

Communications & Opinions



The short and long term challenges facing the UK and the rest of European Agriculture and its implications for food production and consumption at home and abroad

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I am truly honoured that I was invited by Syngenta to speak at this year's dinner before members of the Mother of all Parliaments at Westminster.

Skyrocketing prices and environmental degradation are signs that population explosion, urbanization, economic development and changes in consumption patterns are progressively causing food, feed, and energy shortages, and leading the world towards eventual environmental collapse. Food security, energy security and environmental security (climate change) have become major policy challenges for our planet and its people. They are parts of a great planetary puzzle. Farmers, in particular UK's and Europe's farmers, are among its key players. They must wonder how they can be expected to contribute to satisfy world food demand, save energy and water, and preserve the environment, all at the same time, while farm payments and public support are on the down path.

There is not enough time to deal with all of these challenges today. I will therefore zero in on food and environmental security.

The Food Challenge

Grain demand tends to exceed supply, which is diminishing, notably in Australia, China, India (including its Punjab bread-basket), the United States (in particular the southern Great Plains and the South-West), and in a number of other countries such as Kazakhstan and Ukraine. According to a recent World Bank report, China's annual grain production from 1998 to 2004 has gone down by 50,000 tons and the northern part of the country "is literally drying out." World grain stockpiles are the lowest in 25 years in terms of days of consumption, and moving down, despite some poor harvests. These trends cannot be compensated by increasing the land area under cultivation in Latin America and Africa.

The F.A.O predicts continuing high food prices, and warns that low-income-food-deficit developing countries, whose food expenditure has more than doubled since 2000, are faced with a further "alarming" increase in food bills, cuts in food consumption, and increasing malnutrition, making it more difficult to reach the UN goals of hunger reduction. It blames soaring grain prices and a doubling of freight costs since 2006.

We are witnessing a mounting competition between food and fuel and a structural shift in US and European agricultural markets with serious implications. When oil costs more than \$60 to €100 a barrel, depending on whether we talk about Brazil, South East Asia, the US or Europe, farmers have an incentive to convert sugar cane, palm oil, corn, wheat, soy beans, and/or rapeseed into fuel provided crop prices are attractive, and provided also, at least in Europe, that agrofuel production is subsidized and protected from imports. The OECD considers those subsidies and protection "irrational" and "wasteful".

There is too little awareness of the repercussions of substantial agrofuel production on food availability and the environment. EU legislation is in flux, advancing as it were towards an unknown destination. It is pushed by a targeting mania that has struck EU member Governments, and incidentally the US, in an effort to obtain green credentials with technological fixes.

But competition between agrofuel and food for land is only one of the determinants of looming food scarcity. The Earth Institute believes that the main reasons why world food supply is tightening are population explosion, and accelerated urbanization together with falling water tables and diversion of irrigated water towards the cities.

Some 3 billion people are expected to be added to the world by 2050 (two thirds of whom in Asia and Africa), with 4.7 billion people in 8 countries alone, most of whom (except the US and Brazil) have neither the climate, nor the soil or other conditions necessary to feed themselves in the future.

Farm land is actually diminishing fast. Deserts are expanding at the expense of mostly cropland and grassland with an annual loss of 700,000 hectares in China and Nigeria alone. Cropland is also lost to urbanization. It has been calculated that the addition of some 70 million people every year claims nearly 3 million hectares for housing, roads, highways and parking lots (Lester Brown).

According to the UN Report on Global Warming, "Water shortages will affect millions." Up to 250 million will lack water in Africa alone. While individuals drink only two to four liters of water (in different forms) a day, it takes 2,000 liters of water to produce the food an individual consumes daily. In China a thousand tons of water can be used to produce 1 ton of wheat, worth at most \$200, or it can be used to expand industrial output by \$14,000 – 70 times as much. This may encourage China to import water by replacing domestic with imported food production. Agriculture, which currently uses 70% of the world's water, may become a residual claimant on the world's increasingly scarce supply of water. In California farmers have started selling their water rights to neighbouring towns. This means the end of farming on their land. Water shortages translate into food shortages. Also "Food shortages will affect millions."

