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Our fragile food supply
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The capacity of the worlds commercial agriculture to produce sufficient food faces some severe tests.

Food is full of paradoxes. Currently there is enough produced to adequately feed the 6 billion people on the planet. Yet nearly a billion are underfed.

In the rich United States, 35 million people, including nearly 13 million children, experience hunger or the threat of hunger. Yet at least that many Americans are obese.

The best land in America produces two low-value commodity crops that are rarely directly consumed by humans -- corn and soybeans. They are used instead for animal feed and increasingly for biomass fuel, such as ethanol.

Commodity-driven agriculture brings many ills -- economic, environmental and social. The short list includes soil erosion and depletion, nitrogen fertilizer contamination of drinking water, fouled lakes and rivers, damage to the Gulf of Mexicos fisheries, pesticide contamination and feedlot pollution. Often not considered: the loss of farms because government programs favor consolidation and ever-larger farm operations, and the destruction of Third World agriculture, which cant compete against the subsidized farmers of rich nations.

Rather than address these problems, federal farm and export programs worsen them while costing taxpayers billions of dollars.

Consider these further challenges:

-- Water shortages for irrigation are becoming common worldwide because of poor water use and increased agricultural, urban and industrial demand. While irrigated farming is practiced on about 20 percent of the worlds agricultural land, it produces more than 40 percent of the food.

-- Animal diseases threaten meat, milk and egg supplies, and plant diseases threaten to decimate corn and soybean production.

-- Land continues to revert to deserts or is covered in concrete. Soil erosion removes more soil than is formed. Most threatening over the long term is climate change that within 50 years will greatly change agriculture in the Midwest.

-- Chinas huge and expanding economy is sucking in grain, posing a further challenge to our food supply. Last year saw a continued decline in worldwide grain stockpiles in spite

of increasing production. Coarse grain stocks are now the lowest in three decades, with only about a 50-day supply -- 70 days is considered necessary for food security.

-- Short of global apocalypse from disease or war, the world economy will continue to expand, and population, especially in the Third World, will continue to grow. An increasingly affluent population that demands diets high in animal protein will require more grain to produce more animal products.

-- More food will not come from more land because, aside from fragile lands in Brazil, there is little new land left to exploit. New technologies will help, but we have peaked on the benefits of many of them. The green leaf can convert only so much energy to carbohydrates and proteins.

If these problems coalesce, there is the strong possibility that the food supply cannot be sustained. Food shortages, dramatic increases in food costs, lowered exports and worldwide pressure on food supplies could result. Food could become a precious commodity, with adequate supplies available only to rich nations.

How the world responds to the global challenges in food supply will be critical.

Adoption of healthy diets based on less animal protein, lower energy use throughout the economy, and policies to help build strong rural communities and promote farming methods that protect the environment would help. However, such changes are difficult and likely would come slowly. They require research, public involvement and major reversals in federal policies. Moreover, they require us to think big rather than working on small, disjointed half solutions.

Equally important, the United States and other food-rich nations must redouble their support of food self-sufficiency in food-short nations of Asia and Africa. Lessons learned from the Green Revolution must be applied. Neither food sufficiency nor ecological sustainability can be achieved by exporting inappropriate western technologies.

Agriculture has served the world in the past and it will do so in the future. Now is the time to make decisions to ensure sustainability. The welfare of our grandchildren demands no less.

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