Potential Economic Impact of the Central American Free Trade Agreement–Dominican Republic on the United States Economy

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Interest in United States agricultural trade with Central America and the Dominican Republic has increased significantly since the signing of the Central American Free Trade Agreement-Dominican Republic (CAFTA-DR) on August 2, 2005. U.S. agriculture could realize increased exports as the agreement is implemented by all participants. The CAFTA-DR provides for a free trade area between the United States, five Central American countries and the Dominican Republic. The purpose of this study is to estimate the economic impacts of increased agricultural exports to the CAFTA-DR region on the U.S. economy.

Trade negotiations began in January 2003 and on May 28, 2004 the United States along with Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua signed the Central American Free Trade Agreement (CAFTA). In August 2004 the Dominican Republic was added to the agreement creating the Central American Free Trade Agreement-Dominican Republic. However, shortly after joining the agreement the Dominican Republic violated the rules of the agreement by passing a revenue bill that included a 25% tax on beverages containing High Fructose Corn Syrup. Subsequently, the tax was repealed, allowing the D.R. to participate in the agreement. On June 29, 2005 the Senate Finance Committee approved legislation that would implement the trade agreement. One day later the U.S. Senate approved the free trade agreement with Central America and the Dominican Republic. Approximately one month later the House approved CAFTA-DR with a narrow 2-vote margin, 217-215. President Bush signed the implementing legislation on August 2, 2005.

U.S. agriculture could benefit from the trade agreement with the eventual elimination of tariffs giving the United States a competitive advantage over other countries such as the European Union who does not have preferential access to these markets. It is estimated that CAFTA will increase the value of U.S. agricultural exports by $1.0 billion (AFBF). Adding the Dominican Republic to the agreement has the potential to boost exports another $576 million, totaling $1.6 billion. At the end of the 20 year implementation period increased sugar imports could reduce the benefits of CAFTA-DR by $181 million, resulting in a net gain in exports to these countries of approximately $1.3 billion. All 50 states export to the five Central American countries and the Dominican Republic. The leading export states are Florida, North Carolina, Texas, Louisiana, California, Georgia, Alabama, Massachusetts, South Carolina and Pennsylvania.

Economic and Political Economy of the CAFTA-DR Countries

CAFTA-DR involves six middle and low income countries with limited production and expanding demand for a variety of bulk, semi-processed, and consumer ready food products (AFBF). The Central American countries of Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua and the Dominican Republic represent a broad range of economic and political maturity. These countries have a total combined population of approximately 47 million with an average two-percent per year growth rate (Table 1). The population of the United States is approximately 296 million people with a one-percent per year growth rate.

With a 2004 Gross Domestic Product (GDP) of $11.75 trillion and a per capita GDP of $40,100 the United States is the world's largest economy and a major market for both domestic and foreign producers of goods and services. United States exports include capital goods, automobiles, industrial supplies and raw materials, consumer goods and agricultural products. In

2004, total U.S. exports accounted for approximately 7% percent of GDP, totaling $795 billion. Over this same time period U.S. imports totaled $1.48 trillion accounting for 13% of GDP. In 2004 total U.S. international trade accounted for 20% of GDP compared to 12% in 1994. In fact the U.S. is now more dependent on international trade than any other time since 1900-1914 when 16% of GDP was generated by merchandise trade (Taylor et al, 1999).

Table 1: CAFTA-DR Demographic and Economic Overview

Country	Population (millions)	Growth Rate (%)	Literacy Rate (%)	Population Below Poverty Level (%)	Agricultural Population (%)	GDP (billion)	GDP Real Growth Rate	GDP Per Capita
United States	**295.7**	**0.92**	**97**	**12**	**0.7**	**$11.75 *trillion***	**4.4**	**$40,100**
Costa Rica	4.0	1.48	96	18	20	$37.97	3.9	$9,600
Dominican Republic	9.0	1.29	84.7	25	17	$55.68	1.7	$6,300
Guatemala	14.7	2.57	70.6	75	50	$59.47	2.6	$4,200
El Salvador	6.7	1.75	80.2	36.1	17.1	$32.35	1.8	$4,900
Honduras	7.0	2.16	76.2	53	34	$18.79	4.2	$2,800
Nicaragua	5.5	1.92	67.5	50	30.5	$12.34	4	$2,300
Central America-Dominican Republic Average	**46.8**	**1.86**	**79.20**	**42.85**	**28.10**	**$216.6**	**3.03**	**$5,017**

Source: http://www.cia.gov

The five Central American countries along with the Dominican Republic have a combined population of 47 million people with an annual average growth rate of two percent. Guatemala is the most heavily populated country, with 14.7 million people, but is also a relativity poor country with a per capita GDP of $4,200. Costa Rica and the Dominican Republic are the most prosperous countries, with per capita GDPs of $9,600 and $6,300, respectively. It can be seen that the Central American-Dominican Republic region consists of a large consumer market with a low level of purchasing power. However, as these countries become more developed, gaining higher levels of purchasing power they are likely to purchase more agricultural commodities.

