



The World Food Prize

Borlaug Dialogue International Symposium

17 October 2013

On behalf of the Pontifical Council for Justice and Peace, I thank you warmly for your very kind invitation to participate in the *World Food Prize* event of this year, and for your warm welcome.

As you may know, about 50 years ago, the Second Vatican Council carefully reviewed the mission of the Catholic Church in the modern world. The Council found it urgent that the Church, with all her resources, accompany humanity in its walk through history. She made her own “*the joys and the hopes, the griefs and the anxieties of the [people] of this age, especially those who are poor or in any way afflicted.*”¹ Recently Pope Francis put it straightforwardly to a meeting of the Food and Agriculture Organization of the United Nations (FAO): “*the Catholic Church, with all her structures and institutions, is at your side,*”² that is, at the side of everyone who seeks in good faith to meet the challenges of world hunger.

The Vatican Department that was mandated to study and to promote the Church's accompaniment of humanity is the *Pontifical Council for Justice and Peace*, which I preside over. And the spirit of our work – and of my presence – is beautifully expressed by Vatican II with these words: “Giving witness and voice to the faith of the whole people of God gathered together by Christ, this Council can provide no more eloquent proof of its solidarity with, as well as its respect and love for the entire human family, than by engaging with it in ***conversation*** about these various problems.”³

To engage in conversation about the problems of hunger that afflict our world: that is why I join you at this International Symposium. When we share a common commitment to conversation, we should be in a good position to exchange views about concerns we have and positions we take, even when they are at variance.

¹ Vatican II, *Gaudium et Spes*, § 1.

² Pope Francis, *Address*, 38th Conference of the Food and Agriculture Organization of the United Nations, 20 June 2013.

³ Vatican II, *Gaudium et Spes*, § 3.

And yet because the stakes are high, tempers tend to run short, and sharply divergent views make the conversation shrill. When that happens, as Vatican II foresaw, we must courageously go even further and deeper than conversation, into *dialogue*: “The Church sincerely professes that all [people], believers and unbelievers alike, ought to work for the rightful betterment of this world in which all alike live; such an ideal cannot be realized, however, apart from sincere and prudent dialogue.”⁴

And when you juxtapose the World Food Prize and the Occupy World Food Prize, at first glance the divergence can appear and sound like polar opposition. The urgency of world hunger and food insecurity certainly cries out for “*rightful betterment*”, and therefore calls for *dialogue*. And for that I have come, too: to call for conversation and to promote *dialogue*. The Church promotes listening, dialogue, patience, respect for the other, sincerity and even willingness to review one’s own opinion. The Church encourages, orients and enriches discussion and debate.⁵ It strives to *indicate directions* for the work of those who are technically and politically responsible for dealing with concrete problems.

THE CHURCH CONVERSES WITH THE WORLD FOOD PRIZE

Let me, then, begin the *conversation*: The earth, as Scriptures tell us, was created as the home of the human family. The earth is beautiful, good and perfect in serving its purpose of giving sustenance to human life. Later, however, the Prophet Isaiah tells us that “*the earth languishes and suffers*”⁶ from the sins of its human inhabitants. In view of this pitiful situation, Saint Paul will announce the hope of the earth’s redemption, with man who was given custody of it, through Christ⁷.

Entrusted with the custody of the earth, the human family has a mission to love God’s creation, to accompany it towards its ultimate perfection, and to make it fruitful: a fruitful creation that is to be enjoyed by the present and future generations, and that satisfies all the needs of humanity. That is why Pope Leo XIII says: “*that which is required for the preservation of life, and for life’s well-being, is produced in great abundance from the soil, but not until [people have] brought it into cultivation and expended upon it [their] solicitude and skill.*”⁸ Similarly, the Compendium of the Social Teaching of the Church observes: “*The Christian vision of creation makes a positive judgment on the acceptability of human intervention in nature, which also includes other living beings, and at the same time makes a strong appeal for responsibility.*”⁹

In Catholic thought, then, “nature” is neither sacred nor divine, neither to be feared nor to be revered and left untouched. Rather, it is a gift offered by the Creator to the human community to be lived in and used, entrusted to the intelligence and moral responsibility of men and women. Therefore it is legitimate for humans with the correct attitude to intervene in nature and make modifications. In the words of the *Compendium* as applied to biotechnology: “*For this reason the human person does not commit an illicit act when, out of respect for the*

⁴ *Gaudium et Spes*, § 21 ; cf. § 40.

