

This report is presented by the Working Group on Canadian Science and Technology Policy. The group is comprised of international development, church and farmers organizations, including: Canadian Organic Growers, ETC Group, Inter Pares, National Farmers Union, Social Justice Committee, United Church of Canada, and USC Canada. For further information, please contact Working Group member Anna Paskal by phone at (613) 563-4801 or by email: apaskal@interpares.ca.

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Introduction

This is a report on proceedings from the *Voices from the South: Biotech seeds, food security and international development* Roundtable dialogue with government held March 9th, 2005 in Ottawa. In addition, this report presents an evaluation of the Roundtable and surrounding events as a civil society initiative in policy dialogue with government. The report incorporates an evaluation of the civil society organizing process as well as the effectiveness of the series of events held between March 7th and 10th 2005 and organized by the *Working Group on Canada's Policy with Regards to Agricultural Biotechnology and Developing Countries*. This grouping includes the Canadian Organic Growers, ETC Group, Inter Pares, The National Farmers Union, the Social Justice Committee, the United Church of Canada, and USC Canada. The event series included an all-day Roundtable with government officials in Ottawa, public panel presentations in three cities (Saskatoon, Montreal and Ottawa), a Senate Committee hearing and a Parliamentary breakfast.

As the subject of intense debate, and with high stakes for farmers and rural communities around the world, Canada's support for agricultural biotechnology internationally demanded the attention of diverse Canadian civil society organizations. In July 2004, these groups came together as the *Working Group on Canada's Policy with Regards to Agricultural Biotechnology and Developing Countries*. The group aims to engage with Canadian policy-makers on issues related to Canadian policy in the South on food and agriculture technology, food security and rural development. Based on extensive experience working with communities in the South, the group sought to facilitate the inclusion of the voices of the people most affected by Canadian policy in these areas – Southern farmers – in the decision-making processes that affect their lives.

The Canadian government is widely engaged in activities that support and promote the use of, and research in, agricultural biotechnology in developing countries. This technological-fix approach to agricultural productivity has come into direct conflict with the goals and work of many of our colleagues in the South. The Working Group was constituted to respond to the concerns and questions of our colleagues regarding the emergence and promotion of agricultural biotechnologies, as well as to our own concerns as Canadians about global biodiversity and sustainable development. Our initiative was borne out of work with communities in developing countries facing immediate and pressing questions raised by the introduction of genetically modified (GM) crops, donations of GM food aid, and the financing of biotechnology research projects and facilities. There is widespread concern that financial, technical and ideological commitments to agricultural biotechnology are jeopardizing successful efforts in many communities to maintain or establish sustainable farming systems and self-sustaining local economies, and that such commitments overlook the promise of, and divert funding away from, other technologies and knowledge systems that already support food sovereignty in those communities.

The *Voices from the South: Biotech seeds, food security and international development* initiative was the outcome of a series of meetings with eight biotech-policy related Canadian government agencies and departments in which it was apparent that officials were lacking, and seeking, perspectives from Southern farming and scientific communities on issues relating to agricultural biotechnology in developing countries. The initiative was therefore an effort to assist in filling this broadly assessed gap in the Canadian policy making process. The result was a unique initiative featuring farmers, scientists, and agricultural policy analysts from Africa, Asia and Latin America, in dialogue with Canadian policy-makers, farmers, civil society and the public.

The Roundtable dialogue with government and its accompanying events were undertaken at a moment of particular relevance in Canadian government policy processes in the specific area of agricultural biotechnology and international development. There are a variety of government initiatives and trends that we were interested in discussing and others that we learned more about through the process. For example, we learned through discussions with government about intentions to develop a “pro-poor science” platform that would possibly include promotion of biotechnology and nanotechnology in the South, building on initiatives such as the existing \$30 million Biosciences in Eastern and Central Africa (BECA) project currently managed by CIDA. There were also a number of relevant policy processes ongoing or coming to a close around March 2005 including the development of a biotechnology “scoping paper” at the Canadian International Development Agency and an internal Joint Task Force on Biotechnology and Emerging Technologies at the International Development Research Centre (IDRC). Significantly, the Canadian Biotechnology Secretariat is also currently taking inventory of government activities relating to biotechnology and international development. The Canadian government had also launched other, broader, initiatives with implications for Canadian policy in this area including the International Policy Review, and the proposal by the Prime Minister to devote no less than 5% of Canada’s Research and Development investment to a knowledge-based approach to development assistance. These policy processes coincided to open a unique and timely opportunity for dialogue.