U.S. Agricultural Trade with CAFTA-DR Countries

In 2004, U.S. agricultural trade accounted for one percent of GDP. Agricultural exports were 9.2% of total trade and imports were 4.9% of total trade. Forecast agricultural trade for 2005 is approximately $118.5 billion. Agricultural exports are forecast at $60.5 billion and imports are forecast at $58 billion, resulting in a $2.5 billion trade surplus. Exports remain below 2004 levels due to record levels of grain, soybean and cotton supplies, increased foreign competition and lower prices (Brooks et al, 2005). In 2004 agricultural exports exceeded $62 billion and imports were $52 billion resulting in an agricultural trade surplus of approximately $10 billion. The top five export markets for U.S. agricultural products in 2004 were Canada, Mexico, Japan, the European Union and China.

Taken together the five Central American countries and the Dominican Republic represent the United States' 12th largest trading partner. During 1999-2004 total U.S. exports of agricultural and non-agricultural products to Central America increased 42%. In 2003, two-way trade, between the U.S. and the CAFTA-DR countries, totaled $31.9 billon. The U.S. is the largest supplier of agricultural goods to the CAFTA-DR region, accounting for 40% of the regions agricultural imports. U.S. agricultural exports to the region were approximately $1.7 billion in 2004. However, U.S. market share has declined from 54% in 1995 to 40% in 2004, due in large part to preferential access conditions afforded to third countries by Central America through bilateral trade agreements (http://www.fas.usda.gov/).

Orderly transition to freer trade is a major issue for CAFTA-DR. With large shares of the population in agriculture and relatively poor and illiterate, economic disruption caused by greater imports and low prices can be devastating. Government programs to mitigate negative impacts of adjusting to freer trade will be important. The absence of an effective transition policy, will likely lead to social disruption and political instability in the most fragile economies.

Increased Market Access

CAFTA-DR would allow for a more reciprocal trade relationship between the U.S., the five Central American countries and the Dominican Republic. Under the Caribbean Basin Economic Recovery Act (CBERA) Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras and Nicaragua enjoy duty free access on 99% of their products exported to the United States. CBERA was initiated in 1983 to facilitate economic development and export diversification of the Caribbean Basin economies (Wainio, et al 2005). Nonreciprocal trade agreements such as CBERA we created to help promote economic growth in developing countries by providing with enhanced trading relationships with the United States. U.S. agricultural trade preference programs offer duty free access to all eligible products. Import sensitive products are either excluded or import quantities are limited, as is the case with U.S. sugar imports.

Under WTO commitments the Central American countries and the Dominican Republic are allowed to charge high tariffs on goods imported from the United States. The average allowed tariff for agricultural products is 42% in Costa Rica, 40% in the Dominican Republic, 41% in El Salvador, 49% in Guatemala, 35% in Honduras, and 60% in Nicaragua (USDA, 2005). Actual applied tariffs are lower on specific products. However, these tariffs place U.S. producers of agricultural products at a competitive disadvantage. In addition there is no guarantee these countries will not raise their tariff rates to WTO limits.

Under CAFTA-DR, liberalization would occur through tariff reductions, tariff-rate quota expansion and a combination of approaches. There would be a separate schedule of commitments for each country. Tariffs will be eliminated for most products, except sugar, fresh potatoes and fresh onions for Costa Rica, and white corn for the other Central American countries. Depending on the product and country tariff phase-outs will occur immediately, within 5 years, 10 years, 12 years, 15 years, or 18-20 years for chicken leg quarters, rice and dairy products. Immediate access will be provided through the creation and expansion of tariff rate quotas. TRQ schedules and export data are presented for selected agricultural commodities: beef, cotton, rice, and soybeans.

Beef

In 2003, the U.S. exported approximately 3,400 metric tons (MT) of beef valued at $10.4 million to Central America and the Dominican Republic (Table 2). Costa Rica, the Dominican Republic and Guatemala accounted for 88% of U.S. beef exports to the region. In 2004, BSE had a negative impact on the U.S. beef industry causing a sharp decline in beef exports. U.S. beef exports to the CAFTA-DR region declined 66% over a one year period, to 1,100 MT in 2004. However, from 2001-2003 annual beef exports to the CAFTA-DR region averaged 3,100 MT valued at $9 million. The U.S. share of the CAFTA-DR beef import market is over 60% (value).

