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Speakers

- Facilitator: Cary Fowler | 2024 World Food Prize Laureate and President, Food Security Leadership Council
- Ismahane Elouafi | Executive Managing Director, CGIAR
- Sir Richard Roberts | 1993 Nobel Prize Laureate and Chief Science Officer, New England BioLabs
- Johan Swinnen | Director General, International Food Policy Research Institute
- Michael Werz | Senior Fellow, Council on Foreign Relations

Transcript
Cary Fowler:

Before we really launch into this wonderful panel, I wanna give you a little bit of an update on something that began earlier this year. Earlier this year, we launched an open letter signed by a number of Nobel Laureates and World Food Prize Laureates, calling attention to the worrying trends that we see in terms of food production going out to 2050. And advocating for more agricultural research and indeed moonshot research to make transformational changes in agriculture. I can tell you that 126 Nobel Laureates signed that open letter–26, I believe, World Food Prize Laureates and more than 150 in total.

And now more than 260 organizations have signed on to the letter. If you are in an organization that hasn't signed on, you can find people with the World Food Prize Foundation or go to the website. They've been working very closely with us in promoting this open letter. So we have a wonderful panel here and I'm just going to give the briefest of introductions and then we will launch into a little bit of a discussion. So Ismahane Elouafi is next to me.

She is the Managing Executive Director of the CGIAR. Before that she was a Chief Scientist at FAO, the Food and Agriculture Organization of the UN. Before that, the Director General of the International Center for Biosaline Agriculture. And I will just mention that this year, Ismahane was listed in the time 100 most influential people in the world list. That's why you're sitting next to me.

Next to Ismahane is Sir Richard Roberts. Rich is the Chief Science Officer at New England BioLabs and spent twenty years at the Cold Spring Harbor Laboratory. Which is the nineteen ninety three Nobel Laureate in Medicine. I suggest that you go on the website to find out about amazing research that he's done that's applicable obviously to medicine, but also to agriculture. Next is Jo Swinen.

Jo is the Director General of the International Food Policy Research Institute in Washington. Before that, Yeo was a professor at the Catholic University in Leuven in Belgium. He's been the lead economist at the World Bank. He's also advised the European Commission. And I just want to give a shout out to his organization because during my time at the State Department, if there were ever an occasion when I briefed the Secretary or anybody else on what was happening with the global food security situation in the world.

And if there was any moment when it appeared that I knew what I was talking about, it was because I had just gone to his website to read the latest analysis on what's going on in the world. I advise you to go to the ifpri.org website if you really want a good education. We have Michael Werz, who is just recently become senior fellow at the Council on Foreign Relations. He was before that was senior fellow at the Center for American Progress. He's been very involved with the Munich Security Conference and has had associations with Woodrow Wilson Center in Washington and also with Harvard. So to begin, I want to pose a question to all of the panelists for a really quick response.

And that is, what is the most urgent food security challenge that we need to be addressing? Ismaan?

Ismahane Elouafi:

Thank you very much, Cary. Really a pleasure to be here. And I think the most urgent, it's building resilience in our food system. So if we think about it, and we heard it from Valerie and from many others, conflict is number one when we talk about food insecurity. But then it's not only conflict.

It's conflict, it's climate, it's global geopolitics. And hence, what we are seeing is that conflicts is fueling hunger, hunger is fueling conflict. So there is a really very strong

relationship between the two, and we have to cut it. So how do we cut it? The only way to cut it, it's really to be much more anticipatory.

Not wait till the hangar happens, not wait till the conflict hampers, but rather come early on. And maybe just to say that we have 800 small scale producers in the world. And those 800,000,000 are producing one third of our food. So in terms of number, they are very important because there are more than 800,000,000 people. But also in terms of production system, it's a very important production systems.

So those people are the most vulnerable when we talk about conflict, when we talk about climate, and when we talk about the geopolitical changes and the supply chain issues. So they need to be addressed, and that's one of the major focus for us at CGIAR.