List of International Participants

(For biographies and contact information please see Appendix ii)

Africa

Ibrahima Coulibaly, Association of Professional Producers of Mali

Dr. Mwananyanda Mbikusita Lewanika, National Institute for Scientific & Industrial Research, Zambia

Dr. Melaku Worede, gene bank scientist, Ethiopia

Asia

Mananagari Narsamma, farmer and filmmaker, India

Begari Sammamma, farmer, India

P.V. Satheesh, Director, Deccan Development Society, India

Latin America

Camila Montecinos, GRAIN, Chile

Melina Hernandez Sosa, indigenous community leader, Mexico

West Asia

(Unfortunately, confirmed participant Maryam Rahmanian from the Centre for Sustainable Development & Environment (CENESTA) in Iran could not attend due to a family emergency).

List of Events March 7-10 2005

March 7th: Meeting with the Federation of Saskatchewan Indians, Saskatoon.

March 7th: Meeting with the National Farmers Union and the Saskatchewan Organic Directorate, Saskatoon.

March 7: Public Forum *Genetically Modified Seeds: The Answer to World Hunger and Poverty?* Saskatoon Public Library, Saskatoon.

March 7: Public Forum, *GMOs: Views from the South*, University of Quebec at Montreal, Montreal.

March 8: Senate Hearing, Standing Senate Committee on Foreign Affairs, *Agriculture in Africa*, Ottawa.

March 9: Roundtable with Government, Sheraton Hotel, Ottawa.

March 9: Public Forum, *Genetically Modified Food: The Answer to World Hunger and Poverty?*, Congress Centre, Ottawa.

March 10: Parliamentary Breakfast, Sponsored by Hon. Bernard Bigras, Bloc Québécois; Hon. David Kilgour, Liberal Party of Canada; Hon. Alexa McDonough, New Democratic Party, House of Commons, Ottawa.

Acknowledgements

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The Working Group would like to acknowledge the support of all Working Group members but particularly that of Inter Pares, ETC Group and USC Canada through their roles in the Roundtable organizing committee. In addition to Working Group members Canadian Organic Growers, ETC Group, Inter Pares, The National Farmers Union, the Social Justice Committee, the United Church of Canada, and USC Canada, we would like to thank the following groups that co-organized and/or co-sponsored public events and other meetings in Saskatoon, Montreal and Ottawa:

Saskatoon: Federation of Saskatchewan Indians, Saskatchewan Organic Directorate, Indigenous Peoples Program (University of Saskatchewan).

Montreal: Development and Peace, Greenpeace, the Social Justice Committee, Union Paysanne, Greater Montreal YMCA (International Program), CINBIOSE, Groupe de recherche Technosciences du vivant et société.

Ottawa: Council of Canadians, Development and Peace, Friends of the Earth, National Union for Public and General Employees (NUPGE), OPIRG Carleton, OPIRG Ottawa, Polaris Institute, Sierra Club of Canada.

We would like to thank those government officials who met with us and those who participated in the Roundtable.

The Working Group would like to sincerely and heartily thank the international participants who traveled great distances to share their experiences and provide expertise to this initiative and its non-stop, action-packed agenda.

Our Process

- **Pre-Dialogue Process**

In July 2004, the *Working Group on Canada's Policy with Regard's to Agricultural Biotechnology and Developing Countries* requested meetings with Canadian government departments and agencies whose mandates and activities relate to agricultural biotechnology. This informal assessment exercise allowed us to begin to build a general overview of biotechnology policies and activities as they relate to developing countries. Over the course of several months we met with 9 government departments and agencies: the Canadian Biotechnology Secretariat, International Trade, National Research Council, Canadian International Development Agency, Canadian Food Inspection Agency, Health Canada, Agriculture and Agri-food Canada, and Environment Canada as well as with the International Development Research Centre.