⁵ Cf. Pope Francis, *Audience* for Pontifical Council for Justice and Peace Conference on *Pacem in Terris*, 3.10.2013.

⁶ Cf. *Is*, 24, 1-13.

⁷ Cf. *Rm*, 8, 21.

⁸ LEO XIII, *Rerum Novarum*, n. 9.

⁹ Pontifical Council for Justice and Peace, *Compendium of the Social Doctrine of the Church*, Libreria Editrice Vaticana, Città del Vaticano 2004, §473.

order, beauty and usefulness of individual living beings and their function in the ecosystem, he intervenes by modifying some of their characteristics or properties."¹⁰

"INTERVENING BY MODIFYING": THE CHURCH, CATHOLIC SOCIAL DOCTRINE AND BIOTECHNOLOGICAL RESEARCH

There are no *a priori* limits on the notion of “*intervening by modifying*”. It does not even preclude actions taken on what may be considered as the most intimate part of living organisms: the *genome*.

Blessed John Paul II, for example, in a speech to the members of the Pontifical Academy of Sciences, expressed support for genetic research, saying: “*It is also to be hoped, with reference to your activities, that the new techniques of modification of the genetic code, in particular cases of genetic or chromosomal diseases, will be a motive of hope for the great number of people affected by those maladies*”.

He continued in a similar way about food production, saying: “*Finally, I wish to recall, along with the few cases which I have cited that benefit from biological experimentation, the important advantages that come from the increase of food products and from the formation of new vegetal species for the benefit of all, especially people most in need.*”¹¹

Again, addressing the 24th General Assembly of the FAO, where he observed how hostile climate affects food production in poor countries, he said: “*The findings of science must be put to use in order to ensure a high productivity of land in such a way that the local population can secure food and sustenance without destroying nature.*”¹²

Finally, at a study week of the Pontifical Academy of Sciences and the Swedish Academy of Sciences on *Tropical Forest and the Conservation of Species*, John Paul II referred to how “*other plants possess value as sources of food or as a means of genetically improving strains of edible plants.*”¹³

At this point in the conversation, and in the light of the above, we should rejoice in the memory and achievements of Dr. Norman Borlaug: He was awarded the *Nobel Prize* in 1970 in recognition of his lifetime of work to feed the hungry of the world. He struggled endlessly to integrate research and viable technologies into wheat production in Mexico. His work extended from research stations to farmers' fields. In the words of Pope Francis, Dr. Borlaug had ‘*the smell of the sheep*’, or in Iowan farmers' language: “*He had manure on his boots*”. The result was called ***the Green Revolution***: the production of seeds with broad and stable disease resistance, adapted to varying growing conditions and with high yield potential; and he conceived and set up the ***World Food Prize*** to encourage continued work towards food security and to meet the *zero hunger challenge*.

This is also why we have reason today to congratulate our three *World Food Prize* winners this year: Dr. Marc Van Montagu of Belgium,¹⁴ and Dr. Mary-Dell Chilton¹⁵ and Dr. Robert

¹⁰ Ibid.

¹¹ John Paul II, *Address to the Members of the Pontifical Academy of Sciences*, 23.10.1982, §§ 5-6.

¹² John Paul II, *Address to the Participants in the XIV General Assembly of the FAO*, 13.11.1987, § 5.

¹³ John Paul II, *Address to the Participants of the Study Week organized by the Pontifical Academy of Sciences*, 18.05.1990, § 2.

¹⁴ Founder and Chairman of the Institute of Plant Biotechnology Outreach at Ghent University in Belgium

¹⁵ Founder and Distinguished Fellow of Syngenta Biotechnology

T. Fraley¹⁶ of the United States, and to commend them for carrying on the legacy of Dr. Borlaug, putting biotechnology and research towards improving food production.

But times have also changed: Dr. Borlaug's achievements were greeted with great enthusiasm, and the *Green Revolution* with great optimism. Why then is there so much displeasure and distrust today, so much skepticism and strong opposition? Never before, having accepted an invitation, have I received so much mail, some of it urging me to withdraw, a bit of it affirming the value of GMOs, much of it recounting destruction and suffering in relationship with globalized industrial agriculture promoting GMO crops. What can be going wrong, seeing that Pope John Paul spoke positively about such research?

