

# Agriculture in Brazil and Argentina

## Developments and Prospects for Major Field Crops

### Introduction

U.S. agriculture has historically benefited from its generous endowment of resources that include abundant, fertile soils, favorable climate, strategic inland waterways, and long coastlines with deepwater ports. This initial resource endowment has been supplemented by a well-developed rural transportation and marketing infrastructure, well-educated agricultural entrepreneurs who are quick to adopt new technologies, and a strong network of agricultural research, extension, and credit institutions. In addition, U.S. agriculture has benefited from private corporations that respond quickly to investment opportunities in agricultural production, processing, and marketing. This broad-based agricultural structure has permitted the United States to maintain a strong position among the world's leading producers and exporters of most temperate-zone field crops including soybeans, corn, cotton, wheat, sorghum, and rice.

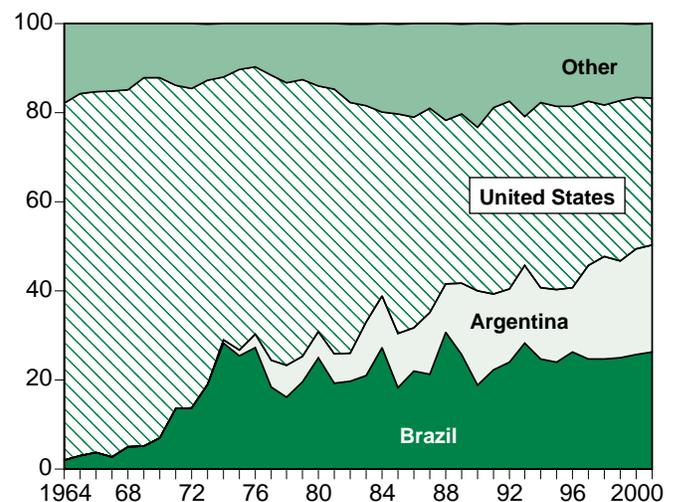
However, in the past decade two Southern Hemisphere competitors—Argentina and Brazil—have begun to tap more deeply into their own vast array of agricultural resources. Spurred by economic policy reforms, private investment (much of it from external sources) has been pouring into their agricultural sectors, applying cutting-edge technologies to historically underdeveloped production, marketing, and processing sectors. As a result, crop area and yields have been expanding rapidly, generating sharp increases in production. This output expansion, in turn, has translated into strong gains in global competitiveness in several commodity markets important to the United States, most notably soybeans and its products (fig. A-1).

In Brazil, soybean production doubled from an average of 18.5 million metric tons in 1989-91 to an estimated 41.5 million tons in 2001, while Argentina's production rose from 11.1 million tons to 27 million tons

Figure A-1

#### U.S. share of world soybean and soymeal market has steadily eroded\*

% of global exports



\*Soybeans and soymeal as soybean equivalents.

Source: USDA, August 10, 2001.

over the same period (table A-1). Soybean production in these two countries has expanded faster than domestic use, thereby contributing to rising exports and displacing U.S. export market share. From a global market share of over 80 percent during the 1960s, the U.S. share of soybean and product exports (in soybean equivalents) declined to only 39 percent in 1989-91 and about 35 percent in 1999-2001. The combined share for Brazil and Argentina has grown from less than 10 percent in the 1960s to nearly 50 percent today. The continued decline of the U.S. trade share since the mid-1990s is particularly remarkable since U.S. farmers planted record area to soybeans for four consecutive years starting in 1998.

**Table A-1—Average production, yields, net exports, and market share (selected commodities): Argentina, Brazil, and the United States**

