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Thank you very much, Mostafa. It is a great pleasure to be here and to discuss with you a subject that is so dear to my heart. 200 years ago, if all of us had sat here, one out of three people would have died before the age of 30. 200 years ago, our yields of cereals were at most 1.5 tonnes per hectare. Today, life expectancy is nearing 80 in many parts of the world, and the best yields are around 8-10 tonnes per hectare. That tremendous advance was possible because of a combination of science, government policy, innovation and collaboration.

Today we again face new challenges: in 2050, by all accounts, we will probably have nine billion people on this earth; by 2050, 60% of those nine billion people will live in cities, and the demand will be for animal proteins, milk, for meat, and to a lesser extent for vegetables. Today, as I speak, one billion people are still undernourished, one billion have enough calories but not enough micronutrients, but also 1.5 billion are obese or badly nourished; in other words, 3.5 billion of the seven billion we have today in this world have a problem with food, and that is a real challenge. How do we deal with that?

It is very clear that we can feed those nine billion, and no scientist in his right mind doubts that, but a couple of things need to be done. First of all, in my view, we need to push for serious innovation. The things that have worked so well since the 1960s, the combination of plant nutrients, water, credit and infrastructure development needs to be reinvented in some ways. We have done a great deal with the so-called Green Revolution, but we have also seen the effects levelling off, and we need to find new ways to produce foods sustainably; by that I also mean sustainable in a social sense, and there is a big problem there that I want to raise.

We have a rapidly declining population working in agriculture. Fewer young people want to be agriculturalists, and there is nothing more devastating for the recruitment of young people to put emphasis on small being beautiful and doing it by hand. I am saying this provocatively, because I think one of the fallacies of the current debate on agriculture is that we should have some kind of return to traditional agriculture, as if small is beautiful. I think the only way we can get young people to produce the food for those nine billions is to stimulate entrepreneurship, innovation and the funding of agriculture, and this is not what we are doing; we have nothing that looks even remotely like a strategy, either nationally or internationally. Very few countries have a strategy in place.

What needs to be done to feed those nine billion requires global governance, both internationally and nationally. The first thing that faces us is a continuing situation of highly fluctuating food prices. These fluctuations are very much a combination of structural underinvestment in agriculture in the last 20 years, including, indeed, by the World Bank, and of a number of contingencies, climate and weather fluctuations in particular, and of misguided policies by governments. Should Russia close its borders to grain exports, as it did after the drought and fires the summer before last, if Thailand closes its border to the export of rice, although it is the largest exporter of rice, this has an immediate impact on the world market, and these fluctuations are very difficult to deal with. I am not so worried about food prices themselves going up; in fact, they were at their historic low in 2001 before these fluctuations started, and food prices on the world market have declined by 1% since 1948, and it is very logical that we see readjustments. However, what farmers cannot deal with, and what food processors cannot deal with, are major short term fluctuations.

Therefore, the first question I am putting on the table is how we can better use the positive side of food price fluctuations to channel investments into agriculture, because it is also an opportunity and not just a tragedy, to make sure that the natural balance or rebalancing will take place in the marketplace by producing more food if there is a shortage if expressed by prices.

Secondly, what needs to be done and discussed internationally is that we somehow finalise the Doha round. I will not go into the details of that, but this is a real burden on international relations in agriculture, and I think Europe and the US have to face up to that in one way or another. More importantly, we should look seriously at the regulations we have internationally. I think we have done some very good things, particularly in the area of food safety, and a number of areas such as agreements on pesticide residues and contaminants. We know how to deal with that, but we have not taken the next step to ask ourselves if we can have a set of rules and regulations in the sector as a whole, throughout the food chain, on sustainable production, of crops and livestock.



This is the weakness of the climate meeting in Durban; we all expect that it will not yield very much in terms of a new Kyoto Protocol, but at the same time the food industry is really taking up its responsibilities when it comes to greenhouse gas emissions, reducing energy use, recycling, retrieval etc. I am fully convinced that we can go to much more closed cycles in agricultural production, including the retrieval of things like phosphates and the reduction of nitrogen loads. Do not forget that in some countries 90% of the nitrogen fertiliser actually does not reach the plant and the consumer. Therefore, there is an enormous amount we can do with our current knowledge.

The big item that remains when it comes to regulations is the problem of GMOs, genetically modified organisms, where Europe has a very conservative stance. Yet the growth of GMOs takes place in developing and emerging markets is very much in that area. We need to find a way to deal with this without distorting the markets. The general issue on the markets is that we should find ways to deal with the negative effects of globalisation for certain groups of people, the poor and the more vulnerable, but at the same time make sure that we do not have artificial barriers, because if there is one thing that globalisation has taught us, it is that food is best produced in areas that are most suited to agriculture and that globalisation can actually enhance the trade of agricultural products that also need to meet sustainability criteria.

Let me stop here by asking perhaps the most difficult question in terms of governance. There is a cry in many circles, including the G20, for regulating food prices. It seems to me that we have very little evidence that this is going to work. There are also reports, including from the World Bank, that this is not a good idea. The past is littered with attempts to create buffer zones and buffer supplies, with little effect. Yet, if we look at history, it is very clear that certain countries, including the US, Canada and most OECD countries, have thrived because they did and still are protecting their farmers. Therefore, in order for agriculture to bloom, we must make the transition to a sustainable agriculture that is competitive, that attracts young people, that is entrepreneurial, and that attracts the right types of investment.

Lastly, this will not happen only through farmers alone; if there is one trend we see very strongly in the world market today, and also nationally, it is integration throughout the whole food chain: with fluctuating resources and resource prices, food companies are actually buying land, renting land, buying up contracts with farmers. The large retailers, the Walmarts of this world, are dominating the farmer's market more than anybody would have believed ten years ago. Consumers have a more organised voice. Therefore, there is a whole shift in the agricultural landscape. The question is how we can put the governance in place to make sure it actually benefits the two billion who are not well fed, that allows us to produce food in a sustainable way, and really makes sure that by 2050 we have everybody fed as far as possible. I think this can be done, but we are not yet there.