Let me now go back to Pope John Paul II to continue the *conversation*. For when he encouraged genetic research to enhance food production, he also clearly stated the *parameters* within which such research may be carried out. “*In terminating these reflections of mine,*” he said to the Pontifical Academy of Sciences, “*which show how much I approve and support your worthy researches, I reaffirm that they must all be subject to moral principles and values, which respect and realize in its fullness the dignity of man.*”¹⁷

It is clear, then, that in the mind of John Paul II, the various operations that can be called “genetic manipulation” must be the object of a true moral discernment. “*To speak the truth,*” he said on another occasion, “*the expression genetic manipulation is ambiguous.*” While it is characterized by beneficial applications in the area of animal and plant biology, very useful for food production, it can also yield to adventurism.¹⁸ In the latter case, it can be *arbitrary and unjust*, especially when it loses sight of the total wellbeing of the human person. This is why, for John Paul II, it is absolutely necessary to overcome the separation between science and ethics, and to discover their radical unity.¹⁹

Accordingly, the desired dialogue will have to go very deep. It will need to include the motivation and vision which guide biological and genetic research and biotechnology – in other words, not only so-called “pure” research but also the vision and motivation that guide its translation into policies, commerce, agriculture and trade in many different situations around the world. And for the dialogue to progress *in good faith*, all the stakeholders must genuinely be represented and meaningfully take part.

THE PROBLEM OF FOOD INSECURITY

Hunger in the world is a very serious injustice that shows fundamental disrespect for human dignity. Pope John Paul II called it “*the first and fundamental form of poverty*”.²⁰ Persistent hunger, starvation and malnutrition represent a global failure of humanity that, to our shame, has dragged on for decades. It is a plague, and a long-term indicator of a system that does not function properly. Some point to the economic crisis of recent years as the reason why the world cannot do better; but that is just an excuse – food insecurity has persisted for decades, through prosperous times as well as more difficult ones.

But the problem is not, of course, an overall scarcity of food.

¹⁶ Executive Vice President and Chief Technology Officer of Monsanto

¹⁷ John Paul II, *Address to the Members of the Pontifical Academy of Sciences*, 23.10.1982, §6.

¹⁸ Cf. John Paul II, *Address to the XXXV General Assembly of the World Medical Association*, 29.10.1983, §6.

¹⁹ *Idem*.

²⁰ John Paul II, *Message*, World Food Day 2001, 16.10.2001.

Today the world produces more than enough food to feed its 7 billion inhabitants, but the world has 1 billion hungry people (about 1 in 7), the United States 50 million (about 1 in 6). But much is lost after harvesting or just thrown away: in a very recent document, “*FAO estimates that each year, approximately one-third of all food produced for human consumption in the world is lost or wasted*”²¹. Some estimates are even higher than one-third.

Since the 1980s, the Popes, supported by FAO statistics, have pointed out that the supply of food per capita on the planet is steadily increasing. So it is clear that, in large part, hunger is a problem of distribution of food or access to it. It does not reach some people, or they cannot buy it. To others, however, it comes in abundance, even from afar – abundant enough that they can waste it.²² In other cases, finally, the systems for storage of harvests or the supply chains are deficient.

Let me suggest a little parable. A man is anxious to improve the strength of his arms. A surgeon offers to transplant muscles from his legs into his arms: “This will quickly make your arms big and strong”. “What will happen to my legs?” the man asks. “They will become much weaker,” replies the surgeon, “and may have to be amputated.” The man is horrified and rejects the surgeon’s solution.

In some circumstances, the promise of food security merely through higher agricultural productivity is similar. New technologies are promoted with the claim of making more food available for everyone. But that is not the whole picture. In reality, the innovations are so designed or implemented as to benefit relatively few interests that are already well-off.

Along the way, many small producers will inevitably be excluded and/or moved off their land. They will be amputated from their traditional occupations and way of life. The uprooting of individuals, families and communities is not only a painful separation from land; it extends to their entire existential and spiritual environment, threatening and at times shattering their few certainties in life.

