



The University of Georgia

Center for Agribusiness and Economic Development

College of Agricultural and Environmental Sciences

The Economic Importance of Agriculture in the Eighteen County Flint River Basin of Georgia

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This report reviews the economic impacts of agriculture in the Flint River Basin of Southwestern Georgia. Agricultural production in the eighteen Georgia counties considered in this report is dependent on irrigation¹. It is of interest to policy makers and citizens of Georgia to examine how agriculture affects the economic base of these counties and thus explore the economic role of irrigation.

Agriculture in Georgia

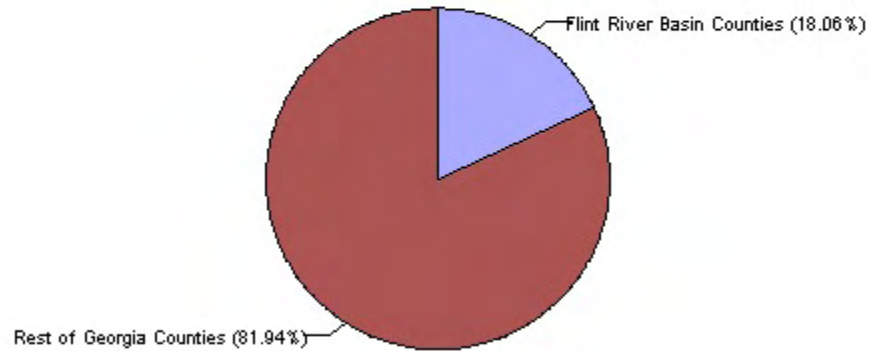
The food, fiber and related industries sector in Georgia accounts for 16 percent of total output and 15 percent of total employment making it the largest single sector in the economy². Farm and forest production sectors directly employed 87,269 people in 1995 and created \$6.5 billion in output (Kriesel and Jones). Clearly, agriculture in Georgia is a significant portion of the state economy. Certain commodities form a strong base for agricultural activities in Georgia. The top value generators in Georgia agriculture have historically been broilers,

Source: 1998 Farmgate Value Report

¹ These counties are: Baker, Calhoun, Colquitt, Crisp, Decatur, Dooly, Dougherty, Early, Grady, Lee, Miller, Mitchell, Randolph, Seminole, Sumter, Terrell, Turner and Worth.

² Includes agricultural production, processing and wholesale and retail food sales.

Chart 1:
Total Agricultural Value in Georgia



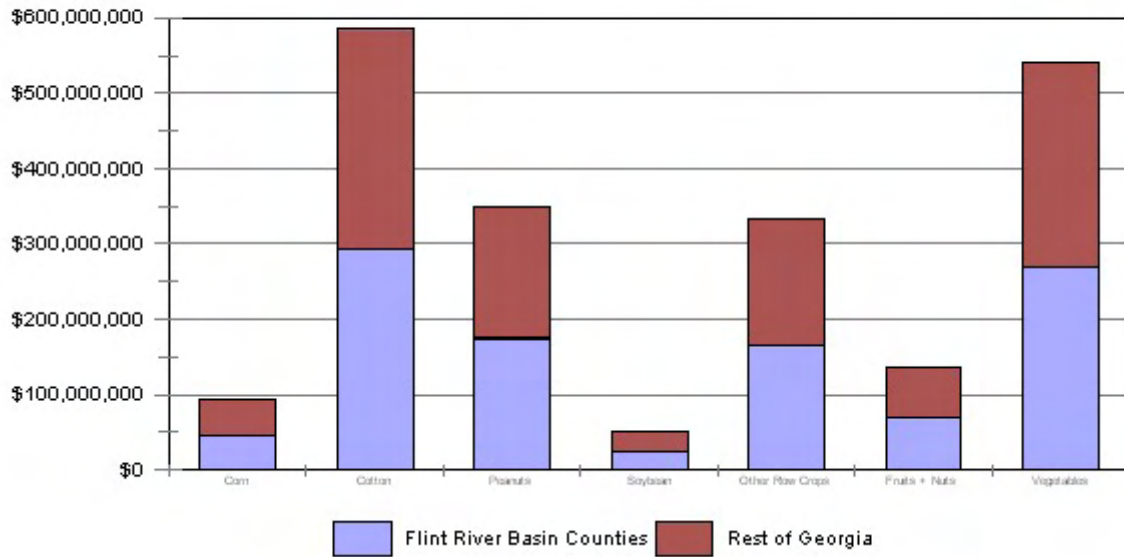
forestry, cotton, peanuts and vegetables. These five commodities represented 67 percent of total farmgate value in 1998. Cotton and peanuts alone were 12 percent of farmgate value.