The need for global food security has resurfaced in a big way, this time at world level, but is still written off by those who believe that the market and technology will continue to prove Malthus wrong till kingdom comes.

As all of us know, without modern mechanized agriculture and the chemical revolution there would be widespread world famine and food wars today. However, gains in productivity have been at the expense of increasing energy use, greenhouse gas emissions and environmental degradation. One third of the agricultural land has been converted from growing food grains for human consumption to growing feed grain for cattle and other livestock. Moreover, food productivity increases have been progressively diminishing, notably due to water scarcity and losses of top soil, continuing over ploughing and overgrazing, increasing biofuel production, and shrinking harvests with rising temperatures. Although crop yields in some areas in Europe and Asia will still increase, they will decrease in Africa and Latin America.

Consequently, as population, urbanization and beef consumption continue to grow at high rates, future food demand will grow exponentially and prices with it.

There are of course those who say: come on, stop dramatizing, Malthus has proved wrong so far, and will be wrong again! But this time things appear different. In his last book "The Revenge of Gaya", James Lovelock tells us that the self-regulating organism of the earth and its biosphere has become sick. He fears that gas emissions caused by human activity will cause the climate to "flip" into a different equilibrium state that will leave the tropics uninhabitable, force humanity to flee to the poles and threaten civilization. If the world does not take remedial action, Malthus may have the last laugh after all.

Technology can of course help to increase sustainable food production, but up to a point. Low-till or no-till farming techniques help retain water, raise soil carbon content, reduce energy needed for cultivation, and combat wind and water erosion, but cannot do more than slow the negative trend. New technologies capable of raising land productivity are shrinking and will be of diminishing help as yields of wheat, rice, and corn press against the ceiling ultimately imposed by the limits of photosynthetic efficiency.

Without a change in food habits foregoing heavy meat regimes combined with land reform in the Southern Hemisphere providing the poor with access to land for cultivation, and sustainable food and energy policies everywhere, it will be impossible to free up the necessary land to feed the world in the second part of this century at prices acceptable to the poor.

The Environmental Challenge

A number of you have already listened to Sir Crispin last year. I can therefore be short here. Our lives are and will increasingly be affected by serious environmental problems, which are persuasively described in Jared Diamond's recent book "*Collapse*" (Penguin) on how societies choose to fail or succeed. Societies' survival depends on how they solve these problems, most of which are caused by human activities moving closer to ceilings on natural resources. The most recent problems concern: fossil fuels, photosynthetic ceilings on sunlight supply, toxic chemicals, and gases such as carbon dioxide or methane, which is 24 times as potent a greenhouse gas as carbon dioxide. All these problems are interlinked time bombs with fuses of one or two generations.

Environmental degradation and climate change do not happen by themselves. They are a consequence of population pressure, rising living standards, immigration from low-environmental-impact countries, and human behaviour. They can be aggravated by agricultural and rural policies.

In turn, failure to tackle environmental degradation jeopardizes the future of agriculture and of the countryside. Several cultures, such as Easter Island, the Mayas, the Vikings, Haiti and Rwanda with its recent genocide collapsed because of environmental failure.

Australia could be the next to follow. Diamond has defined it "the most unproductive continent". It is mostly useless for any form of agriculture, and in much of the rest of the country the soils have on average the lowest nutrient levels, the lowest plant growth rates, and the lowest productivity in the First World. Some economists even think that country should do away with much of its agriculture and could become a net agricultural importer.

The declining sustainability of Australia's agriculture and society may be particularly serious, but there is little doubt that much of the world is going in the same direction, and that we in Europe would be well advised to steer more and more in the opposite direction by progressively improving the sustainability of our agriculture, particularly in the context of accelerating climate change, and by doing something to stem the depopulation and desertification of growing parts of our countryside. This obviously requires public commitment, as well as money.

Although the food and environmental challenges cannot be faced without a large combination of policies such as industrial, transportation, fiscal and research policies, in closing I will focus on the CAP and its future.

The Future of the CAP

The design of the CAP reform of 2003-2004, which promoted the greening of the CAP, was based on two strategic motives addressing the looming food and environmental challenges.