It should not surprise us if some populations reject certain innovations, not because they are faulty or perceived as such, but because the manner of their delivery entails unbearable costs to those who are supposed to benefit from them. It is not they who are missing the point. Rather, like the surgeon who thinks only of a set of arms, not the whole person, whoever refuses to look at the whole food insecurity picture – people and their dignity and their lives as well as food production and distribution – will miss the point.

How does the Church “know” about world hunger, sustainable agriculture or GMOs? First of all, the Church is in touch with the direct experience of her people. Another important way that we know about these topics is through members of the Church who are scientists or professionals working in a wide variety of positions in universities, government and industry. And a third way would be in the work of different departments of the Roman Curia: the Pontifical Academy for Life, the Pontifical Academy of Science, the Pontifical Academy of Social Science, the Congregation for the Doctrine of the Faith, the Holy See Missions to the World Food Organization and to other international bodies, the Secretariat of State and our own Pontifical Council for Justice and Peace.

²¹ FAO, *Food wastage footprint, Impacts on natural resources. Summary report*, 2013, p. 6.

²² Cf. FAO, *Food wastage footprint*, pp. 11-13.

In 2004 our Pontifical Council produced a *Compendium of the Social Doctrine of the Church*. Nine of its 583 paragraphs are devoted to biotechnology: not to the science or the industry, but to the ethical criteria that people of good will should apply to the development and use of these technologies. I warmly recommend this text to everyone involved in working on GMOs.²³

BROAD DIRECTIONS

Here is what I can offer to whoever tries to fight hunger, especially in the field of biotechnologies applied to the agricultural sector. I implore you, your colleagues, and others whom you influence such as your students, to always proceed along an ethical path of discernment.

It is common to find some scientists and advocates who strongly hold one position and others who hold its opposite. They attack and even ridicule the opposed views – perhaps not in scientific meetings and journals, but certainly in the media. And all this attack, defense and counter-attack leave the public deeply confused.

There is a different approach, which takes its stand in dialogue, in the patient exchange of positions and objections. When there is something as important to humanity as hunger, and something as controversial as GMOs, let us encourage research under solid (not flimsy) ethical guidelines, and then, sharing the results, let us do so in a climate of listening and dialogue.

We know since *Gaudium et Spes* in the mid-1960s that the Church accompanies science. This is because science cannot proceed without ethics. *Ratio* goes along with *fides*, as Benedict XVI taught so clearly. *Bios*, which means *life*, must be handled ethically and respectfully, and maybe this is especially true with respect to biotechnology. It is hazardous – and ultimately absurd, indeed sinful – to employ biotechnology without the guidance of a deeply responsible ethics. For instance, nearly 50 years ago, Pope Paul VI called for prudence, responsibility and unselfishness in this domain:

*By dint of intelligent thought and hard work, man gradually uncovers the hidden laws of nature and learns to make better use of natural resources. As he takes control over his way of life, he is stimulated to undertake new investigations and fresh discoveries, to take prudent risks and launch new ventures, to act responsibly and give of himself unselfishly.*²⁴

Blessed Pope John Paul II was supportive of research in biotechnology to feed the world. Moreover, when he visited Des Moines in 1979, standing in a corn-bedecked fields, he challenged agriculture in America and around the world to “*foster sustainability of the land and water and plants, and to use the harvest to feed the hungry in the world.*”²⁵

The study-document preparing for the II Synod for Africa in 2009 identified the true problems of agriculture in Africa: “the lack of cultivatable land, water, energy, access to credit, agricultural training, local markets, road infrastructures, etc.” These true problems

²³ *Compendium of the Social Doctrine of the Church*, §§ 472-480.

²⁴ Paul VI, *Populorum Progressio* § 25.