Table 2: U.S. Beef Exports to the CAFTA-DR Region (2001-2004)

	2001	2002	2003	3 Year Average	2004
			Value ($1000)		
Costa Rica	$1,781	$1,945	$2,263	$1,996	$168
Dominican Republic	$2,207	$2,258	$3,434	$2,633	$1,408
El Salvador	$409	$264	$268	$314	$204
Guatemala	$3,262	$3,542	$3,783	$3,529	$1,512
Honduras	$428	$177	$347	$317	$811
Nicaragua	$95	$313	$316	$241	$119
Total	**$8,182**	**$8,499**	**$10,411**	**$9,031**	**$4,222**
			Quantity (MT)		
Costa Rica	922.2	757.9	989.2	889.8	51.5
Dominican Republic	858.6	877.0	905.9	880.5	305.7
El Salvador	164.9	84.7	74.0	107.9	54.3
Guatemala	821.2	932.6	1,091.4	948.4	277.2
Honduras	199.6	99.4	175.0	158.0	406.6
Nicaragua	23.4	155.9	137.6	105.6	38.3
Total	**2,989.9**	**2,907.5**	**3,373.1**	**3,090.2**	**1,133.6**

Source: http://www.fas.usda.gov/ustrade/

WTO maximum allowed tariff rates for beef range between 35-79%. Actual applied rates are between 15-30%, depending on the product and country. Under CAFTA-DR tariffs on Prime and Choice cuts will be eliminated immediately (except in the Dominican Republic). Immediate duty-free access will be given to other beef cuts, depending on the country, through an initial TRQ of 1,165 MT, expanding annually until duties are fully phased out.

For Costa Rica tariffs will be eliminated immediately for Prime and Choice cuts and offal, there will be a 15 year phase out period on all other beef products with a back-loaded schedule and safeguard. In the Dominican Republic the U.S. gains immediate duty free access for 1,100 MT of Prime and Choice cuts through a TRQ growing 100 MT annually (Appendix, Table 1). The out-of-quota duty will be phased out over 15 years. Beef trimmings face an initial TRQ of 220 MT, growing 10 percent per year over a 15 year period (Appendix, Table1).

For El Salvador there is a 15 year back-loaded tariff reduction schedule for other products beside Prime and Choice cuts (Appendix, Table 2) and a 5 year tariff phase out for offal. A TRQ for other beef cuts is established with a base quantity of 1,100 MT growing five percent per year. A TRQ for other beef cuts exists for Guatemala with a base quantity of 1,060 MT with an annual six percent growth rate. All other products will be phased out over 15 years for both Guatemala and Honduras. For Honduras and Nicaragua tariffs on offal are phased out over a 5 year period. For Nicaragua there is a 15 year phase out on all other products with a safe guard and a back-loaded reduction schedule. In order to facilitate U.S. exports, the CAFTA-DR countries are working toward the recognition of the U.S. meat and certification systems.

Cotton

In 2004, U.S. cotton suppliers exported 44,300 MT of cotton valued at $66.4 million to the CAFTA-DR region (Table 3). Guatemala and El Salvador were the two primary importers of cotton accounting for 90% of U.S. cotton imports to the CAFTA-DR region. In 2004, Guatemala and El Salvador imported approximately 21,800 MT and 17,700 MT of cotton valued at $33.8 million and $25.7 million, respectively (HTS 5201.00). Annual U.S. cotton exports to the CAFTA-DR region from 2001-2003 averaged 40,000 MT valued at $44 million.

Table 3: U.S. Cotton Exports to the CAFTA-DR Region (2001-2004)

	2001	2002	2003	3 Year Average	2004
			Value ($1000)		
Costa Rica	$18	$0	$244	$87	$2,418
Dominican Republic	$12,798	$311	$651	$4,587	$1,227
El Salvador	$20,965	$14,538	$23,856	$19,786	$25,689
Guatemala	$16,467	$16,173	$22,099	$18,246	$33,834
Honduras	$866	$1,649	$1,027	$1,181	$3,270
Nicaragua	$30	$0	$0	$10	$0
Total	**$51,144**	**$32,671**	**$47,877**	**$43,897**	**$66,438**
			Quantity (MT)		
Costa Rica	11.3	0.0	192.7	68.0	1,656.5
Dominican Republic	9,456.7	424.7	569.4	3,483.6	991.9
El Salvador	18,140.8	17,843.6	20,603.2	18,862.5	17,696.8
Guatemala	14,314.7	17,617.3	17,709.1	16,547.0	21,843.1
Honduras	789.1	1,709.5	584.4	1,027.7	2,113.3
Nicaragua	20.5	0.0	0.0	6.8	0.0
Total	**42,733.1**	**37,595.1**	**39,658.8**	**39,995.7**	**44,301.6**

Source: http://www.fas.usda.gov/ustrade/

Currently U.S. cotton shipped to Costa Rica faces an applied import tariff of one percent and enters the remaining CAFTA-DR countries duty free. The WTO allows tariffs as high as 60%. Immediately after implementation of the trade agreement all bound import tariffs will be eliminated.