The Fischler Reform was recognition that the market system had proved insufficient to ensure a proper distribution of activities without appropriate public policy and corrective mechanisms. It stressed that agriculture, rural activities and spaces generated positive externalities (public goods) that had to be rewarded. It aimed at helping European farmers and the up- and downstream industry reconcile the needs of modernization and restructuring with the acknowledgement of their community function as providers of services to society. The reform introduced a number of radical principles such as the loss of public payments whenever the farmer fails to respect the so-called *cross-compliance* rules regarding the environment, *decoupling* of CAP support from production with a *Single Farm Payment*, the *capping* of direct aids (rejected by the UK), *modulation* (shifting market support towards rural development), and a *financial discipline*.

UK and EU farmers will be called upon to strengthen their role in feeding the world. Even with high food prices, their obligation to provide enough food and to accomplish their other multifunctional tasks providing services to society that the market does not pay for, deserves adequate public support. It is our challenge to restructure EU policy in order to preserve our capacity to produce enough food for the world sustainably, enhance our countryside, and open our market further.

All agricultural policies in the world are actually in need of reform and action, and measures should be taken as appropriate to each case, but with one and the same objective: feed the people over time in a sustainable way.

Our farmers' claims that they cannot compete with countries with more space, better climate and lower costs of production, although partly right, are no reason to stop the CAP reform process making our agriculture more competitive, preserving our countryside, and opening our food markets. European actions should **not** depend on parallel actions by third countries, unless Europe is prepared to risk eventual collapse of its own environment, not to say of its own society.

If food prices stay high, Europe will be able to reduce its CAP subsidies, but if it does not produce enough food, the poor will suffer; the net-food-importing developing countries will have to fight for supplies; in an effort to preempt domestic food strikes, they will resort to costly food subsidies and custom import tariff reductions with disastrous consequences for their public budgets.

Trade practices will change. To the extent that there will be world food scarcity overall, we can anticipate less competition among staple food producers for access to world markets, and more likely competition among net-food-importing countries for access to supplies. If so, one can also anticipate import barriers being replaced by export limits. If Europe or other countries faced the risk of internal food imbalance, they will tend to repeat what several other countries have already done in such a situation, particularly recently: impose export limits, let alone temporary export embargoes. After being accused of dumping its food surpluses on world markets, one might well see the EU accused of withholding supplies from hungry people.

If farm gate prices do not remain sufficiently attractive and Single Farm Payments, taking into account net revenues from crops and rural development support, go down, the consequence will not be – as some believe – farming extensification. It will be the opposite: according to the OECD, production intensity will go up, and incidentally land values may go down. We surely don't want that.

Weakening, let alone scrapping the CAP, as a growing number of people advocate, notably in this country, would involve a number of risks, and actually mean throwing out the baby with the baby water. The risks include: production intensification with increased pollution, land abandonment with rural desertification (nature needs caring) and reduced farm output, accelerated urbanization with additional infrastructural and environmental costs, contradictory agricultural policies among member States hampering the smooth functioning of the internal market, higher world food prices with serious humanitarian, economic and political consequences, in particular for the poor at home and for the net-food-importing developing countries. Continuing, substantial public support for agriculture world

wide (all countries have some form of agricultural policy) is probably essential in order to help tackle the environmental and the food scarcity challenges just described.

Without adequate public support, lower for crops and beef, but higher for rural development, and without ways to reduce excessive fluctuations in farmers' incomes as market rules prevail, there will be less sustainably produced food supply to satisfy growing demand at prices that all people can afford.

As public funds will be scarce, private investment and philanthropy should attach greater interest to rural development. This is the very reason why the ELO, the FCS together with Franz Fischler created the RISE Foundation that I represent here.

If hunger and undernourishment are receptacles of terrorism and revolution, food price inflation can feed domestic food strikes, lack of energy is an obstacle to development and democracy, and environmental degradation ruins the countryside and eventually leads to society's collapse, international security, solidarity and peace depend on our capacity to face up to the various coming shortages I outlined, come to grips with them in a sustainable and fair way, and avoiding to take measures that help tackle one shortage at the expense of the other.

Thank you.