²⁵ John Paul II, Address to the Rural Community of Saint Patrick, Des Moines, 4.10.1979

should not be overlooked or side-stepped by those who promote the planting of genetically-modified seeding as the definitive solution.²⁶

In his important encyclical *Caritas in Veritate* of 2009, Pope Benedict XVI counted food security among the urgent global issues which require “a greater degree of international ordering”. He asserted that the problem of food insecurity “needs to be addressed within a long-term perspective, eliminating the structural causes that give rise to it and promoting the agricultural development of poorer countries. This can be done by investing in rural infrastructures, irrigation systems, transport, organization of markets, and in the development and dissemination of agricultural technology that can make the best use of the human, natural and socio-economic resources that are more readily available at the local level, while guaranteeing their sustainability over the long term as well. All this needs to be accomplished with the involvement of local communities in choices and decisions that affect the use of agricultural land.” Having enumerated the many conditions that cry out for improvement, Pope Benedict went on to welcome “the new possibilities that are opening up through proper use of traditional as well as innovative farming techniques, always assuming that these have been judged, after sufficient testing, to be appropriate, respectful of the environment and attentive to the needs of the most deprived peoples”.²⁷

For Pope Benedict, it is clear that ever-increasing production as the primary path – let alone the sole option – to reducing world hunger is too narrow a vision and can lead to false solutions, which may actually undermine food security in the long term.

GUIDELINES

I have quoted the recent Popes Paul VI, John Paul II, Benedict XVI and now Pope Francis. Having considered the general directions they laid out, let me now spell out more specific ethical orientations that need to accompany work in science and technology, including biotechnology, as well as international trade and commerce. This is still not a Church position on GMOs as such, but rather, the assistance of the Church in the form of guidance based on her Social Doctrine.

A. Spirit of courage: Face up to the reality of hunger decisively and with genuine charity and openness of heart. In the words of Pope Francis: “*Something more can and must be done in order to provide a new stimulus to international activity on behalf of the poor, inspired by something more than mere goodwill or, worse, promises which all too often have not been kept... There is a need to move beyond indifference and a tendency to look the other way, and urgently to attend to immediate needs, confident that the fruits of today’s work will mature in the future. We cannot devise programs which are bureaucratic and antiseptic, which do not work today.*” Keep on studying the causes of world hunger as broadly and deeply as possible, seeking the greatest variety of possible solutions, since we need “*a complete knowledge of particular situations, suitable preparation, and ideas which take into account every individual and every community.*”²⁸

B. Ethics of all human endeavors: Some would claim that research is ethically neutral, and only its application or implementation may be good or bad. But any activity which deserves

²⁶ *Instrumentum Laboris* of Synod for Africa, 19.03.2009, § 58.

²⁷ Benedict XVI, *Caritas in Veritate*, § 67.

²⁸ Pope Francis, *Address to the 38th Conference of the Food and Agriculture Organization of the United Nations in Rome*, 10.06.2013, §§ 2, 3, 4. For a comprehensive presentation of the principles here mentioned, consult the *Compendium*, especially §§ 472-80.

the name “human” requires ethical guidance if it is to serve the common good. Therefore, a researcher always should work “*to satisfy the demands of justice, fairness and respect for every human being*”;²⁹ not merely for the sake of profit. The same criteria apply to those who are responsible, in later phases of the process, for industrial production, international trade, commercial distribution, and so forth. There should be no “washing of the hands” at any step along the way.

C. Prudence. The full costs and consequences of introducing genetically modified organisms may emerge only with time, in the long-term. Therefore let us apply the *principle of precaution* or *prudence* by taking every reasonable measure of caution beforehand, to avoid the risk of damaging human health or the environment. Such prudence, I might add, is a necessary element of any effort to advance the common good through public, that is governmental, action.

D. Transparency: Adopt the highest standards of communication with the public, as well as rules of labeling in order to guarantee producers’ and consumers’ right to information. This is necessary for everyone to have a true choice. This is the *principle of transparency*.

E. Access: Patents and intellectual property rights are legitimate, but they need to be monitored and regulated. Fair ways must be found to share the fruits of research and ensure that developing countries have *access* both to natural resources and to innovations. Otherwise whole populations can be discriminated against, exploited and deprived of what they rightly should have a share in.³⁰

F. Biodiversity: Bio-diversity is humanity’s patrimony. It needs to be protected, indeed privileged. The development of new types should not require, or lead to, the disappearance of traditional species.

G. Subsidiarity: A very healthy principle of Catholic Social Teaching is subsidiarity, which favors the exercise of responsibility at every level and resists “top-down” approaches where inappropriate. It is often better to support local efforts than to provide or even impose solutions from elsewhere. And given the complexities of globalization, effective **coordination** of efforts at all levels is also increasingly required.