Agriculture in the Flint River Basin

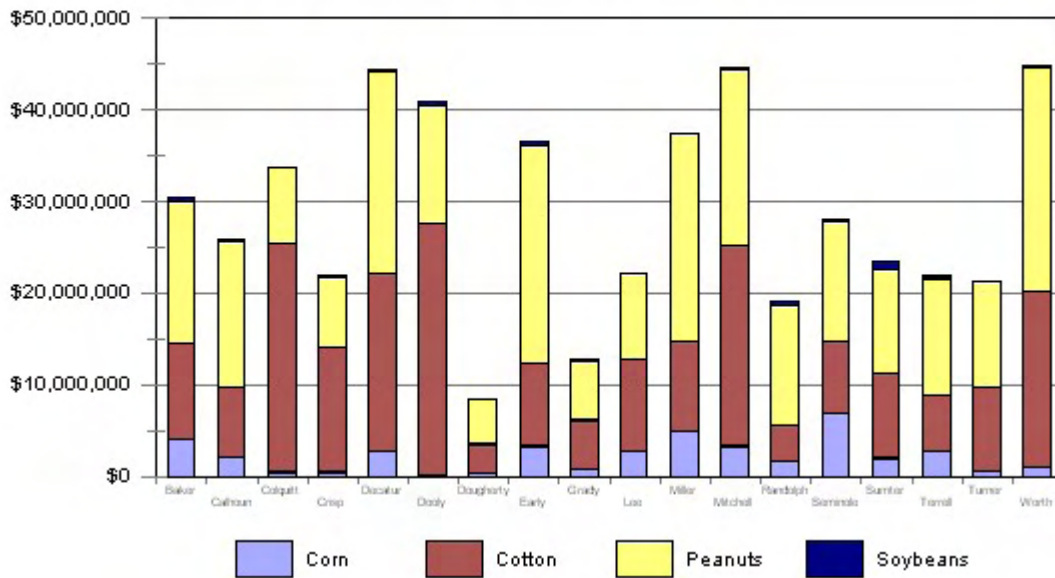
The eighteen counties in the Flint River Basin (FRB) contribute roughly 18 percent of agricultural value to the state's total (see table 1). The FRB region also contains 36 percent of total harvested crop acres in Georgia (1997 Census of Ag).

More importantly, the FRB counties are major contributors to the production of row crops in Georgia. These counties produce more than 40 percent of Georgia's value in corn, cotton, peanuts and vegetables. The FRB counties are responsible for producing nearly 60 percent of the peanut value in Georgia. In addition, about 30 percent of fruit and nut production originates from this region.

