



14 April 2014  
DIR-012-14

Dr. Shakeel Bhatti  
Secretary  
International Treaty on Plant Genetic Resources for Food and Agriculture  
Food and Agriculture Organization of the United Nations  
Viale delle Terme di Caracalla  
00153 Rome, Italy

Dear Dr. Bhatti:

We write in regard to the invitation by the Secretary in reference to the *Ad Hoc* Open-Ended Working Group to Enhance the Functioning of the Multilateral System of Access and Benefit Sharing, to encourage relevant international organizations to make available information relevant to the studies being prepared by the Secretariat.

The International Center for Tropical Agriculture (CIAT), the Global Crop Diversity Trust, the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), and a number of research universities, have recently completed and published an analysis<sup>1</sup> of changes in national level food supplies worldwide over the past half-century, utilizing food supply data provided by FAO. Our methods were chosen in order to provide the highest feasible resolution for analyzing trends in the utilization of food crop species in a standardized manner worldwide, and included all possible countries (98% of world population) and all available metrics of food supply (calories, protein, fat, and food weight) from 1961 to the present.

The major findings of the research include: a) as a global trend, national food supplies have diversified to include a greater number of the crop commodities measured by FAO; b) the relative abundance of crops within national food supplies has also changed significantly, generally with a greater amount of major cereal, sugar and oil crops in the diet, and a declining contribution of regionally and locally important cereals, roots and tubers, and other crops; and c) due to these changes, national food supplies have become much more similar worldwide, i.e. there is increasing homogeneity in global food supplies. These results strongly highlight our increasing dependence worldwide on a relatively restricted suite of globalized crops and, therefore, as a corollary, the increasing interdependence of countries on the genetic resources underpinning their sustainable production. The research has received an extraordinary amount of attention in both the scientific community and the public media, as the implications of such changes relate both to the future of agriculture as well as to nutrition and human health.

Building upon this research, we are expanding our discussion of the effects of such changes in national food supplies on interdependence among countries in the genetic resources of food crops. Our methodology will build upon a key analysis<sup>2</sup> prepared as an input in support of the original negotiations of the International Treaty on Plant Genetic Resources for Food and Agriculture, expanding it to include further metrics of food supply, an improved methodology of geographic sourcing of the genetic resources of crops, and, most critically, providing a vision of change over time in regard to interdependence on these genetic resources. We have initiated the analysis, and project to publish in a scientific journal by the end of this year.

We would like to submit our upcoming analysis on the quantification of interdependence in the genetic resources underpinning national food supplies, and its supplementary information, to the *Ad Hoc* Working group. We believe that the results will serve as an important contribution to the analysis of the factors that influence the willingness of stakeholder groups to make contributions to the Benefit-sharing Fund and to access plant genetic resources for food and agriculture from the Multilateral System, including the potential enhancement of the Multilateral System to include more crops of global significance, as elucidated in our study. CIAT and the Global Crop Diversity Trust have long-standing collaborations with the Treaty Secretariat and we look forward to continue such collaborations in the preparation of the upcoming analysis, so as to make available the research results in the most accessible manner to inform the policy discussions.

Thank you for your consideration of inclusion of our contributions to the goals of the *Ad Hoc* Working Group.

Sincerely,



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<sup>1</sup>Khoury CK, Bjorkman AD, Dempewolf H, Ramirez-Villegas J, Guarino L, Jarvis A, Rieseberg LH and Struik PC (2014) Increasing homogeneity in global food supplies and the implications for food security. *Proceedings of the National Academy of Sciences of the United States of America (PNAS)* 111(11): 4001-4006. doi: 10.1073/pnas.1313490111. Available online at: <http://www.pnas.org/content/111/11/4001.abstract>

<sup>2</sup>Flores Palacios X (1998) Contribution to the Estimation of Countries' Interdependence in the Area of Plant Genetic Resources. Commission on Genetic Resources for Food and Agriculture, Background Study Paper No. 7, Rev. 1, Food and Agriculture Organization of the United Nations, Rome, Italy. Available online at: <ftp://ftp.fao.org/docrep/fao/meeting/015/j0747e.pdf>

The **International Center for Tropical Agriculture (CIAT)** develops technologies, tools, and new knowledge that better enable farmers, especially smallholders, to make agriculture eco-efficient—that is, competitive and profitable as well as sustainable and resilient. With headquarters near Cali, Colombia, CIAT conducts research for development in tropical regions of Latin America, Africa, and Asia. [www.ciat.cgiar.org](http://www.ciat.cgiar.org)

The **Global Crop Diversity Trust** is an independent international organization working to ensure the conservation and availability of crop diversity essential for food and agriculture, forever. [www.croptrust.org](http://www.croptrust.org)

**CGIAR** is a global research partnership for a food secure future. Its science is carried out by the 15 research centers who are members of the CGIAR Consortium in collaboration with hundreds of partner organizations. [www.cgiar.org](http://www.cgiar.org)