H. Commerce: Analyze, condemn and fight “*financial speculation, which presently affects the price of food, treating it like any other merchandise and overlooking its primary function.*” Abandon any form of “*short-sighted economic interests and the mentality of power of a relative few who exclude the majority of the world’s peoples, generating poverty and marginalization and causing a breakdown in society.*”³¹ And educate our youth to do the same. ... with *criteria of justice and solidarity* governing the commercial and economic conditions, avoiding any commercial-economic monopoly

I. Finally, conversation and dialogue. Sharp differences of opinion (e.g., between WFP and “Occupy”) about agriculture and biotechnology show how important are these issues. Their importance does not justify harshness (polemic) or manipulation (bullying). At every level from the global to the local, one might ask, what should be people’s input into research, agricultural and trade policies, development policies, funding priorities, and so forth. “*Every proposal must involve everyone,*” Pope Francis insists. “*To move forward constructively and*

²⁹ Pope Francis, *FAO*, § 1.

³⁰ Cf. *Statement of the Holy See at the World Trade Organization Council on Trade-Related Aspects of Intellectual Property Rights*, Geneva, 8 June 2010, §§ 5-7.

³¹ Pope Francis, *FAO*, § 2.

*fruitfully in the different functions and responsibilities involves the ability to analyze, understand, and engage, leaving behind the temptations of power, wealth or self-interest and instead serving the human family, especially the needy and those suffering from hunger and malnutrition.*³²

I will stop here. There may be other desirable or even essential criteria for serious, realistic, honest and courageous dialogue on this topic. If so, let them be put on the table. For the diverse parties to participate in good faith, they must hold themselves as well as others to such criteria. The world needs everyone, the heirs of Bishop Maurice Dingman and the heirs of Dr. Norman Borlaug, to stay at the table and solve these issues, rather than abandon the dialogue and leave the world's poor at an empty table.

CONCLUSION

The world's food security challenges are not to be overcome with a referendum on science. Scientific research is good. It is right to celebrate the achievements of our three World Food Prize Laureates. The Church is not anti-science.³³ Nor do we wish to promote a referendum on technology or bio-technology. Nor even a referendum on business – the Church is not against business or the market. In fact, while we have critiqued some aspects of the world financial system – inattention to the common good, disrespect for the rights of weaker members, tolerance for monopolies and cartels – my Council has sponsored a major publication that encourages the vocation of business leaders in carrying out God's plan for humanity.³⁴

The Church sees the GMO debate as a complex choice among various means – the means offered by advances in biotechnology and by innovations in agriculture, as well as the human, natural and socio-economic means which can be developed locally and regionally. Among the goals we embrace are food security for all, quality of life of land-based populations, biodiversity and long-term sustainability. We see many sides to the coin of “world food”.

So we wish to promote meaningful dialogue amongst the stakeholders, whether in the United States or in other parts of the world. All sides of the controversy are using many of the same key phrases such as “overcoming hunger” and “sustainable agriculture”, thus it will only be by mutual and respectful listening, by a genuine desire to learn from the other, indeed from all the stakeholders, that the better and truly enduring, sustainable solutions will be found. May I cite my own African experience of “palaver”? Palaver is the extremely patient and thorough exploration of a whole problem until one reaches consensus. It means to talk and to talk, to listen and listen, thoroughly to explore every facet of a complex issue, with mutual respect and without hostility. Sooner or later, a truly consensual conclusion will arise. But in order to find the best way forward, ALL the stakeholders must be represented around the palaver circle – a circle characterized by humble and respectful listening, honest speaking, reconciliation of deep differences – a circle of true collaboration.

³² Pope Francis, *FAO*, § 3.

³³ Far from it – where would genetics be without the contribution of the Augustinian friar Gregor Mendel, where would pharmaceutical knowledge be without the herbalists in countless monastery gardens!

³⁴ Pontifical Council for Justice and Peace, *Vocation of the Business Leader: A Reflection*. First published in 2011 and now available in about a dozen languages, the handbook can be downloaded at <http://www.iustitiaetpax.va/content/giustiziaepace/it/archivio/pubblicazioni/vocation-of-the-business-leader--a-reflection-.html>

Thank you for allowing me, in the name of the Church as convener and teacher, to offer to facilitate some of the needed dialogue.

Cardinal Peter K.A. Turkson
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