Cary Fowler:

Thank you. And thanks for making that connection between food security and national security. That's going to be the undercurrent of this discussion today. Rich?

Sir Richard Roberts:

So I'm a huge proponent of GMOs. And for me, if we're ever going to tackle food properly in the developing countries, we need to make sure that they can adopt GMOs as a way and that technology of genetic modification in order to improve the crops. It's easy to do. It's very safe. We have thirty five years of doing it.

People have been eating these crops all the time. Not a single problem. Not one. And yet, Greenpeace and some of these anti GMO organizations have found it convenient to oppose them. And we have a 180 Nobel Laureates have signed on to a campaign saying GMOs are safe, and we need to make sure that this message gets out to the politicians who run the developing countries because this is something they can do locally.

Local scientists can improve the crops, and the local population can benefit from it. They don't need any help from the West.

Cary Fowler:

Yeah. The most urgent challenge we need to be facing.

Johan Swinnen:

Yeah. I think the most urgent challenge is actually combining very urgent and immediate responses to acute hunger, which has grown tremendously over the last fifteen years, which is really a big drama in the world. And this is very strongly linked with fragility and conflict area. But at the same time, have to link that with investments in resilient and sustainable systems for the future. We cannot just look at the short run, but even there we have to look at sustainability.

And I think more broadly, we need to have a new policy paradigm in mind. I mean, a lot of our policies and our thinking is based on the post World War II area, where we had looking at peace and stability in the world. And we are now in a world where there is no peace, it's fragility and volatility right now, and that needs a very different way of thinking about the problems.

Cary Fowler:

Thank you. Michael?

Michael Werz:

I can connect to what Jo has just outlined. For me, somebody who is at home in the national security and international diplomacy world, weaponization of food and use of food in military conflicts is of the biggest concern because I feel that food security from a geopolitical perspective will be the litmus test of how we organize global governance and our world in the twenty first century. And because of the pressure on food security, the widespread hunger and starvation worldwide, we create vulnerabilities and we see increasing integration of weaponization of food into military conflicts. And there are three different examples that I'd just like to mention. One of course is the old fashioned manipulation of access to food.

We see that in Gaza, for example, where the perceived opponent or enemy is put under pressure because you shut off the access to food. We also see increasing instances of the use of food as a recruitment and retention tool for in certain groups,

especially in Northern Nigeria by Boko Haram and in Somalia by Al Shabaab. And the third and maybe the most concerning strategy of weaponizing food we've seen during the Ukraine war, where the Russian military has used the mining of agricultural field, over 300 attacks on port infrastructure for wheat exports. The attack on seed companies, and even the on the houses of CEOs that own seed companies and the attacks on critical infrastructure for wheat exports have been an integral part of the Russian war strategy. And the Russians for the first time in recent history have used food as a long range weapon because of the cut off of wheat exports, the increased prices, we had roughly 30 to 35,000,000 people more moving into Hungary and Eastern Africa.

And so what happens is that it is likely that the weaponization of food in the Ukraine conflict will create more victims 2,000 kilometers away from the battlefield, namely in East Africa and other parts of the world than in Ukraine itself where the war is being fought with military means.

Cary Fowler:

Thanks, Michael. We want to get a little bit more into depth into what everybody has been talking about so far. Ismahane, the first question to you is about the CGIR. CGIR is a consortium of international agricultural research centers, best in the world. How is this CGIR evolving?

Many of us here in the audience have had experiences with the CGIR. It might be even fifty years ago or thirty years, twenty years ago. Is it the same organization? How is it evolving in terms of the new context that you find yourself in?

Ismahane Elouafi:

So I think, Cary, you mentioned the 65 and we are in the Borlaug dialogue. So in many ways, CGR started under the name of and the Nobel Peace Prize as well. So as the world is changing, and we see the changes on a daily basis, so the changes are happening globally, they're happening nationally, communities, the change is the new reality. And I think under climate change, if you are a farmer or you are a scientist, you see it every single day.