Moving from department to department, we met with varying levels of openness and engagement. We found answers in some boardrooms, and cautious responses in others. In one case, we were relegated to meeting with staff in a cafeteria rather than a meeting room. In another, the departmental chair of the meeting and key officials did not show up. For the most part, however, departments were open to our inquiries, though some were guarded and did not readily volunteer information.

After hailing many taxis and exchanging many business cards, a picture of the complex matrix of government activity in this area began to emerge. In addition, the meetings clearly reflected that the Canadian government is making commitments to agricultural biotechnology in developing countries without necessarily talking first with farmers and scientists in the South. Official after official told us that they had not met with or otherwise heard from communities in developing countries, those who would be most directly affected by policies made in this area. With the exception of Kenyan biotechnology supporter and scientist Florence Wambugu (who spoke at the National Research Council to an audience of officials from across departments) none had taken into account perspectives from farming communities in the South. Officials articulated the need for this contribution and generally acknowledged it as an important gap in their policy-making processes thus far. As our meetings continued, officials confirmed their interest in hearing those yet unheard voices through a forum we might arrange.

Ultimately we proposed a small-scale, off-the-record inter-departmental roundtable featuring a small group of diverse participants from the South. Both because of the timing in relation to current policy processes, and the import of the issue for the Canadian government and for those in developing countries, it was felt that organizing such an event would be important contribution to policy development in this area.

- **Roundtable Organization**

As we finished the last of our meetings, the idea for a roundtable with government began to take shape. In November 2004, we brainstormed ideas for the format and content of a high-level government roundtable and generated a list of international participants who

we thought could best address a range of critical questions. We never imagined that all the people we invited would so readily accept. It underlined the importance of Canadian agricultural policy internationally that busy farmers and scientists, all of high-standing in their communities and with valued knowledge in the field, were willing to commit to spending a week in Canada. The only invitee who could not accept our invitation was acclaimed Kenyan environmentalist Wangari Maathai who was receiving her Nobel Peace Prize as we sent her our invitation.

While we had secured the participation of a diverse group of highly respected resource people from Africa, Asia and Latin America, with a dynamic mix of critical perspectives, a number of departmental officials were taken aback that we were not engaging industry representatives in our roundtable organizing. It was obvious that, in some cases, government officials expected industry representatives to be primary, or at least prominent, guests in any discussions about agricultural biotechnology. One government representative told us that, “industry is driving government policy in this area”. The Working Group considered the suggestion of inviting representatives from the private sector and we returned to this question a few times. We resolved that industry has a strong voice on this issue, and one that is consistently heard above the perspectives of communities represented by the Southern resource people committed to participating. It was felt that government departments were well versed in, and had ready access to industry perspectives and that it was voices from the South that were missing. Given the experience provided by the team of international participants, we felt that the day would be rich and complete with presentations offered from the perspective of those most effected by the technologies in question.

Just before the December holiday season we sent out an email notice to advise government officials we had met with in the Fall that we would be organizing a roundtable to begin to fill the acknowledged gap in Southern perspectives. Upon our return to the office in January we began a process of ensuring the invitation list included appropriate officials from across government, and that invitations were extended through the right channels. We turned to the Canadian Biotechnology Secretariat to help us identify chief departmental officials to whom we could then ask for recommended invitees. The membership of the Interdepartmental Biotechnology Coordinating Committee was one helpful tool in understanding who was most engaged in the issue. We began to receive RSVPs as soon as the invitation was sent and, because our roundtable discussion format limited numbers, we developed an extensive waiting list that took constant management.

We wanted to create a unique and attractive learning opportunity for government officials, an open environment that would allow for rich, in-depth discussion and reflection on the role of agricultural biotechnology in food security and rural development. We also wanted to create a roundtable that would be an experience not soon forgotten, one with exciting and relevant presentations, in a comfortable and intimate setting that was conducive to dialogue. Though we anticipated that the presentations from international resource people would be critical of the role of biotechnology in agriculture, we hoped that we could create an open space for government

to hear and engage with these voices, even when not countered by industry or “the other side”.

