

**SPEECH BY
HIS ROYAL HIGHNESS THE PRINCE OF WALES TO
THE FUTURE FOR FOOD CONFERENCE**

4th May 2011

FINAL – CHECK AGAINST DELIVERY

President de Gioia (*phon:de Joya*), Ladies and Gentlemen. It is a very special pleasure for me to be here again at Georgetown and to speak at this conference. It certainly makes a change from making embarrassing speeches about my eldest son during wedding receptions...!

My one regret today is that I have missed the first panel discussion, chaired by Eric Schlosser, who has done so much, if I may say so, to raise awareness of the key issues in his important film and in his writing. I know that Eric has

outlined why this conference is so vital. The world is gradually waking up to the fact that creating sustainable food systems will become paramount in the future because of the enormous challenges now facing food production.

The Oxford English Dictionary defines “sustainability” as “keeping something going continuously.” And the need to “keep things going” for future generations – in other words, for all of you students, whether here at Georgetown or, through the wonders of modern technology, elsewhere across this vast country – is quite frankly the reason I have made the long journey to Washington.

One or two of you may have noticed that over the past thirty years I have been venturing into extremely dangerous territory by speaking about the future of food. I have all the scars to prove it...! Questioning the conventional world view

is a risky business. And the only reason I have done so is for the sake of your generation and for the integrity of Nature herself. It is your future that concerns me and that of your grandchildren, and theirs too. That is how far we should be looking ahead. I have no intention of being confronted by my grandchildren, demanding to know why on Earth we didn't do something about the many problems that existed, when we knew what was going wrong. The threat of that question, the responsibility of it, is precisely why I have gone on challenging the assumptions of our day. And I would urge you to do the same, because we need to face up to asking whether how we produce our food is actually fit for purpose in the very challenging circumstances of the twenty-first century. We cannot ignore that question any longer.

Very nearly thirty years ago I began by talking about the issue, but I realized in the end I had to go further. I had to put

my concern into action, to demonstrate how else we might do things so that we secure food production for the future, but also, crucially, to take care of the Earth that sustains us.

Because if we don't do that, if we do not work within Nature's system, then Nature will fail to be the durable, continuously sustaining force she has always been. Only by safeguarding Nature's resilience can we hope to have a resilient form of food production and ensure food security in the long term.

This is the challenge facing us. We have to maintain a supply of healthy food at affordable prices when there is mounting pressure on nearly every element affecting the process. In some cases we are pushing Nature's life-support systems so far, they are struggling to cope with what we ask of them. Soils are being depleted, demand for water is growing ever more voracious and the entire system is at the

mercy of an increasingly fluctuating price of oil.

Remember that when we talk about agriculture and food production, we are talking about a complex and interrelated system and it is simply not possible to single out just one objective, like maximising production, without also ensuring that the system which delivers those increased yields meets society's other needs. As Eric has highlighted, these should include the maintenance of public health, the safeguarding of rural employment, the protection of the environment and contributing to overall quality of life.

So I trust that this conference will not shy away from the big questions. Chiefly, how can we create a more sustainable approach to agriculture while recognizing those wider and important social and economic parameters – one that is capable of feeding the world with a global population rapidly

heading for nine billion? And can we do so amid so many competing demands on land, in an increasingly volatile climate and when levels of the planet's biodiversity are under such threat or in serious decline?

As I see it, these pressures mean we haven't much choice in the matter. We are going to have to take some very brave steps. We will have to develop much more sustainable, or durable forms of food production because the way we have done things up to now are no longer as viable as they once appeared to be. The more I talk with people about this issue, the more I realize how vague the general picture remains of the perilous state we are in. So, just to be absolutely clear, I feel I should offer you a quick pen sketch of just some of the evidence that this is so.

Certainly, internationally, food insecurity is a growing

problem. There are also many now who consider that global food systems are well on the way to being in crisis. Yield increases for staple food crops are declining. They have dropped from three per cent in the 1960's to one per cent today – and that is really worrying because, for the first time, that rate is less than the rate of population growth. And all of this, of course, has to be set against the ravages caused by climate change. Already yields are suffering in Africa and India where crops are failing to cope with ever-increasing temperatures and fluctuating rainfall. We all remember the failure of last year's wheat harvest in Russia and droughts in China. They have caused the cost of food to rocket and, with it, inflation around the world, stoking social discontent in many countries, notably in the Middle East. It is a situation I fear will only become more volatile as we suffer yet more natural disasters...

Set against these threats to yields is the ever-growing

demand for food. The United Nations Food and Agriculture Organisation estimates that the demand will rise by seventy per cent between now and 2050. The curve is quite astonishing. The world somehow has to find the means of feeding a staggering 219,000 new mouths every day. That's about 450 since I started talking! What is more, with incomes rising in places like China and India, there will also be more people wealthy enough to consume more, so the demand for meat and dairy products may well increase yet further. And all that extra livestock will compete for feed more and more with an energy sector that has massively expanded its demand for biofuels. Here in the U.S., I am told, four out of every ten bushels of corn are now grown to fuel motor vehicles.