So CGR, it's really changing the metamorphosing and adapting to those changes. We used to be known only for staple crops. It's not the reality anymore. Now we are really we are on the path to diversification of food. So, yes, we work on livestock, on chicken, on fish, but really we want to, within the sector, to diversify.

Even if we are still working on wheat, it's not using a narrow genetic base, it's using a much more broader. If we're working on staple crops, we want to have also other staple, our other neglected and underutilized species, and we started with you on the facts. The other change we are doing, it's really system level. So there is no single innovation, there is no silver bullet. It's a bundle of innovation that are needed, particularly as I said earlier, for the eight fifty small scale producers that are still mostly in the least income countries and the low middle income countries.

The other way that we are working differently is that many of the national system have grown very strongly. So you look at the BRICS countries, Brazil, China, India, they are investing the most right now in science, much more than many OECD countries. So we need to work more with them. Yes, Nigeria's system is strong, maybe Morocco, Kenya and a few other countries, but still the majority of national agriculture system in Africa, for example, requires help from CGR. So CGR, it's really adapting to make sure that not only we do what we have been known for, which is mostly breeding of staple crop and a few other species, but also looking at diversification, looking at working with the national system in a different way.

And within that, really, our mission, it's really transforming food, land and water system in a climate crisis. So we recognize the climate, but we recognize also the importance of nutrition. You mentioned it. Malnutrition, it's all over. So we used to talk mostly about deficiencies, but there is also obesity problem that is spreading across the globe.

So we are looking at those five impact areas that are very important, that are still guiding us, which is nutrition, climate adaptation, gender and social inclusion. But we added youth because another reality, when you look at a continent like Africa, you got really the average in some countries fifteen and seventeen years old. So it's very important that we tackle that. And the other one is biodiversity and incomes for farmers. So farmers should stop being the poorest of the poor, because it doesn't make sense.

They are really producing our food. So we can't let them always be at the bottom of the pyramid. They have to have a decent income and a decent life with it.

Cary Fowler:

Thank you. Just a little follow-up question. I, many years ago, was on the board of trustees of the International Maize and Wheat Improvement Center, SEMIT, one of your centers. Back in those days, it was a wheat and maize breeding center. Today, if I look more closely, it's working on a wider range of crops, collaborating with other centers and talking about the importance of growing vegetables, not just those two crops.

Is that commonplace in the CGIR that we see more of that kind of collaboration and cross disciplinary work?

Ismahane Elouafi:

That's what we are really trying to push for more and more, Cary. Because if we look at it at system level, you have to go beyond a single crop. So it's about really if we wanna look more at regenerative agricultural practices, sustainable agricultural practices, you need to do the soil. It's super important.

I see Dr. Ratan Lal with us here. But you need also to do the rotation and the synergies between different species. So we have now what we call a science portfolio. In the science portfolio, we have science programs and accelerators, and we want everybody to work together, for example, nutrition and healthy diet. We want everybody to work together in alternative proteins, or rather than alternative proteins, animal source food, including alternative proteins as one of the small area of it.

We want also people to work on climate adaptation with co benefits on mitigation, not looking at one crop or one animal, but really looking at the system production systems.

Cary Fowler:

So if you knew the CGIR ten or twenty years ago, take another look now.

Ismahane Elouafi:

Exactly. Take another look and look through the portfolio. Because through the lenses of the portfolio that we are putting in place for six years, you could see really that we are giving solution or providing solution at the system level. Looking both at technical but also policy side and also looking how do we work more with community levels, to spread and adopt those technologies. One of the issues is really adoption at the farmer level.

It's very, very low. And unless we crack it, it is right now in between different institutions, we need to scale for impact and we can do it alone. We had to do it with our partners that are on the ground, and that understand very well the local ecosystem.

Cary Fowler:

Thanks Ishmael. Rich, you are passionate I believe about science, innovation, the role of biotechnologies in addressing some of the questions that we have. You highlighted in your first intervention here some of the difficulties of getting that accepted. Can you talk a little bit about how the broader agricultural community, I think we're representative of that here in this room, can harness and promote the benefits of this technology, while at the same time dealing with maybe one of the prerequisites for that, which is to build trust among the broader community of non scientists, I suppose.