Our hopes for building a comfortable environment for constructive dialogue were thrown into doubt in February, when Working Group member ETC Group received an internal memo from the Canadian government. The memo detailed the delegation’s intention to block consensus at negotiations of the Convention on Biological Diversity (CBD) in order to push open the global *de facto* moratorium on Terminator technology (Genetic Use Restriction Technology – GURTs – AKA sterile seeds). The issue of Terminator, perhaps more than any other, crystallizes some of the most contentious issues about the impact of biotechnology in developing countries, particularly on farmer seed saving which is the very foundation of food production and food security. Civil society groups mobilized with haste to oppose the Canadian position and letters poured in from across the world, tempering the government’s public position. This event brought into sharp focus the need for our Roundtable discussion on Canada’s policy and the interests of small farmers, but it also highlighted contention between the work of government departments and that of members of the Working Group. The Canadian position on Terminator and the civil society response to it formed part of the context for our Roundtable, a context that we were concerned might increase the nervousness of government officials in engaging with civil society. Recognizing that this issue had further heightened tension in this policy area, we continued to assure government that we intended to create an open forum for constructive dialogue and learning.

- **Balance**

Today’s roundtable has not been designed to achieve some hypothetical (even mythological) “balance” of all the possible actors engaged in agricultural biotechnology. It is to correct the “imbalance” - make sure that the voices of those who will be most affected by a Canadian government policy toward agricultural biotechnology in the South will be heard...The purpose of today is to deepen perspectives on these key issues and for us all to go away with a richer context to help us engage with some of these questions.

– Gerry Barr, President and CEO of Canadian Council for International Cooperation (CCIC) and roundtable moderator

We were very careful to develop a concept for a high-level meeting that would enable constructive dialogue, with the officials who were most engaged in this policy area. Knowing, and being told, that biotechnology was a controversial, even sensitive issue, we worked to encourage departments to attend and participate in full. We reassured participants that the event would be *in camera* with a final report that would not document particular discussions or attribute quotes. We had initially considered taking notes from the small table discussions but decided against this to ensure comfortable and open dialogue. Masanagari Narsamma, farmer and filmmaker from India, requested permission to film the proceedings. However, we asked Ms Narsamma, who uses her filmmaking as a tool to communicate and share global experiences with great effect in

communities of resource-poor farmers, to keep her camera on the international presentations only.

The roundtable was moderated by Gerry Barr, President and CEO of the Canadian Council for International Cooperation (CCIC), an umbrella group of international development which remains neutral on the issue of biotechnology due to the diverging positions of its membership. We had also sought a high-level government representative to speak in welcome and to introduce the Roundtable. The President of Canadian International Development Agency (CIDA) and the Hon. Minister for International Cooperation Aileen Carroll both declined, as did National Science Advisor Art Carty who was engaged elsewhere. Wardie Leppan, Team Leader, Sustainable Use of Biodiversity, from our major sponsor, the International Development Research Centre (IDRC), agreed to speak in introduction.

Despite our having met with most participating departments beforehand and our efforts to create an open environment for discussion, there were a number of obstacles yet to be overcome. Some of the obstacles remained and hampered discussion throughout the day. A few departmental officials apparently became nervous about participating in the Roundtable, a civil society initiative on a controversial issue. Working Group members and international resource people were surprised that representatives of democratic governance structures such as ours would feel threatened simply by being exposed to diverging points of view in an off-the-record dialogue setting.

Days before the Roundtable, one department requested our RSVP list and initiated a last minute inter-departmental meeting to discuss the arrangements of who planned to attend. The day before the Roundtable, our group received a call expressing concern about the high number of RSVPs as well as the format that required participants to discuss at small tables rather than just listen to proceedings. A request was also made for an additional government spokesperson to open the event and present the Canadian government's position on the issues. Despite agreeing to this last-minute request and underlining that the Roundtable was an off-the-record opportunity for dialogue on an issue of global importance, over 30% of confirmed participants did not show up. Nearly all were representatives of the departments who had come together in the last minute inter-departmental meeting.

The Roundtable was competing with a 2-day workshop on regulatory foresight as well as a conference in Mexico that required some key officials to be elsewhere. This does not, however, explain the 12 government officials failed to show up - and failed to notify us beforehand. This was particularly unfortunate as we had a waiting list of people who would have been pleased to fill these places had we received notification. The success of our format was jeopardized by these empty seats where full tables of diverse participants were anticipated, to facilitate discussion.