This is the context we find ourselves in and it is set against the backdrop of a system heavily dependent upon fossil fuels and other forms of diminishing natural capital –

mineral fertilizers and so on. Most forms of industrialized agriculture now have an umbilical dependency on oil, natural gas and other non-renewable resources. One study I have read estimates that a person today on a typical Western diet is, in effect, consuming nearly a U.S. gallon of diesel every day!

And when you consider that in the past decade the cost of artificial nitrogen fertilizers has gone up fourfold and the cost of potash three times, you start to see how uncomfortable the future could become if we do not wean ourselves off our dependency. And that's not even counting the impact of higher fuel prices on the other costs of production – transport and processing – all of which are passed on to the consumer. It is indeed a vicious circle.

Then add the supply of land into the equation – where do we grow all of the extra plants or graze all that extra stock when urban expansion is such a pressure? Here in the United States I am told that one acre is lost to development every

minute of every day – which means that since 1982 an area the size of Indiana has been built over – though that is small fry compared with what is happening in places like India where, somehow, they have to find a way of housing another three hundred million people in the next thirty years. But on top of this is the very real problem of soil erosion.

Again, in the U.S., soil is being washed away ten times faster than the Earth can replenish it, and it is happening forty times faster in China and India. Twenty-two thousand square miles of arable land is turning into desert every year and, all told, it appears a quarter of the world's farmland, two billion acres, is degraded.

Given these pressures, it seems likely we will have to grow plants in more difficult terrain. But the only sustainable way to do that will be by increasing the long term fertility of

the soil, because, as I say, achieving increased production using imported, non-renewable inputs is simply not sustainable.

There are many other pressures on the way we produce our food, but I just need to highlight one more, if I may, before I move on to the possible solutions, because it is so important. It is that magical substance we have taken for granted for so long – water.

In a country like the United States a fifth of all your grain production is dependent upon irrigation. For every pound of beef produced in the industrial system, it takes two thousand gallons of water. That is a lot of water and there is plenty of evidence that the Earth cannot keep up with the demand. The Ogallala Aquifer on the Great Plains, for instance, is depleting by 1.3 trillion gallons faster than rainfall can replenish it. And

when you consider that of all the water in the world, only five per cent of it is fresh and a quarter of that sits in Lake Baikal in Siberia, there is not a lot left. Of the remaining four per cent, nearly three quarters of it is used in agriculture, but thirty per cent of that water is wasted. If you set that figure against future predictions, then the picture gets even worse. By 2030 it is estimated that the world's farmers will need forty-five per cent more water than today. And yet already, because of irrigation, many of the world's largest rivers no longer reach the sea for part of the year – including, I am afraid, the Colorado and Rio Grande.

Forgive me for labouring these points, but the impact of all of this has already been immense. Over a billion people – one seventh of the world's population – are hungry and another billion suffer from what is called “hidden hunger,” which is the lack of essential vitamins and nutrients in their

diets. And on the reverse side of the coin, let us not forget the other tragic fact – that over a billion people in the world are now considered overweight or obese. It is an increasingly insane picture. In one way or another, half the world finds itself on the wrong side of the food equation.

You can see, I hope, that in a global ecosystem that is, to say the least, under stress, our apparently unbridled demands for energy, ~~land and water~~ puts overwhelming pressure on our food systems. I am not alone in thinking that the current model is simply not durable in the long term. It is not “keeping everything going continuously” and it is, therefore, not sustainable.

So what is a “sustainable food production” system? We should be very clear about it, or else we will end up with the same system that we have now, but dipped in “green wash.”

For me, it has to be a form of agriculture that does not exceed the carrying capacity of its local ecosystem and which recognizes that the soil is the planet's most vital renewable resource. Top soil is the cornerstone of the prosperity of nations. It acts as a buffer against drought and as a carbon sink and it is the primary source of the health of all animals, plants and people. If we degrade it, as we are doing, then Nature's capital will lose its innate resilience and it won't be very long, believe you me, before our human economic capital and economic systems also begin to lose their resilience.

Let's, then, try and look for a moment at what very probably is not a genuinely sustainable form of agriculture – for the long term. In my own view it is surely not dependent upon the use of chemical pesticides, fungicides and insecticides; nor, for that matter, upon artificial fertilizers and

growth-promoters? You would have perhaps thought it unlikely to create vast monocultures and to treat animals like machines by using industrial rearing systems. Nor would you expect it to drink the Earth dry, deplete the soil, clog streams with nutrient-rich run-off and create enormous dead zones in the oceans. You would also think, wouldn't you, that it might not lead to the destruction of whole cultures or the removal of many of the remaining small farmers around the world? Nor, presumably, would it destroy biodiversity at the same time as cultural and social diversity.

On the contrary, genuinely sustainable farming maintains the resilience of the entire ecosystem by encouraging a rich level of biodiversity in the soil, in its water supply and in the wildlife – the birds, insects and bees that maintain the health of the whole system. Sustainable farming also recognizes the importance to the soil of planting trees; of protecting and