Rice

The U.S. share of the Central American – Dominican Republic rice imports is approximately 98%. During 2001-2003, annual U.S. rice shipments averaged 553,800 MT valued at $83.9 million to all six countries combined (Table 4). In 2004, U.S. rice exports to the CAFTA-DR region were 714,400 MT valued at $184.2 million. Costa Rice is the largest importer of rice accounting for 25% of U.S. rice imports to the CAFTA-DR region.

Table 4: U.S. Rice Exports to the CAFTA-DR Region (2001-2004)

	2001	2002	2003	3 Year Average	2004
			Value ($1000)		
Costa Rica	$9,499	$15,673	$17,293	$14,155	$45,744
Dominican Republic	$3,786	$75	$2,559	$2,140	$35,738
El Salvador	$17,569	$14,942	$17,260	$16,590	$15,581
Guatemala	$7,935	$9,600	$9,374	$8,970	$17,531
Honduras	$20,704	$16,422	$20,129	$19,085	$33,063
Nicaragua	$26,765	$19,142	$23,035	$22,981	$36,585
Total	**$86,258**	**$75,854**	**$89,650**	**$83,921**	**$184,242**
			Quantity (MT)		
Costa Rica	57,648	123,360	134,546	105,185	190,784
Dominican Republic	14,734	241	8,082	7,686	89,246
El Salvador	103,646	109,567	96,605	103,273	69,134
Guatemala	47,066	68,230	58,793	58,030	76,691
Honduras	135,573	145,442	123,309	134,775	142,300
Nicaragua	158,221	140,174	136,055	144,816	146,257
Total	**516,887**	**587,014**	**557,390**	**553,764**	**714,410**

Source: http://www.fas.usda.gov/ustrade/

Currently U.S. rice exports to the CAFTA-DR region face tariffs of 15-60%, with WTO rules permitting tariffs as high as 35-90%. After implementation each country will establish zero duty TRQs for milled and rough rice. In year one of implementation the zero duty TRQ access will total over 400,000 MT and will grow annually throughout the tariff phase out period. For El Salvador, Guatemala, Honduras and Nicaragua tariffs will be phased out over 18 years. Tariffs for Costa Rica and the Dominican Republic will be phased out over 20 years. All tariff cuts will be back-loaded, with out-of-quota imports subject to a safeguard.

Out-of-quota tariffs remain unchanged during the first ten years of the agreement. After 10 years, tariffs for the five Central American countries are subject to a one-third reduction over the next four years (5 years for Costa Rica). Tariffs then are eliminated over the remaining 4 years (5 years for Costa Rica). The out-of-quota tariff for the Dominican Republic remains unchanged during the first 10 years, then is reduced by 40% over the next 5 years, with total elimination over the last 5 years. Established TRQs and growth rates are presented below in Tables 5 and 6.

Table 5: Rough Rice Established Tariff Rate Quotas and Growth Rates

	Costa Rica	*El Salvador*	*Guatemala*	*Honduras*	*Nicaragua*	*Total*
Base TRQ (MT)	51,000	62,220*	54,600	91,800	92,700	352,320
Growth Rate/year	2%	2%	5%	2%	3%	

* Expands 2% annually for 5 years, in year 6 the quota is increased by an additional 3,000 MT and continues expanding at 2% thereafter.
Note: U.S. brown rice exported to the Dominican Republic will receive a TRQ of 2,140 MT with seven percent annual growth.

Table 6: Milled Rice Established Tariff Rate Quotas and Growth Rates

	Costa Rica	*Dominican Republic*	*El Salvador*	*Guatemala*	*Honduras*	*Nicaragua*	*Total*
Base TRQ (MT)	5,250	8,560	5,625	10,500	8,925	13,650	52,510
Growth Rate/year	5%	7%	375/1000/325*	5%	5%	5%	

* 375 MT for the first five years, 1,000 MT increase in year 6 and 325 MT for every year after that.

Soybeans

In 2004, the U.S. share of the CAFTA-DR import market for soybeans and soybean meal was over 80% (USDA-FAS). U.S. soybean exports to Central America and the Dominican Republic totaled 147,000 MT valued at $45.7 million (Table 7). Annual average U.S. soybean exports to the CAFTA-DR region, from 2001-2003, totaled 227,400 MT valued at $48 million. Costa Rica is the largest importer of U.S. soybeans within the CAFTA-DR region. In 2004, Costa Rica accounted for 98% of U.S. soybean exports to the CAFTA-DR region.