Sir Richard Roberts:

Right, I think, you know, one of the problems is that scientists tend to talk in scientific language that people don't understand. And some scientists seem to think this makes them look really smart. In my view, it makes them look really stupid when they cannot talk in language that everybody can understand. And so I think one of the things that we could do in many of our universities when we're training scientists is teach them how to talk to the general public. You know, I got involved in this GMO campaign because I went to a talk in Ghent in Belgium and listened to agricultural research people talking about how it was almost impossible for them to do their work in Europe because Greenpeace and the anti GMO movement was so strong.

And the following day, I'd been invited to go to the European Commission to talk to them about the future of medicine. Not that I claimed to know much, but I could talk about vaccines and so on. But instead, I decided I would change the talk and say, well, food is medicine. If you're hungry, if you go to bed hungry at night, you need food. You don't need fancy drugs.

And I think this is a message that we should try to get over much more than we do at the moment. In many countries, India, I don't wanna go there but many, many developing countries where access to food is a real problem for the poor people in the country. And I think the use of GMOs can actually alleviate this hunger very easily. You have to realize that we in the West have had and benefited from many, many years, more than a hundred years of improvement in the crops that we eat. Crops that are eaten in the developing countries have never been improved because big agribusiness couldn't make money there.

But now we know how to do it. Now we can do it very easily because of scientific advances, and it can be done by scientists in the country. They don't need people from the West to come and tell them what to do. They can do it themselves, and then the governments can decide how they're going to make that food available to the people. And very often, it's to smallholder farmers, people who need to grow stuff.

And I just wanna make one pitch here for golden rice, which in my view is one of the tremendous things that was done by using genetic methods to improve crops. And for a while, it was approved in the Philippines, and now Greenpeace are trying to stop it again. And it is stopped temporarily, but we hope the government can reverse that. But golden rice was absolutely wonderful. It is wonderful. It's perfectly safe, and it can help to stop young children from going blind and from developing immune diseases.

Cary Fowler:

Thanks, Rich. And if I can make, I think, a friendly amendment to your pitch for GMOs, and that is that I think you yourself are talking about a whole panoply of new technologies, CRISPR Cast 9 gene editing and such comes under that same rubric. People should understand.

Ismahane Elouafi:

But maybe just to say that gene editing is not within It the has group of the been declared because that wasn't easy. So we don't want to mix it up. Gene editing, it's a non GMO and it has been approved in so many countries. And it's a wonderful methodology.

Sir Richard Roberts:

That's a misuse of language as far as I'm concerned.

Cary Fowler:

What are some of the more recent sort of policy oriented evidence based policies that you think are maybe cutting edge, maybe really important for this group to pay attention to, to advocate for, that can help us address some of these emerging food security issues?

Johan Swinnen:

Yes. I was it's interesting you can interpret your question in a negative or a positive way. So let me start with the positive first. First of all, if you look back over the last fifty years, okay, there's been tremendous progress in terms of reducing malnutrition, reducing hunger in the world of poverty. But this has really reversed about a decade ago, fifteen years ago.

Okay? So the lessons from that first forty period, we should not forget. We just have our fiftieth anniversary report out on food policy looking backward and forward. And so that's a big, big lesson, okay, what went right there. What's gone wrong now recently, but we've done a couple of things right.

One is, for example, 2008, we had a huge price spike on global markets. Afterwards, we the world has introduced the initiative from the G20 system called AIMIS, it's Agriculture Market Information System. It basically brings out information on stocks, on harvest, on expected supply in the world, so that governments do not react even with good intentions in the bad way to make things worse. Also, it allows stakeholders to make the right investments, etcetera, going forward. I also think if

you look at the COVID crisis, there we've seen much stronger resilience from food supply chains than one had expected in the early weeks and months.

