# Biotech Wheat to Ease World Food Shortage

*Dennis T. Avery, Hudson Institute*

In the midst of the worst global grain shortage in decades, two lines of Australian biotech wheat have out-yielded current wheats by 20 percent—even under drought stress.

"Around the world, 35–50 percent of the wheat-growing areas are under drought risk. The number of drought-affected wheat growing areas is likely to increase with the effects of climate change" John Brumby, of Victoria, Australia told his audience. "These initial results are very promising, and suggest that these genetically modified wheat lines may be part of the solution to help farmers maintain and improve their crop yields in a changing global environment."

Australia is the world's driest continent and Victoria's wheat crop was significantly reduced by drought in 2006/2007. U.S. wheat stocks were cut to an 11-year low this winter by drought that spread last year from Texas through bone-dry Missouri and nearly to the Canadian border.

Researchers are also working on heat-tolerant wheat varieties, examining wild relatives of the wheat plant for DNA that would help wheat to tolerate higher temperatures for longer periods without sacrificing yield. Biotechnology would permit such DNA to be inserted into wheat varieties that already have high yields and good baking characteristics.

Due largely to opposition from environmental activists, no biotech wheats are currently being grown in the world. Monsanto shelved its herbicide-tolerant wheat, which could have allowed higher yields due to better weed control. Syngenta has slowed its work on disease-resistant biotech wheat.

However, British authorities are now saying that the world's current food shortage underscores the huge increase in world food and feed production needed to feed a more populous, affluent world in the coming three decades. They say Europe should encourage research and production of biotech crops to supply the extra food from higher yields, rather than from clearing more forest to grow low-yield crops. Genetically modified crops are already being grown on hundreds of millions of acres worldwide, with no ill effects. The U.S., Latin America, China, and India are all leading biotech producers.

Drought is likely to be a particular problem over the next century or two. During both the Medieval Warming (950–1300 AD) and Roman Warming (200 BC–600 AD) the tropical rain belts moved hundreds of miles north. The Sahara Desert became wetter, and the southern tier of U.S. States became drier. Southern California had two century-long droughts during the Medieval Warming.

Not only is more wheat going to be needed, but research administrators note that many of the world's rural poor depend on growing their own wheat in order to eat each year. Many of these disadvantaged farmers live in regions where drought is frequent. Many more live in areas too dry for current wheat crops, so they depend on still-lower grain yields from such crops as millet and sorghum. Drought and heat-tolerant wheat might offer a nutritional upgrade for such farmers and their families.

Isn't it time we welcome the best agricultural research and technology, developed by thousands of dedicated scientists over the last century, to preserve our wildlands and provide a sustainable food supply for humanity?

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