**Chart 2:
Row Crops in FRB versus State**



**Chart 3:
Crop Production by County**



Source of Charts 2 and 3: 1998 Farmgate Value Report

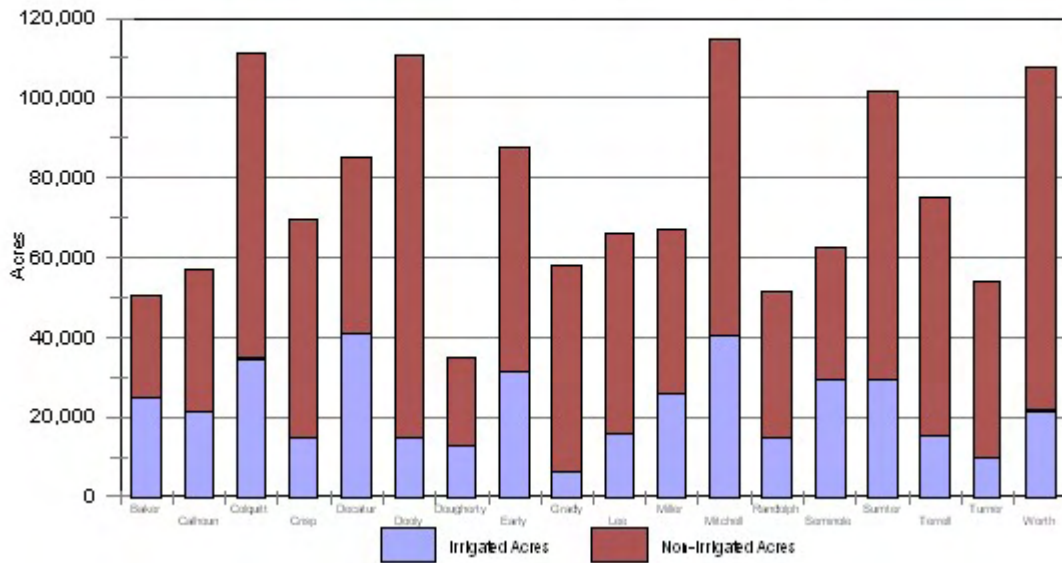
The figures above account only for the income received by producers for agricultural commodities. Impact analysis is a method that accounts for the total economic contribution of a sector to the economy. Producers in the FRB received \$1.4 billion for their agricultural products in 1998. As a result of their activities, a total of \$2.6 billion of output was created in Georgia. In other words, had these agricultural activities in the FRB not occurred, Georgia would have lost \$2.6 billion in economic activity. In addition, agriculture in the FRB provides over 25,000 jobs in Georgia.

Focusing on row crops, economic impact analysis shows that removing \$1 of cotton output would reduce total economic activity by \$1.89 and removing \$1 of peanut output would reduce economic activity by \$1.83 (Kriesel and Jones). This amount only accounts for the activity generated by the farmer purchasing his inputs. It does not measure the value further generated in Georgia by processing the product. A dollar reduction in cotton production would also have serious impacts on cotton ginning, warehousing for storage, and so forth. These figures show that removing cotton and peanut production will have an effect beyond decreasing the amount of value received by the producer.

**Chart 4:
Total Irrigated Acreage in Georgia**



**Chart 5:
Total Acreage in the Flint River Basin**



Source of Charts 4 and 5: 1997 Census of Agriculture

Irrigation and Agriculture in the Flint River Basin

Producers in the FRB rely on irrigation as an integral input into the production of row crops. The 18 county region represents 36 percent of the state's total harvested crop acreage but has 54 percent of the total irrigated acreage in the state (see table 2). Roughly 30 percent of total harvested crop land in the 18 counties is irrigated. In certain counties, irrigated acres are almost 50 percent of total harvested crop land (1997 Census of Ag). Certain crops tend to be more highly irrigated. In Georgia, between 40 and 50 percent of all cotton and peanut crops receive irrigation and almost all commercial vegetables (Givan, et al).

Conclusions

This report has demonstrated the economic importance of agriculture in the eighteen counties of the Flint River Basin. The major commodities of this agricultural production are crops including cotton, peanuts and vegetables. These crops are in turn relatively dependent on irrigation. This is reflected in the high amounts of land irrigated in the region. Through this reasoning, it is clear that irrigation contributes to the economic health of the Flint River Basin region.

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Table 1: Value of Agricultural Production and Economic Impact - 18 County Flint River Basin Counties, 1998