I think we have to draw lessons on that for the future. And there I think we really, when you think about the resilience framework, it has three components really. One is anticipation. Ismahane referred to that already, information is really important. So the aim is one model, but we have much better technology today with digital data systems and also AI increasingly, where we can predict where a crisis will break out, The weather ones are really good now. I mean, we can not only predict at the global scale, we can actually get it to the farm level as well through AI technology now. But also even there's now new models on fragility. I mean, the World Bank just presented a report on Friday actually at IFRI on the new probability of fragility on the very disaggregated level. We are working on our models where we predict conflict breakout.

So that allows stakeholders, people, organizations to anticipate these things. We have to get it at the micro level as well. And this helps also at the reaction to crisis when they break out. There, I think it's three components. It's finance, it's insurance, and again the information there.

And basically, and this is both at the production level, at consumption level. I mean, insurance systems through on the consumption level through social security programs, fit for fragility frameworks, and at the supply I mean, the big thing is if you have a bad crop, you have no money, right? So you have to invest in seeds for the next harvest, and how do you do these things. And then the last one is really on really recovery. Okay, and recovery has a very acute component and a long run component, and how to make these things to go together.

And again, insurance and finance systems are important. I mean, think the finance issue is really central to the whole fragility discussion as well.

Cary Fowler:

Thanks, Jo. I just want to mention, since I complimented you on your website earlier, that if you go to the website today, you will find article about the release of your 2025 food policy analysis, big global analysis. Also some strong analytic articles about what's going on in Gaza and AI in agriculture. So I hope that people here, particularly

folks that are working in developing countries are paying attention to what you're doing. Thank you.

Johan Swinnen:

It's better if it comes from you than it is. Thank you.

Cary Fowler:

Michael, you've been really involved with the Munich Security Conference. Munich Security Conference is an annual event bringing together leaders from around the world that are very interested in the broad questions of national security. So my question for you is, I think the context of this question is that most of the people in this room understand that there is a very direct correlation between food insecurity and conflict. And that correlation goes back hundreds, indeed thousands of years. At the Munich Security Conference, do people get that?

Are they making that connection? And if they're not or not fully, then what's it going to take for folks including all of us to really understand the need for national security. I'm not talking about just US national security, everybody's national security in this world to make that connection and get involved with food security. I mean after all, if we look at a lot of the food insecurity hotspots around the world today, wow, can we name many that aren't involved in conflict? So

Michael Werz:

Thank you for that easy question. What we try to do is to instill a sense of urgency into the conversation. It seems to me on this panel here, I'm not the agricultural specialist, maybe that's my deficiency, but I'm the one that seems to be most nervous about where we're going. Because I feel if you have the illusion that we can live in a world where we have a global food system, simplistically speaking in the North that is working and one in the South that is not working, and you think this is going to be a stable world, you're looking at the different scenario that that I'm looking at. Our argument is that conversations like these need to be geopolitically informed.

They need maybe to shift away from a humanitarian and donor driven perspective to one that is strategic because food security is not cyclical. It's a systemic problem. It's not regional. It's a global issue. On top of it, we have incredibly concentrated and integrated market structures with regard to the big trading houses, with regard to seed production.

So there's tremendous vulnerabilities. And on top of that, you have the current destruction of multilateral institutionality. The closure of USAID alone will extract $44,000,000,000 or up to 44,000,000,000 from the global system. World Food Programme budget is down by half. So again, there is a sense of urgency because we will create regional instabilities that will translate into broader context.

And this is why it's so important to make this point. On a broader issue of the financial side, and I think all the organizations that are represented here on the stage are massively impacted by the budget cuts of global development ministry, especially in Europe, but also in The United States. The question is, how do you mobilize the resources that we need? When I asked economists at the World Food Programme, at the FAO, at the United Nations, how much would you need to make global food systems sustainable and resilient? They come up with a number between $350,000,000,000 and $380,000,000,000 a year.