	Production						Trade <sup>1</sup>					
	Production			Yields <sup>2</sup>			U.S.		Argentina		Brazil	
	U.S.	Arg.	Brazil	U.S.	Arg.	Brazil	Qty <sup>3</sup>	Share <sup>4</sup>	Qty <sup>3</sup>	Share <sup>4</sup>	Qty <sup>3</sup>	Share <sup>4</sup>
----- mmt -----			----- mt/ha -----			mmt	Percent	mmt	Percent	mmt	Percent	
<b>Soybean<sup>1</sup></b>												
1969-71	31.2	0.0	2.4	1.83	1.28	1.22	16.3	78.7	0.0	0.0	1.8	8.7
1989-91	52.9	11.1	18.5	2.26	2.31	1.79	23.6	39.1	10.9	18.0	13.5	22.3
1999-2001 <sup>5</sup>	75.5	24.9	38.0	2.55	2.52	2.65	35.2	33.9	24.1	23.2	27.6	26.6
2001 <sup>5</sup>	79.1	27.0	41.5	2.64	2.52	2.68	35.1	32.1	26.2	24.0	30.5	27.9
<b>Corn</b>												
1969-71	122.7	8.4	14.4	5.15	2.21	1.40	16.1	48.7	4.8	14.7	1.0	2.9
1989-91	194.2	7.8	25.8	7.18	3.79	1.95	48.1	67.8	4.3	6.0	-0.7	--
1999-2001 <sup>5</sup>	244.1	16.1	36.2	8.52	5.61	2.76	49.9	59.8	11.1	13.2	1.0	2.2
2001 <sup>5</sup>	239.5	15.5	36.0	8.55	5.74	2.81	51.8	62.1	10.7	12.8	0.5	1.2
<b>Wheat</b>												
1969-71	40.0	5.9	1.6	2.14	1.33	0.88	17.6	31.4	1.6	2.9	-1.8	--
1989-91	61.2	10.3	4.0	2.39	1.98	1.37	31.6	27.3	5.8	4.9	-3.5	--
1999-2001 <sup>5</sup>	58.9	16.6	2.4	2.80	2.57	1.68	26.3	22.3	12.1	9.4	-7.1	--
2001 <sup>5</sup>	53.3	17.5	3.2	2.71	2.57	2.00	25.4	21.7	13.0	10.1	-6.5	--

<sup>1</sup>Soybean trade includes both soybeans and soymeal expressed in soybean equivalents. <sup>2</sup> mt/ha = metric tons per hectare.

<sup>3</sup> Qty = quantity traded where >0 are net exports and <0 are net imports; mmt = million metric tons. <sup>4</sup> Share = country-specific exports as a percent of world exports. <sup>5</sup> Year 2001 is marketing year 2001/02, estimated as of October 12, 2001, and may be subject to revision. For Brazil and Argentina, the 2001 crop is not harvested until early 2002.

Source: Economic Research Service, USDA.

Argentina's corn and wheat production and exports have also made significant gains since 1990 and have coincided with a decline in the U.S. share of these exports. Rebounding from a severe decline during the late 1980s, Argentina's corn production doubled from 1989-91 to 2001 and wheat production rose by 75 percent. In contrast, U.S. soybean and corn production each expanded by about 42 and 25 percent in the last decade, while wheat production has declined. Since 1990, Argentina's shares of global corn and wheat trade have nearly doubled, to 13 and 10 percent. Argentina is also among the world's leading exporters of sorghum, sunflower, and peanuts.

Brazil, traditionally a net importer of wheat, corn, cotton, and rice, has also been expanding its capacity to produce field crops other than soybeans. Brazil has been the world's third-leading corn producer for the past 40 years, but has averaged net imports of almost 1 million tons per year during the 1990s. However, with a record corn crop of 41 million tons in 2000/01—up nearly 60 percent since 1990—Brazil is projected to become a net exporter of about 3.7 million tons of corn in 2000/01. Brazil's corn export surge may be a

temporary phenomenon, but it would be the first time since 1981 that it has been a net corn exporter.

In contrast to soybeans, corn, and more recently cotton, Brazil's predominantly tropical setting has prevented the expansion of most small grain production beyond the southernmost States. Brazil's wheat industry has been in decline since production subsidies and import protection were removed in the early 1990s. Continued population and income growth have bolstered demand for wheat products, and Brazil was the world's leading wheat importer in 1999/2000 (7.6 million tons) and 2000/01 (7.2 million tons).

Despite great strides to date, Argentina and Brazil have yet to fully develop their agricultural resources. Until recently, trade policies in both countries suffocated their agricultural sectors by closing domestic markets to outside competition, technology, and investments, while imposing taxes on agricultural exports to finance other sectors of their economies. Both countries also suffered from government mismanagement that fostered hyperinflation, severe exchange rate overvaluation, high interest rates, endemic currency devaluations, and a generally poor investment climate. The net effect

of these policies was to hinder investment in the agricultural sector and in the transportation and marketing infrastructure needed to support agricultural growth.

Nevertheless, economic and political reforms of the early to mid-1990s have improved the investment climate, unleashing a reservoir of latent comparative advantage in each country's agricultural sector. While significant hurdles remain for Argentina and Brazil to fully realize their agricultural production potential, it remains substantial.

This report examines the factors underlying Argentina's and Brazil's surge in agricultural produc-

tion and trade during the 1990s—i.e., its origins and sustainability, as well as the prospects for further expansion. More specifically, it focuses on the relative competitiveness of Argentina, Brazil, and the United States in international soybean markets. The report also assesses the longrun production and trade outlook for both Argentina and Brazil.

Important informational needs remain, but this report is intended to provide a foundation for further study into the nature and potential consequences of continued agricultural development by Argentina and Brazil.