Table 7: U.S. Soybean Exports to the CAFTA-DR Region (2001-2004)

	2001	2002	2003	3 Year Average	2004
			Value ($1000)		
Costa Rica	$37,618	$48,046	$51,173	$45,612	$44,973
Dominican Republic	$8	$0	$0	$3	$0
El Salvador	$121	$0	$239	$120	$0
Guatemala	$2,532	$1,476	$1,427	$1,812	$729
Honduras	$0	$0	$352	$117	$0
Nicaragua	$93	$577	$459	$376	$0
Total	**$40,372**	**$50,099**	**$53,650**	**$48,040**	**$45,702**
			Quantity (MT)		
Costa Rica	205,001	239,599	203,517	216,039	145,044
Dominican Republic	16	0	0	5	0
El Salvador	550	0	1,000	517	0
Guatemala	13,198	7,356	5,880	8,811	1,980
Honduras	0	0	1,493	498	0
Nicaragua	420	2,557	1,650	1,542	0
Total	**219,185**	**249,512**	**213,540**	**227,412**	**147,024**

Source: http://www.fas.usda.gov/ustrade/

U.S. soybeans and meal enter the Dominican Republic, El Salvador and Honduras duty free but face applied tariffs of 1-5% in the three remaining countries. Soybean WTO bindings range from 20%-90%. Duties on soybean meal and flour will be eliminated almost immediately in most countries and vegetable oil duties will be phased out over 15 years (Table 8). Duties on crude soybean oil will be locked in at zero immediately and refined oil will be phased out over 12-15 years.

Table 8: Tariff Rate Quota Schedule for Soybean and Soybean Products

	HTS	Costa Rice	El Salvador	Guatemala	Honduras	Nicaragua
Soybeans	1201.00	Immediate	Immediate	Immediate	Immediate	Immediate
Soybean Flour	1208.10	15 years	Immediate	Immediate	Immediate	10 years
Crude Soybean Oil	1507.10	15 years	Immediate	Immediate	12 years	Immediate
Refined Soybean Oil	1507.90	15 years	12 years	15 years	15 years	15 years
Protein Concentrates	2106.10	Immediate	Immediate	Immediate	Immediate	Immediate
Soybean Meal	2304	15 years	Immediate	Immediate	Immediate	Immediate

Methodology

The economic impact of expanded U.S. agricultural exports to Central America and the Dominican Republic were estimated using an input-output model of the United States. Baseline export estimates were developed using a three year average from 2001-2003. After calculating baseline exports these numbers were ran through IMPLAN to determine the impact of specific U.S. agricultural exports to the CAFTA-DR region on total business activity (output), labor income, other income and jobs.

IMPLAN is an input-output model that develops a computer-based algorithmic set of equations to evaluate sales and purchases for each sector of the economy, thereby identifying interrelationships between the sectors (Boehm, et al.). It is one of the most widely used methods for developing regional input-output models (Jones). Input-Output models use multipliers to estimate the impact of a change in output of one sector on the output requirements of other sectors. Multipliers account for the difference between an initial effect of a change in final demand and the total effects of that change. The model accounts for backward linkages. Backward linkages connect an industry to its suppliers of goods and services.

Three types of effects are measured by IMPLAN: direct, indirect and induced. Direct effects are calculated relative to sales (exports) and represent the amount of change in the beef, cotton, rice or soybean sectors due to increased exports to the CAFTA-DR region. Indirect effects are also calculated relative to sales and represent the amount of secondary change within the United States that is required by suppliers of the beef, cotton, rice and soybean sectors to meet the additional demands of these primary industries due to increased exports. Induced effects are the impact of workers and business owners spending their income within the United States.

Four statistics are reported for each commodity: total business activity (output), labor income, other income and employment. Total business activity or output is the value of output produced by an industry or sector. Labor income is composed of employee compensation and proprietary income. Employee compensation is wage and salary payments in addition to benefits such as health insurance, retirement contributions and any other non-cash compensation. Proprietary income is payments (income) received by self-employed individuals. Other income is composed of two components: other property type income and indirect business taxes. Other property type income is payments received from interest, rents, royalties, dividends and profits. Indirect business taxes are excise and sales taxes paid by individuals to businesses. Employment includes wage and salary employees along with self-employed individuals and includes both full time and part time workers.

Impact of U.S. Agricultural Exports

In addition to the direct impact U.S. exports to Central America and the Dominican Republic have on the beef, cotton, rice and soybean sectors, there are also indirect and induced effects that need to be taken into account. Indirect effects include purchases of goods and services by each sector to produce a final product for export. For example beef slaughtering and packing plants purchase live animals from cattle producers and then add value to the product by processing the animal before the final sale. Induced effects are changes in household spending as household income increases or decreases due to changes in production.

In input/out analysis, output is measured in dollar sales in exports to Central America and the Dominican Republic. The estimated total economic impact on the value of business output attributed to average U.S. exports of beef, cotton, rice and soybeans is $537.9 million annually (Table 10). This estimated impact represents the total value of sales by all industries within the

United States that are impacted both directly and indirectly by U.S. beef exports. The annual income impact attributable to U.S. exports of beef, cotton, rice and soybeans is estimated to be $138.9 million. U.S. exports to Central America and the Dominican Republic help support over 6,300 jobs annually.