That money is not going to come from shrinking development budgets. It's not coming from private public partnerships as successful as they might be. And it's certainly not coming from kind of introduces like the World Bank because they are all under tremendous pressure. So my argument is if we can credibly make the point that this is a systemic and stability relevant investment into food security, that then there might be an argument to be made that in the medium term, different government agencies and maybe even multilateral organizations should be in a position to receive funding out of these ever growing military budgets. Because if we can make the argument, this is a stability question with the weaponization of food, then the response to how do we deal with the use of food as a military weapon will not be a military response, especially if it's used as a long range weapon.

It will be a response of investment, multilateral engagement and more sustainable food structures. And this is I think the direction in which we have to go. And this is why at the Munich Security Conference, which is a traditional military to military conference, we have established a task force on food security. We have a food

security track we had at this year's Munich Security Conference in February. You've been part of some of these events.

We had eight events on food security, which is record breaking for an organization that really hasn't had a deep footprint in this area. And we are getting increasingly better feedback from military and international security leaders that understand that these are systemic and structural challenges that they need to factor into their foresight exercises. But where they do not have the instruments to provide a good response and this is where all of you come in.

Cary Fowler:

Thanks Michael. We don't produce peace on an empty stomach. I think that was the slide that we heard earlier today. So what you in the audience can't see is that we have four very large countdown clock screens here. And I'm going to try to keep us on time, so I'm going to invite my friends here to look at those countdown clocks. And as I ask a quick question, this is going to be asking for about a thirty or forty second response. My apologies.

What's the one hopeful, if we succeed in any way in the kind of work that we're doing in this room, what's the one hopeful change that we would see in the world? And what can people in this audience do to what action can they take to try to help us achieve that? Tough question. Thirty seconds or So something like

Ismahane Elouafi:

I think, Cary , everything happening because we are losing our humanity. So we're not speaking up for, We're not speaking up and standing by the right thing. And I think really what I hope is that we put out our hearts, our positions and speak up truth. We can't let the food weaponization that Michael mentioned happening in Gaza, in Yemen, in so many parts of the world. So we need to go back to the roots of we are human, we live together, and we need peace.

And the second one, innovation for the least and low middle income countries, so we can produce more with less. Thank you.

Cary Fowler:

Rich, what are we going

Sir Richard Roberts:

I'm obviously all in favor of using biotech to improve agriculture. I still call gene editing GMOs. There will come even better ways of doing it. We know how to do it very precisely. We should let the countries get the scientists together and actually make the progress that is possible. The progress is immense that could be made. Give the scientists the opportunity to do it.

Cary Fowler:

Thank you.

Johan Swinnen:

Yeah, I'm going to link it back to the finance issue, and I mean also linking to what Michael said. I mean, I was part of the Food Systems Economics Commission, and we came to an estimate of $400 $500,000,000,000 a year. But of course, this is across the whole world, right? But that's roughly half of this is on the supply side and half of it is on the consumption, on the demand side, okay? And so I think it's really crucial to really bring in the private sector and the public sector much stronger.

So the leveraging effect we have to I mean, we spent $800,000,000,000 a year on agricultural subsidies in the world. We can do better with this money. And we can also use it the new funding has to come in and leveraging private investment and consumption investments in the right direction. I think that's crucial. All of you, all of us have a role to play in that because we are part of this food system and advising to it.

Michael Werz:

Okay. Our screens just change color, so there's a lot of pressure. I would say, do what you do and keep doing what you do, but have an eye on the geopolitical situation. And as a concrete policy initiative that we will try to get off the ground next year, Help us to start a conversation about a UN Security Council resolution. The number is

two four one seven that has passed in 2018 and is the strongest legal environment that outlaws the weaponization of food, the use of food as a military weapon.

It has been passed unanimously by the UN Security Council, and then it has been shelved and never again looked at. We want to organize a public conversation, preferably at the global level, about what this means and what this resolution could actually do for the world and we need the support from all of you.

Ismahane Elouafi:

Thank you.

Cary Fowler:

Thank you. Well, according to the countdown clocks, we have no time for you to give any applause to these panelists. You can do it anyway.