<u>County</u>	<u>Corn</u>	<u>Cotton</u>	<u>Peanuts</u>	<u>Soybean</u>	<u>Other Row Crops</u>	<u>Fruits + Nuts</u>	<u>Vegetables</u>
Baker	\$4,032,000	\$10,400,000	\$15,525,000	\$573,750	\$2,282,500	\$190,000	\$1,482,800
Calhoun	\$2,141,647	\$7,648,518	\$15,970,338	\$204,408	\$2,135,042	\$2,160,229	\$75,000
Colquitt	\$395,224	\$24,971,286	\$8,278,130	\$87,302	\$13,038,110	\$7,398,850	\$44,295,638
Crisp	\$413,154	\$13,610,740	\$7,759,123	\$226,195	\$442,803	\$1,662,500	\$6,820,000
Decatur	\$2,696,345	\$19,475,040	\$22,060,238	\$168,300	\$1,276,877	\$330,245	\$84,026,645
Dooly	\$148,819	\$27,533,844	\$12,750,250	\$505,318	\$617,770	\$599,925	\$2,877,780
Dougherty	\$378,000	\$3,120,000	\$4,852,125	\$61,200	\$504,400	\$6,840,000	\$267,700
Early	\$3,243,429	\$9,094,150	\$23,741,699	\$454,792	\$1,444,900	\$646,000	\$0
Grady	\$798,788	\$5,250,056	\$6,503,689	\$189,353	\$3,015,987	\$587,400	\$6,106,672
Lee	\$2,662,590	\$10,101,780	\$9,307,534	\$108,610	\$1,212,049	\$5,700,000	\$4,224,377
Miller	\$4,937,888	\$9,752,015	\$22,699,165	\$66,963	\$719,499	\$0	\$1,416,724
Mitchell	\$3,276,000	\$21,840,000	\$19,180,281	\$255,000	\$4,414,500	\$5,130,000	\$19,376,125
Randolph	\$1,604,064	\$4,015,830	\$13,224,000	\$349,988	\$1,773,740	\$62,700	\$2,500
Seminole	\$6,886,754	\$7,823,270	\$13,018,976	\$308,734	\$619,211	\$1,022,500	\$13,688,960
Sumter	\$1,963,500	\$9,213,750	\$11,320,171	\$1,020,000	\$1,870,200	\$1,681,500	\$14,811,494
Terrell	\$2,689,176	\$6,300,320	\$12,563,099	\$441,634	\$1,387,244	\$652,460	\$278,575
Turner	\$474,369	\$9,265,750	\$11,469,256	\$40,341	\$797,520	\$281,580	\$3,432,926
Worth	\$1,045,044	\$19,273,914	\$24,250,542	\$295,137	\$3,798,147	\$185,060	\$4,264,743
18 County Total	\$39,786,790	\$218,690,262	\$254,473,615	\$5,357,025	\$41,350,499	\$35,130,949	\$207,448,659
State Total	\$86,501,613	\$511,515,891	\$428,770,430	\$30,205,039	\$207,868,871	\$103,692,954	\$477,748,278
18 County % of Total State	45.995%	42.753%	59.350%	17.736%	19.893%	33.880%	43.422%
Employment	796	2,363	5,030	106	827	829	4,898
Output	\$71,441,160	\$412,340,489	\$464,439,796	\$9,777,106	\$74,248,956	\$65,016,846	\$383,925,233
Employment is the number of jobs associated with the value of output for the commodity.							
Output is the total value generated in the economy by the amount of value generated directly by the commodity (does not include processing).							
Employment Multiplier (per \$1 million dollar change in output)	20.0047	10.8064	19.7649	19.7649	20.0047	23.6087	23.6087
Output Multiplier	1.7956	1.8855	1.8251	1.8251	1.7956	1.8507	1.8507

Source: Center for Agribusiness and Economic Development, Department of Agricultural Economics, University of Georgia, February 2000.