Table 10: Impact of CAFTA-DR on U.S. Agricultural Exports (Average 2001-2003)

	Output	Other Income	Labor Income	Employment
	$1,000			
Beef*	$ 67,886	$ 10,048	$ 14,819	503
Cotton	$120,639	$24,814	$38,623	1,327
Rice	$227,778	$53,340	$55,124	2,709
Soybeans	$119,060	$32,311	$30,352	1,781
Total Impact	**$537,946**	**$120,513**	**$138,918**	**6,320**

***Includes Animal Fat*

Total Business Activity and Employment Impacts

<u>Beef Exports</u>

The total estimated impact of average U.S. beef exports to the CAFTA-DR region was estimated at $67.9 million annually and helped support 500 jobs within the beef and related industries. The value of business output includes $19 million as the estimated worth of the direct output of beef exports to Central American and the Dominican Republic. An estimated additional $30.5 million in indirect value of output is estimated from IMPLAN to be required by businesses that supply inputs to the beef industry. The total of direct output by the beef industry and indirect output by other businesses is $49.5 million.

Indirect expenditures are distributed over a wide variety of businesses within the United States. Businesses impacted the most include businesses engaged in cattle ranching and farming, other animal production, wholesale trade, crop and grain farming, real estate, food manufacturing and transportation. The induced effects are estimated at $15.5 million.

Cotton Exports

Average U.S. cotton exports to the CAFTA-DR region are estimated to have an annual impact of $120.6 million on total business activity and helped support over 1,300 jobs within the cotton and related industries. This value includes $43.9 million attributed to the direct output of the cotton industry, which exports an average 40,000 MT of cotton valued at $43.9 million annually o the CAFTA-DR region. IMPLAN estimated an additional $36.2 million of indirect value of output is required by businesses that supply inputs to the cotton sector. The total of indirect and direct business activity attributed to annual average cotton exports to the CAFTA-DR region is $76.7 million.

Indirect expenditures are distributed over a wide variety of businesses throughout the United States. Businesses engaged in agricultural support activities, real estate, wholesale trade, pesticide or other agricultural chemical application, and transportation are impacted the most. The induced effects of U.S. cotton exports to the CAFTA-DR region are estimated at $40.5 million.

Rice Exports

Milled rice makes of the majority of U.S. rice exports to Central America and the Dominican Republic. Annual U.S. rice exports to the CAFTA-DR region are estimated to have a $227.8 million impact on total business activity. Of this value $83.9 million can be attributed to direct output within the rice milling sector. An additional $86.1 million of indirect output is required from the suppliers to the rice milling industry. Major suppliers to the rice milling sector are businesses engaged in grain farming and whole sale trade. U.S. rice exports to the CAFTA-DR region help support 2,700 jobs within the rice and related industries. The induced effects of U.S. rice exports to Central America and the Dominican Republic are estimated at $57.8 million.

Soybean Exports

The estimated total economic from U.S. soybean exports to the CAFTA-DR region on the total value of business output is $119.1 million. Of this the soybean sector contributes $48,040,000 in direct output. An estimated $39.1 million of indirect value of output is required by businesses that supply inputs to the soybean sector. Primary suppliers include businesses engaged in real estate, wholesale trade, and pesticide and agricultural chemical application. U.S. soybean exports to Central America help support approximately 1,800 jobs. Induced effects are estimated at $32 million.

Income Impacts

The annual income impact attributable to U.S. exports of beef, cotton, rice and soybeans to the CAFTA-DR region is $138.9 million.

Beef Exports

U.S. beef exports to the CAFTA-DR region annually contribute $2.5 million to total U.S. labor income. Of this, $9.7 million is income generated directly by the beef sector and indirectly by industries which provide supplies and services to the beef sector. The induced household effect is estimated at $5.1 million. The induced effect is the secondary economic impact that is created through spending and re-spending of income paid to local households in the study area (Jones).

Cotton Exports

The annual income impact attributable to U.S. cotton exports to the CAFTA-DR region is estimated to be $38.6 million. Of this, $25.1 million is income generated by the cotton sector through its payroll and indirectly through the payrolls of businesses that provide productive inputs and service to the cotton sector. The induced household income impact is estimated at $13.5 million.

Rice Exports

U.S. rice exports to Central America and the Dominican Republic annually contribute an estimated $55.1 million to total U.S. labor income. Of this, $35.9 million is income generated directly by the rice industry through its payroll and indirectly through the payrolls of businesses that provide inputs and services to the rice industry. The induced household income is impact is estimated at $19.3 million.

Soybean Exports

The annual income impact attributable to U.S. soybean exports to the CAFTA-DR region is estimated to be $30.4 million. Of this, $19.7 million is income generated directly by the soybean sector through its payroll and indirectly through the payrolls of businesses that provide inputs and services to the soybean sector. The induced household income is impact is estimated at $10.7 million.

