Fossil Fuels and Agriculture

Few people realize that an enormous amount of energy is required to produce our food. In fact, 17% of all fossil fuel used in the U.S. is consumed by the food production system.

As a result of the industrialization of agriculture, most food is now produced at large-scale, centrally-located facilities which use energy-intensive farming practices. Large amounts of fossil fuel are required to power heavy farming machinery, to process foods, to refrigerate foods during transportation, to produce packaging materials, and to manufacture and transport chemical inputs such as fertilizers and pesticides. Fertilizers containing nitrogen are particularly fossil-fuel-intensive; production and transport of 1 lb of nitrogen releases an average of 3.7 lbs of CO 2 into the atmosphere.

It is estimated that the average U.S. farm uses a total of 3 calories of fossil energy to produce each calorie of food energy.

Transportation

A tremendous amount of energy is also used to transport our food. As a result of the development of centralized industrial agricultural operations and the corresponding disappearance of local family farms, food is now shipped extraordinarily long distances before it reaches your dinner plate.

According to the U.S. Department of Transportation, food and agricultural products (not including imported or exported foods) are transported 566 billion ton-miles within U.S. borders each year, constituting more than 20% of total U.S. commodity transport.7 In 1969, the U.S. Department of Energy estimated that, on average, food traveled 1,346 miles.8 Another study conducted in 1980 determined that fresh produce traveled 1,500 miles!

Furthermore, an increasing quantity of food is now being transported internationally; in 1998, a total of 172 million tons of food were shipped into and out of the U.S.10 In 2001, the U.S. imported 39% of all fruits, 12% of vegetables, 40% of lamb, and 78% of fish and shellfish.

This excessive and unnecessary food transportation requires the consumption of large quantities of fossil fuel, thus polluting the environment and damaging human health. Lengthy food transport also generates additional energy expenditures by creating the need for increased food packaging, processing, and refrigeration. It also forces the government to spend more of our tax dollars repairing, constructing, and maintaining an extensive system of roads and railways.

Energy Conservation in the Agriculture Sector
Given the damage to human health and the environment caused by the use of fossil fuels, it is clearly in our best interest to reduce our consumption of this source of energy whenever possible.

As a consumer, you can also help reduce agriculture-related energy consumption by simply choosing to buy your food from local farms – this drastically reduces the distance that food is shipped, thus conserving fuel, reducing pollution, and protecting human health.

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