

The coming black plague?

Oil fuels America's agricultural might. Soon, experts fear, it could plunge the world into a food crisis.

By Tom Pelton | Sun reporter

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During harvest, farmer Edward F. Stanfield burns the equivalent of about 1,400 gallons of oil a week in his diesel tractors and combines.

The farmer drove a diesel-powered hay baler in a circuit around his field, followed by his son on a clattering machine that grabbed the bales with metal fingers.

Edward F. Stanfield, 77, and his son, Edward B. Stanfield, 49, have followed this oil-inspired choreography for decades on their 600-acre farm in the Randallstown area of Baltimore County.

Like farmers around the world, they grow their hay, corn and soybeans with petrochemical fertilizers and pesticides, harvest them with diesel combines, pack them with oil-based plastic and ship them in diesel trucks.

The mechanized "Green Revolution" the family joined after World War II created an explosion in food productivity that allowed global populations to multiply. But it also forged a dependence on oil that could now lead to a food crisis, a small but growing number of scholars and activists warn.

Dr. Brian Schwartz, co-director of the program on global sustainability and health at the Johns Hopkins Bloomberg School of Public Health, said governments should start planning for a worst-case scenario, with soaring oil prices disrupting food supplies, just as they plan for other possibilities like nuclear war and bioterrorism.

"We have an industrial model of food production that requires intense amounts of fossil fuels," Schwartz said. "Food is going to be a huge problem for us."

Dale Allen Pfeiffer, author of the recent book *Eating Fossil Fuels: Oil, Food and the Coming Crisis in Agriculture*, goes even further in his warnings. With global oil production soon sliding into decline, fuel prices might continue to skyrocket until the world's food system collapses, causing starvation, he wrote.

"Growing evidence indicates that world [oil and gas] production will peak around 2010, followed by an irreversible decline. The impact on our agricultural system could be catastrophic," he wrote. "Hunger could become commonplace in every corner of the world, including your own neighborhood."

Pfeiffer estimated that the U.S. population of about 300 million is roughly a third larger than can be fed with the gradually shrinking oil supply expected over the next half-century. As a comparison to the agricultural crisis the world faces today, he noted, "The black plague during the 14th century claimed approximately a third of the European population, plunging that continent into a darkness from which it took them nearly two centuries to emerge."

The surge in oil prices has already hurt the Stanfield farm's output. As fertilizer costs doubled and diesel prices spiked, Edward B. Stanfield said, he'd had to grow less corn this year.

"It all goes up," he said of prices linked to oil. "There is no way to escape [oil], unless we're going to go back to the horse-drawn days, and I don't think we can survive with the number of people we have in the world today," he said, watching his father drive a tractor down a long row of cut hay.

The idea of starvation triggered by oil prices sounds outlandish - and indeed, it is dismissed by many

economists, farmers and petroleum producers.

John Felmy, chief economist at the American Petroleum Institute, said the world's oil supply would not decline at any foreseeable time. The only risk of economic collapse and hunger, he said, will come if the government tries to intervene with price controls. Felmy said that more offshore oil drilling, as advocated by President Bush last week, could help with oil and food prices.

"Economists say you never run out of anything - it's just how costly it gets," said Felmy. "Technology continues to improve, and we continue to find new sources of oil. There is every indication that there is sufficient oil in the ground that could be recovered."

Schwartz, of Johns Hopkins, said statistics compiled by well-respected petroleum geologists suggest that this picture of plenty is misleading. He said a critical mass of experts is predicting that petroleum production will shrink in the next few years because new oil discoveries have been declining since the 1960s, despite increased exploration. Meanwhile, demand for fuel will continue to rise rapidly in the expanding economies of countries such as China and India.

Falling production will accelerate the already soaring price of fuel, to the point that it's too expensive for average consumers and farmers, Schwartz said.

It's not that the world will literally run out of oil, Schwartz said. Some oil will always remain in the ground. The problem is that petroleum is a limited resource, and oil production always follows a bell curve, with a peak and then an inevitable dropoff, he said.

More reliance on low-grade tar sands or harder-to-reach oil will cost more, contributing to price escalation. Increased drilling of known oil fields, such as those in Alaska or off the California coast, will only temporarily delay the fundamental dynamic of surging demand but less coming out of the ground, Schwartz said.

This problem of "peak oil" was first outlined by Shell Oil's research director M. King Hubbert during the 1950s. He was ridiculed when he predicted in 1956 that the United States, then the world's biggest source of oil, would experience a production peak between 1966 and 1972, followed by decline.

But Hubbert was proved right when oil production in the lower 48 states peaked in 1970 and then started to drop, despite increased drilling, Richard Heinberg wrote in *The Party's Over: Oil, War and the Fate of Industrial Societies*.