AFBF Estimated Impacts

The American Farm Bureau Federation (AFBF) analyzed two scenarios to estimate the impact of CAFTA-DR on U.S. exports of agricultural products: 1) no agreement in 2024 and 2) the draft agreement put into place with full implementation in 2024. The first scenario required anticipating demand, supply, exports and imports in 2024 for the major grain, oilseed, livestock and fiber products. Supply was estimated by looking at historical trends, demand was estimated by projecting economic growth and population gains, export projections were based on trends and imports were taken as a residual.

In scenario 2, it was assumed the main difference between the two scenarios would be due to changes in commodity price resulting from the elimination of tariffs and the higher general economic growth and per capita incomes likely with an agreement (AFBF). Supply, demand, price and income elasticities developed by the Food and Agriculture Organization of the United Nations were used to adjust production and consumption. Imports were then recalculated. After calculating imports, market share was then calculated using historical data. For the non-agreement case, the 1999-2001 base shares were used. For the second scenario, the highest United States market share for the 1990's was used. To estimate U.S. export demand, the market share estimates were then applied to the CAFTA-DR countries import demand.

Trade with the five Central American countries is estimated to boost U.S. exports $945 million above the $2.1 billion mark expected without an agreement. The AFBF estimates a $73 million increase in sugar exports from the Central American countries and a $485 million gain in United States exports of wheat, rice, corn, cotton, soybean products and livestock products.

Estimated increased exports with the Central American Free Trade Agreement in place, assuming constant 1999-2001 prices (not including the D.R.) for beef, cotton, rice, and soybean meal and oil are $52.1 million, $113.8 million, $253.0 million and $258.9 million, respectively. Without the agreement estimated exports in 2024 for beef, cotton, rice, and soybean meal and oil are $16.1 million, $86.8 million, $184.1 million, and $207.1 million, respectively (see Table 2). Increased demand for beef products are due to population growth, higher incomes and increased tourism activities. Increased demand for cotton is related to both increased domestic demand for textiles and apparel and increased import demand from the U.S.

Table 11: AFBF Estimated Exports to CAFTA-DR Region

	1999-01	2024 U.S. Exports		CAFTA-DR
Commodity	U.S. Exports	Without CAFTA-DR	With CAFTA-DR	Difference
		Value ($1,000)		
Beef	$10,050.4	$27,258.2	$74,332.7	$47,074.5
Cotton	$50,558.4	$87,729.7	$115,331.9	$27,602.2
Rice	$96,999.1	$220,910.4	$312,421.2	$91,510.8
Soybean Meal	$140,421.3	$292,351.5	$348,923.5	$56,572.0
Soybean Oil	$28,895.3	$59,132.4	$87,522.0	$28,389.6

Source: American Farm Bureau Federation, 2005.

Beef

Without a free trade agreement in place U.S. beef exports to the region would total $27.3 million in 2024. Assuming passage of the free trade agreement in its current context estimated beef exports would be approximately $47 million more, totaling $74.3 million in 2024. The economic impacts of the AFBF projected exports for 2024 were estimated using IMPLAN to capture the future impacts of the CAFTA-DR on U.S. beef exports. Table 12 presents the American Farm Bureau Federation estimated impacts of the CAFTA-DR on U.S. beef exports to the region.

Table 12: Impact of Estimated Beef Exports

	Output	Valued Added	Labor Income	Employment
		Value ($1000)		
with CAFTA-DR	$300,727	$49,233	$51,892	2,600
Without CAFTA-DR	$110,278	$13,405	$23,678	953
Difference	**$190,449**	**$35,828**	**$28,214**	**1,647**

CAFFTA-DR would result in total business activity of $300.7 million. Without the free trade agreement estimated business activity would be $100.3 million. Increased beef exports to Central America and the Dominican Republic would help support an additional 1,647 jobs. Labor income would more than double with the passage of the agreement, totaling $51.9 million.

Value-added impacts due to the passage of the free trade agreement would also increase substantially.

Cotton

With a free trade agreement in place, U.S. cotton exports to the CAFTA-DR region are forecast at $115.3 million in 2024. The economic impacts of the AFBF projected exports for 2024 were estimated using IMPLAN to capture the future impacts of the CAFTA-DR on U.S. cotton exports. Table 13 presents the estimated impacts of the CAFTA-DR on U.S. cotton exports to the region.

Table 13: Impact of Estimated Cotton Exports

	Output	Valued Added	Labor Income	Employment
	Value ($1000)			
with CAFTA-DR	$318,609	$65,534	$102,003	3,504
without CAFTA-DR	$241,102	$48,962	$77,190	2,652
Difference	**$77,507**	**$16,572**	**$24,813**	**852**

Passage of the free trade agreement would result in total business activity of $318.6 million in the cotton and related industries. With the free trade agreement in place the U.S. cotton industry would contribute an additional $24.8 million to U.S. labor income. Increased trade to the CAFTA-DR region resulting from a free trade agreement would help support an additional 852 jobs with in the cotton and related industries.