Table 1: Continued

<u>County</u>	<u>Other crops</u>	<u>Beef</u>	<u>Broilers</u>	<u>Hogs</u>	<u>Other Livestock</u>	<u>Other Income</u>	<u>County Total Ag Value</u>
Baker	\$2,764,900	\$1,058,000	\$35,110,766	\$1,270,000	\$0	\$4,286,784	\$78,976,500
Calhoun	\$2,264,800	\$900,375	\$31,752,000	\$281,532	\$243,000	\$2,422,371	\$68,199,259
Colquitt	\$12,005,784	\$3,207,297	\$16,972,576	\$1,843,430	\$4,190,292	\$10,403,494	\$147,087,412
Crisp	\$5,742,923	\$1,449,300	\$4,492,511	\$243,027	\$3,750	\$4,866,024	\$47,732,050
Decatur	\$18,635,056	\$2,778,725	\$29,730,698	\$44,000	\$3,346,400	\$12,568,691	\$197,137,259
Dooly	\$7,275,000	\$801,375	\$2,343,128	\$457,200	\$315,000	\$8,627,545	\$64,852,954
Dougherty	\$1,887,400	\$792,050	\$1,183,896	\$0	\$336,000	\$3,255,295	\$23,478,066
Early	\$3,365,849	\$2,595,000	\$0	\$440,487	\$1,600,000	\$8,156,409	\$54,782,716
Grady	\$42,655,956	\$2,895,800	\$25,157,790	\$1,777,136	\$2,700,625	\$4,100,182	\$101,739,434
Lee	\$9,555,000	\$1,388,500	\$0	\$15,875	\$5,548,000	\$9,536,057	\$59,360,372
Miller	\$931,856	\$1,795,350	\$3,118,500	\$546,354	\$0	\$5,418,166	\$51,402,480
Mitchell	\$10,417,000	\$4,425,000	\$48,630,173	\$2,659,800	\$12,722,600	\$11,228,081	\$163,554,560
Randolph	\$8,445,243	\$1,569,700	\$0	\$365,125	\$586,008	\$3,496,362	\$35,495,259
Seminole	\$3,048,200	\$2,099,600	\$0	\$91,059	\$1,284,975	\$3,305,216	\$53,197,454
Sumter	\$17,288,451	\$1,922,750	\$22,614,018	\$607,568	\$8,101,931	\$3,159,910	\$95,575,243
Terrell	\$6,204,908	\$335,850	\$0	\$11,494	\$1,618,750	\$4,829,237	\$37,312,747
Turner	\$10,253,000	\$3,295,500	\$11,049,696	\$146,050	\$15,330	\$1,359,692	\$51,881,010
Worth	\$8,643,670	\$3,192,990	\$6,577,200	\$728,472	\$1,208,024	\$9,921,010	\$83,383,953
18 County Total	\$171,384,995	\$36,503,162	\$238,732,952	\$11,528,609	\$43,820,684	\$110,940,526	\$1,415,148,727
State Total	\$1,236,172,018	\$247,437,486	\$3,273,930,048	\$72,498,014	\$698,306,464	\$459,170,517	\$7,833,817,623
18 County % of Total State	13.864%	14.752%	7.292%	15.902%	6.275%	24.161%	18.065%
Employment	1,611	939	2,702	2,485	2,715		25,300
Output	\$268,526,011	\$66,205,785	\$493,270,025	\$20,450,600	\$81,997,264	\$194,145,921	\$2,605,785,190
Employment Multiplier	9.4009	25.733	11.3178	215.5085	61.9482		
Output Multiplier	1.5668	1.8137	2.0662	1.7739	1.8712	1.75	

Table 2: Irrigated Acres - 18 County Flint River Basin Counties, 1997

Table 2: Irrigated Acres - 18 County Flint River Basin Counties, 1997

County	Total Irrigated Acres	Harvested Acres	Non-irrigated Acres	Percent Harvest Acres Irrigated
Baker	24,933	50,329	25,396	49.54%
Calhoun	21,360	57,217	35,857	37.33%
Colquitt	34,520	111,343	76,823	31.00%
Crisp	14,758	69,434	54,676	21.25%
Decatur	41,040	85,272	44,232	48.13%
Dooly	14,827	110,575	95,748	13.41%
Dougherty	12,690	34,965	22,275	36.29%
Early	31,498	87,718	56,220	35.91%
Grady	6,280	58,077	51,797	10.81%
Lee	16,001	65,975	49,974	24.25%
Miller	25,814	67,181	41,367	38.42%
Mitchell	40,579	114,609	74,030	35.41%
Randolph	15,137	51,322	36,185	29.49%
Seminole	29,483	62,656	33,173	47.06%
Sumter	29,630	101,747	72,117	29.12%
Terrell	15,473	75,199	59,726	20.58%
Turner	9,480	54,029	44,549	17.55%
Worth	21,479	107,704	86,225	19.94%
18 County Total	404,982	1,365,352	960,370	29.66%
State Total	748,520	3,762,559	3,014,039	19.89%

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