

US EPA ARCHIVE DOCUMENT

# Agribusiness

**Profile** EPA's Sector Strategies Program defines the agribusiness sector broadly to include those business entities that most significantly affect how food is grown, processed, and distributed in the U.S. EPA is working with agribusiness stakeholders because of the major influence they have on the environmental practices of all segments of the food industry, from production to consumption. Diversified agribusiness companies such as Kraft Foods, Conagra, PepsiCo, Cargill, and Coca-Cola are some of the largest in the U.S.

Food processing<sup>2</sup> is the focal point for the agribusiness sector, given the predominant role that processors play in food production. Food processing companies convert raw fruits, vegetables, grains, meats, and dairy products into finished goods, ready for the grocer or wholesaler to sell to households, restaurants, or institutional food services. Food safety is an overarching objective that affects environmental planning and decisions in all facilities. Processing facilities address on-site environmental issues but also interact with farmers, livestock growers, distributors, and consumers in ways that can beneficially affect off-site environmental decisions.

Although the food processing industry is comprised of large agribusiness corporations, there are more than 20,000 food processing establishments widely distributed throughout the country.<sup>3</sup> Two-thirds of all food processing companies have fewer than 20 employees.<sup>4</sup> Like many other industry sectors, the food industry has experienced consolidation and vertical integration in recent years.

**PRODUCTION PROCESS** The industry produces a diverse array of food products, each with its own unique production processes and environmental impacts.

**PARTNERSHIPS** The Sector Strategies Program's working relationship with the agribusiness sector originated with the meat processing segment of the industry, represented by the American Meat Institute (AMI).<sup>5</sup> The National Food Processors Association (NFPA) is EPA's current partner in the Sector Strategies Program.<sup>6</sup>

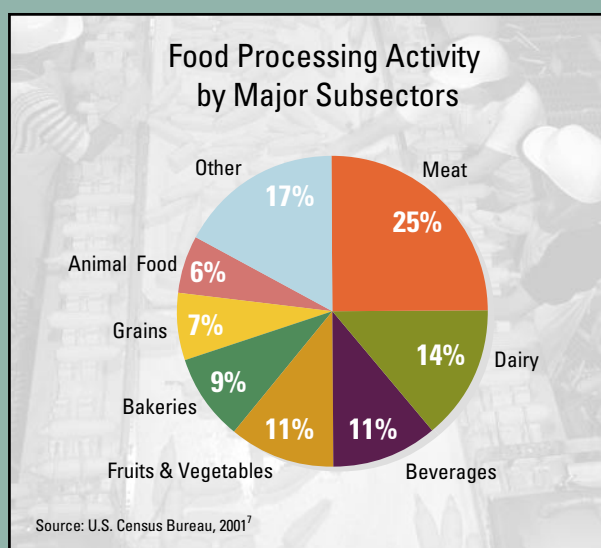
**KEY ENVIRONMENTAL OPPORTUNITIES** The agribusiness sector is working with EPA to improve the industry's performance by:

- Improving water quality;
- Managing and minimizing waste; and
- Improving performance of meat processors.

## Sector At-a-Glance\*

Number of Facilities:	21,000
Value of Shipments:	\$480 Billion
Number of Employees:	1.5 Million

\*All figures represent food processing segment of sector.  
Source: U.S. Census Bureau, 2001<sup>1</sup>





## Improving Water Quality

In the food processing sector, water is an essential element of plant sanitation. Typical wastewater pollutants include biodegradable organics, oil and grease, and suspended solids. Food processors may be able to recover some of the fats, oils, and greases in their waste stream and sell them to renderers, and in some cases, treated water can be recycled for plant cleanup or other processing purposes. Federal data from approximately 400 food processors indicate a 44% decrease in wastewater discharges between 1994 and 2002, as plants looked for opportunities to conserve, recycle, or reuse water.<sup>8</sup>

## Managing and Minimizing Waste

Food processors use and produce a variety of chemicals in their operations, including nitrate compounds, ammonia, ethylene glycol, methanol, n-hexane, and hydrochloric and sulfuric acid. More than 1,000 food processors report the release and management of these and other chemicals through EPA's Toxics Release Inventory (TRI). While normalized quantities of TRI releases increased, the normalized quantity of TRI releases and waste managed by food processing facilities decreased by 23% between 1993 and 2001.<sup>9</sup>

## Improving Performance of Meat Processors

Ongoing projects with AMI and its member companies promote the use of environmental management systems (EMS) and stewardship in the supply chain.

### Environmental Management Systems

Together with AMI member companies and the state of Iowa, the Sector Strategies Program developed a customized EMS Implementation Guide for meat processors.<sup>10</sup> Using the Guide as a basis, AMI developed the Master Achiever Pioneer Star (MAPS) Program, which provides a tiered approach to EMS development and performance recognition for AMI members.<sup>11</sup> Through their EMS:

- ■ ■ Advance Brands reduced the volume of caustic chemicals used to treat wastewater by 50%;<sup>12</sup> and
- ■ ■ Excel Corporation reduced solid waste volume by 28% in 2002-2003.<sup>13</sup>

### Stewardship in the Supply Chain

Some of the larger meat processors are working with their agricultural and livestock suppliers to achieve better nutrient management.

#### *Case Study: Comprehensive Nutrient Management Plans (CNMP)*

*Farmland Foods, Prestage-Stoecker Farms, and 19 of their suppliers are participating in an Iowa-based pilot project to voluntarily implement CNMPs at livestock facilities. So far, participating farms have improved nutrient application on nearly 4,500 acres, with an anticipated decrease in soil loss at some farms of more than 30%.<sup>14</sup>*