Rice

Passage of the free trade agreement is expected to boost rice exports to the CAFTA-DR region $91.5 million to $312.4 million. Rice exports to Central American and the Dominican Republic under CAFTA-DR would result in $1 billion in total business activity within the rice and related industries. Income impacts are expected to exceed $120 million, while a net increase of 2,333 jobs will result.

Table 14: Impact of Estimated Rice Exports

	Output	Valued Added	Labor Income	Employment
		Value ($1000)		
with CAFTA-DR	$1,006,128	$185,958	$239,904	7,964
without CAFTA-DR	$711,425	$131,489	$169,634	5,631
Difference	**$294,703**	**$54,469**	**$70,270**	**2,333**

Soybean Meal and Oil

Table 15: Impact of Estimated Soybean Meal and Oil Exports

	Output	Valued Added	Labor Income	Employment
		Value ($1000)		
with CAFTA-DR	$1,442,924	$259,908	$304,510	12,861
without CAFTA-DR	$1,162,034	$209,312	$245,232	10,358
Difference	**$280,890**	**$50,596**	**$59,278**	**2,503**

Soybean Meal and Oil

Total net economic output to soybean meal and oil is expected to reach $281 million after full implementation of CAFTA-DR. Total output should approach $1.5 billion with an additional $560 million in income attributed to these exports. It is also estimated that 12,861 new jobs will be created to support soybean and soybean meal exports to the region.

Conclusions and Implications

More than a year after signing the Central American Free Trade Agreement – Dominican Republic the United States government has signed the agreement into law. However this agreement is expected to provide additional export opportunities for U.S. agriculture by lowering trade barriers to U.S. products in the Central American and Dominican Republic markets **IMPLAN was used to estimate the economic impacts of additional U.S. exports to CAFTA-DR for beef, cotton, rice and soybeans. It was estimated that the U.S. rice and soybean sectors will experience some of the largest economic impacts attributable to U.S. exports to**

the region. Rice exports alone will generate total economic output exceeding $1.0 billion create nearly 8,000 new jobs.

The economic impacts of exports from these four sectors alone is substantial, with output estimated at $3.0 billion and new job creation exceeding 27,000. Additional income attributable to these exports is estimated to reach $1.3 billion.

While the economic impacts of CAFTA-DR are important nationally, they are even more important to the southern United States. In this region the majority of the rice and cotton are produced as is a large share of beef. Further work is needed to estimate the precise impacts on the South, but it is expected they would be substantial. In addition, it will be important to estimate the negative impacts of increased import competition, especially on sugar, vegetables and fruit production. Again, most of these crops are concentrated in southern states.

As CAFTA-DR is implemented it will be important to monitor progress and impacts. Some tariff reductions are backloaded, leading to little or no market access in the first years of the agreement. Rice is an example. If implementation proceeds as scheduled, the economic impacts in this study should be valid. If delays in market access occur, new estimates will be needed to quantify the impacts of limited market access and reduced economic impacts.

References:

Brooks, N., C. Whitton, and E. Carter. “Outlook for U.S. Agricultural Trade.” U.S. Department of Agriculture, Economic Research Service and Foreign Agricultural Service, February 24, 2005.

Taylor, T.G., G.F. Fairchild, H.M. Harris, Jr., and P. Rosson. “Agricultural Trade and the U.S. Economy.” Texas Agricultural Extension Service, Texas A&M University, May 1999.

Office of the United States Trade Representative. *United States and Central America Sign Historic Free Trade Agreement*. May 28, 2004. www.ustr.gov

Salassi, M.E., Kennedy, P.L. and Breaux, J.B. (2003, October). Impact of potential bilateral free trade agreements on projected raw sugar prices and the economic viability of the Louisiana sugar industry (Staff Report No. SP2003-07). Prepared for the Louisiana Bankers Association and First South Farm Credit Association, Department of Agricultural Economics and Agribusiness, Louisiana State University, Baton Rouge, Louisiana.

USDA Foreign Agricultural Services. “The Case for CAFTA-DR with Commodity Benefits Analysis.” April 2005.

APPENDIX

Table 1: Dominican Republic Beef Tariff Rate Quota Schedule		
Year	Quantity *(Metric Tons)*	
	Prime and Choice Beef Cuts	Beef Trimmings
1	1,100	220
2	1,200	240
3	1,300	260
4	1,400	280
5	1,500	300
6	1,600	320
7	1,700	340
8	1,800	360
9	1,900	380
10	2,000	400
11	2,100	420
12	2,200	440
13	2,300	460
14	2,400	480
15	unlimited	Unlimited

Table 2: El Salvador Other Beef Cuts Tariff Rate Quota Schedule	
Year	Quantity *(Metric Tons)*
1	105
2	110
3	115
4	120
5	125
6	130
7	135
8	140
9	145
10	150
11	155
12	160
13	165
14	170
15	unlimited