The table discussions were compromised by the number of absent participants. In fact this situation was remarked on in the participant evaluations, for example, "Unfortunately, there were not too many people at my table, so exchange was limited."

The format had been carefully designed to facilitate informal discussion where mixed tables of 8 could discuss panel presentations for half an hour before moving questions and comments to plenary, for dialogue in the larger group. We had carefully assigned seating to create a mix of officials from various departments, Working Group members, and international resource people.

Despite some preliminary wariness, as the day wore on many took advantage of the Roundtable, and the informal table discussions in particular, to ask questions and explore ideas. International resource people were split among the tables, and some officials were obviously pleased to be seated at tables with farmers and international participants to whom they could direct questions. Younger officials in particular seemed to enjoy the day and were open to pursuing questions, debating and discussing points of interest and new information. The general assessment is that a unique space for learning and discussion was created.

Roundtable Participant Feedback

Many participants generously spent time at the end of the day filling out evaluation forms and we felt that the number of people who stayed to do this was itself an indication that participants were engaged and stimulated by the process. 35 forms were returned to us (out of 60 participants) and this input was valuable.

Participants agreed that the format was helpful, with the small table discussions described as “creative” Feedback included, “Great workshop format- time for discussion was well balanced with interesting presentations.” For some, however the time to discuss at tables (30 minutes) was too short, (“too little time for table discussions. 2 days would be better!”) and for others, as mentioned, discussion was limited due to absent participants.

We anticipated that many participants would struggle with the notion of “balance” due to the lack of industry participation as well as to the generally critical approaches to biotechnology and/or policy approaches of the international participants. The Roundtable moderator tried to address this through introductory comments but for many, the idea that there was an absence of “balance” remained an obstacle. Feedback along these lines included the following comments: “not all sides of the issue were presented and this is key to good public policy development” and “there was no one defending biotech.”

The evaluation of “balance” however, is more complex since evaluations that were critical were, with one exception, coupled with acknowledgements from participants that they left the roundtable with new understandings of the social issues involved. These evaluations included feedback of new understandings of the “ethical dimension in technology assessment”, a “better understanding of biodiversity challenges” and a “new understanding of the perceptions of those in developing countries. More appreciation for the complexity of the issues”. Generally, according to evaluation feedback, comments on the need to hear from “all sides” were coupled with these recognitions of understandings gained from hearing one side. For example, while saying that, “the process was biased and too political”, the result was becoming “more aware of cultural and social aspects

related to technology development”. A common conclusion was one of gaining a “better understanding of the cultural aspects of agriculture”, a contribution that we feel industry could not have added to.

Closing remarks on evaluation forms included suggestions for follow-up actions such as “Organize more such fora to bring together all concerned, including consumers and transnationals such as Monsanto”; “Repeat this dialogue with those who deal with international development policy in general, not just focusing on biotech” and “Very useful forum and necessary to organize more of such forums.”

Other general feedback included the following:

- “I feel as though the issue of Biotech was clouded by the underlying international development issues and biotech alone is not the problem, the real problems relate to international development.”
- “I have a much more nuanced and complete understanding of the socio-economics associated with this issue.”
- “Definitely lots of discussion, but not necessarily a universal openness to ‘hear’ one another”
- “Very transparent with freedom to reflect personal views”
- “Reinforced my belief in the need for continuous citizen engagement in public policy making particularly on complex issues such as biotechnology.”
- “While I think these sessions should be more scientifically rigorous, the event helps inform the policy environment in which we operate!”

Other Events and Outcomes

Prior to the Roundtable in Ottawa, the group of international participants agreed to split into two teams – one to travel to Saskatoon and the other to Montreal. The first team of resource people was comprised of two farmers from India, a Zapotec woman from a farming community in Mexico, and a gene bank scientist from Ethiopia, who traveled to Saskatoon to meet with indigenous peoples, farmers, the media, and the general public. The group was invited to a meeting with indigenous peoples’ representatives hosted by the Federation of Saskatchewan Indians and then with farmers, hosted by the National Farmers Union and the Saskatchewan Organic Directorate. After a full day, the team presented at a public event at the Saskatoon Public Library. Feedback confirmed the importance of the evening event both for the Canadian farmers present and for the international resource people, including call to Ottawa from an 80 year-old well-respected farm leader who commented on the prominence of women farmers in the forum and remarked that this was “the best event he had ever attended”. One direct outcome of these meetings was an invitation from the Deccan Development Society of India to representatives of the Saskatchewan Organic Directorate and the National Farmers Union to India, and a representative from each organization traveled to India in April for “Southern Encounters”, an international consultation on genetic engineering (see www.ddsindia.com).

