

Brazil's agricultural miracle

How to feed the world

The emerging conventional wisdom about world farming is gloomy. There is an alternative

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THE world is planting a vigorous new crop: “agro-pessimism”, or fear that mankind will not be able to feed itself except by wrecking the environment. The current harvest of this variety of whine will be a bumper one. Natural disasters—fire in Russia and flood in Pakistan, which are the world’s fifth- and eighth-largest wheat producers respectively—have added a Biblical colouring to an unfolding fear of famine. By 2050 world grain output will have to rise by half and meat production must double to meet demand. And that cannot easily happen because growth in grain yields is flattening out, there is little extra farmland and renewable water is running short.

The world has been here before. In 1967 Paul Ehrlich, a Malthusian, wrote that “the battle to feed all of humanity is over... In the 1970s and 1980s hundreds of millions of people will starve to death.” Five years later, in “The Limits to Growth”, the Club of Rome (a group of business people and

academics) argued that the world was running out of raw materials and that societies would probably collapse in the 21st century.

A year after “The Limits to Growth” appeared, however, and at a time when soaring oil prices seemed to confirm the Club of Rome’s worst fears, a country which was then a large net food importer decided to change the way it farmed. Driven partly by fear that it would not be able to import enough food, it decided to expand domestic production through scientific research, not subsidies. Instead of trying to protect farmers from international competition—as much of the world still does—it opened up to trade and let inefficient farms go to the wall. This was all the more remarkable because most of the country was then regarded as unfit for agricultural production.

The country was Brazil. In the four decades since, it has become the first tropical agricultural giant and the first to challenge the dominance of the “big five” food exporters (America, Canada, Australia, Argentina and the European Union).

Even more striking than the fact of its success has been the manner of it. Brazil has followed more or less the opposite of the agro-pessimists’ prescription. For them, sustainability is the greatest virtue and is best achieved by encouraging small farms and organic practices. They frown on monocultures and chemical fertilisers. They like agricultural research but loathe genetically modified (GM) plants. They think it is more important for food to be sold on local than on international markets. Brazil’s farms are sustainable, too, thanks to abundant land and water. But they are many times the size even of American ones. Farmers buy inputs and sell crops on a scale that makes sense only if there are world markets for them. And they depend critically on new technology. As the [briefing](#) explains, Brazil’s progress has been underpinned by the state agricultural-research company and pushed forward by GM crops. Brazil represents a clear alternative to the growing belief that, in farming, small and organic are beautiful.

That alternative commands respect for three reasons. First, it is magnificently productive. It is not too much to talk about a miracle, and one that has been achieved without the huge state subsidies that prop up farmers in Europe and America. Second, the Brazilian way of farming is more likely to do good in the poorest countries of Africa and Asia. Brazil’s climate is tropical, like

theirs. Its success was built partly on improving grasses from Africa and cattle from India. Of course there are myriad reasons why its way of farming will not translate easily, notably that its success was achieved at a time when the climate was relatively stable whereas now uncertainty looms. Still, the basic ingredients of Brazil's success—agricultural research, capital-intensive large farms, openness to trade and to new farming techniques—should work elsewhere.

Plant the plains, save the forests

Third, Brazil shows a different way of striking a balance between farming and the environment. The country is accused of promoting agriculture by razing the Amazon forest. And it is true that there has been too much destructive farming there. But most of the revolution of the past 40 years has taken place in the *cerrado*, hundreds of miles away. Norman Borlaug, who is often called the father of the Green Revolution, said the best way to save the world's imperilled ecosystems would be to grow so much food elsewhere that nobody would need to touch the natural wonders. Brazil shows that can be done.

It also shows that change will not come about by itself. Four decades ago, the country faced a farm crisis and responded with decisive boldness. The world is facing a slow-motion food crisis now. It should learn from Brazil.