\$27,715,840
Horses	\$43,037,800	Goats	\$4,116,244	- Tomatoes	\$61,322,170
Hunting leases	\$55,151,193	Greenhouse	\$145,219,333	- Zucchini	\$14,759,415
Milk	\$231,064,817	Hatching Egg Layers*	\$307,953,180	- Vidalia Onions	\$84,333,682
Misc. Fruits:	\$23,431,075	Hay*	\$89,440,125	- Watermelon	\$49,527,271
- Apples	\$8,912,838	Hogs:	\$110,430,631	- Other Veg.	see Msc.Income
- Blueberries	\$9,145,058	- Farrow to Finish*	\$75,763,194	Wheat	\$24,350,528
- Grapes	\$5,373,180	- Feeder Pigs*	\$16,380,650	Total	\$7,926,020,170
Misc. Poultry	\$219,131,968	- Finish Only*	\$18,286,787		
Misc. Small Grains:	\$24,286,346	Horses:	\$70,837,700		
- Barley	\$203,669	- Boarding, Breeding and Training	\$34,409,950		
- Oats	\$3,357,819	- Raising*	\$36,427,750		
- Rye	\$16,272,792	Hunting leases:	\$63,503,767		
- Sorghum	\$4,552,067	- Deer*	\$61,119,824		
Nursery:	\$192,275,373	- Turkey*	\$1,951,193		
- Container Nursery	\$145,707,623	- Duck*	\$432,750		
- Field Prod. Nursery	\$46,567,750	Fruits:	\$80,080,068		
Vidalia Onions	\$92,825,920	- Apples	\$9,917,230		
Other Gov't Pmts.	\$139,281,581	- Blueberries	\$12,154,563		
Other Misc. Income	\$175,227,627	- Fresh	\$8,307,013		
Peaches	\$20,762,250	- Frozen	\$3,847,550		
Peanuts	\$428,770,430	- Grapes	\$3,899,244		

Pecans	\$59,499,629	- Peaches	\$32,148,170	
Soybean	\$30,205,039	- Strawberries*	\$761,097	
Tobacco	\$148,915,179	- Other Fruits and Nuts	see Misc. Income	
Turfgrass	\$162,876,700	Small Grains:	\$25,915,402	
Vegetables:	\$341,518,321	- Barley	\$115,177	
- Snap Beans	\$29,304,406	- Oats	\$2,901,927	
- Cabbage	\$20,345,786	- Rye	\$16,587,099	
- Carrots	\$2,579,250	Nursery:	\$132,529,658	
- Sweet Corn	\$54,386,355	- Container Nursery	\$82,718,958	
- Cucumbers	\$26,583,889	- Field Prod. Nursery	\$49,810,700	
- Eggplants	\$6,393,904	Other Gov't Pmts.	\$282,328,761	
- Greens	\$20,303,056	Misc. Income	\$192,655,620	
- Okra	\$903,943	- Other Livestock	\$78,412,505	
- Onions	\$242,380	- Other Vegetables	\$33,194,289	
- Bell Peppers	\$25,322,018	- Other Fruits and Nuts	\$9,045,200	
- Other Peppers	\$4,335,980	- Other Row Crops	\$2,783,924	
- Irish Potatoes	\$2,027,834	- Other Misc. Income	\$64,966,065	
- Sweet Potatoes	\$1,965,360	Peanuts	\$383,126,435	
- Yellow Squash	\$17,758,227	Pecans	\$103,250,994	
- Tomatoes	\$79,332,670	Silage*	\$11,731,238	
- Zucchini	\$10,014,055	Sorghum	\$3,527,274	
- Other Veggies.	\$39,719,208	Soybean	\$25,385,705	
Watermelon	\$43,404,038	Table Egg Layers	\$188,584,734	
Wheat	\$34,567,346	Tobacco	\$115,357,591	* Commodity or Categories
Total	\$7,833,817,623			added in 1999