In Montreal, Ibrahim Coulibaly, farm leader from Mali, and Dr. Mwananyanda Mbikusita Lewanika, a scientist from Zambia, spoke at the University of Quebec in Montreal to a packed auditorium on Africa and agriculture. After hearing Ibrahim interviewed on CBC radio earlier in the evening, at least one person turned his car around to join the audience. Well-known Quebec media personality Daniel Pinard moderated and participated in the panel that also included members of Union Paysanne. Though they could not communicate directly with one another, as Ibrahim speaks French and Lewanika English, through translators the two panelists found they had much in common and the audience remarked on the complementarity of their presentations.

In Ottawa, on the night of the Roundtable, it was standing room only for a full panel of all the international resource people. Over 500 people packed a room at the Ottawa Congress Centre including students, farmers, government workers and other Ottawa residents. CBC Radio journalist and documentary producer Bob Carty moderated and took questions from the floor. The public ended the evening with a standing ovation in appreciation of the international participants.

The March 8th hearing on Africa and agriculture at the Standing Senate Committee on Foreign Affairs was particularly dynamic. Ibrahim Coulibaly and Mwananyanda Mbikusita Lewanika testified with Dr. Regassa Feyissa, Founder and Director of Ethio-Organic Seed Action in Ethiopia and advisor to USC Canada Seeds of Survival program. The panelists stressed how Africa is a centre of diversity for many food crops and how biological diversity is critical in ensuring food security. They further explained how agricultural policies should support the traditional farming practices that have given rise to this diversity and that we should be wary of introducing technologies, such as GM seeds, that will disrupt this system and endanger food security. All three speakers also explained how the structural adjustment measures imposed by the World Bank and the International Monetary Fund have been disastrous for farmers and society at large, requiring their countries to dismantle supply management boards and other state support mechanisms to agriculture, and opening their countries up to cheap imports. When asked by Senators what Canada could do to help agricultural development in Africa, the panelists responded that one-size-fits all agricultural policies do not work and that policies should be built from the grassroots.

The follow up to the hearing was immediate. After listening to critical testimony from African farmers and scientists about the roles of the World Bank and the International Monetary Fund (IMF) in African food security, the Committee arranged a second hearing to examine the particular role of these and other international institutions. Since this first hearing took place, two other hearings have occurred on directly related topics. The Committee has since announced a visit to Washington to "demand answers" from the World Bank and the IMF. All hearings have become part of the public record, and have been televised nationally on CPAC. The Senate Committee also requested us to submit further information on Canada's history of involvement in African agriculture (See Appendix v).

The Parliamentary Breakfast on March 10 was an enlightening event for both Members of Parliament and international participants. Sponsored by MPs from three parties (Bloc Québécois, Liberal Party of Canada, and New Democratic Party), the event brought MPs from each party to hear Southern perspectives on Canadian biotechnology policy. Liberal MP Paul Steckle, Chair of the House of Commons Standing Committee on Agriculture, was moved by the testimony of the Indian farmers and concluded that while GMOs may be appropriate for farmers in Canada, they may not be appropriate in the developing world. Members of Parliament were unaware and shocked to hear that Canada had pushed Terminator technology at UN negotiations the month before, and requested details as well as follow up, including a hearing of the Committee on Agriculture and Agri-food on Terminator Technology. We are currently in discussion with the Committee regarding the timing and scope of this hearing.

International Participant Feedback

International participants were initially skeptical about the ability to affect Canadian policy processes. Once the week was over and they had had a chance to dialogue with a broad cross-section of Canadian society, international participants were unanimous in their appraisal of the series of events as a promising and constructive step forward. It was clear to them that there was a great deal of follow-up work to be done and that it was now up to Canadian groups to carry this work forward. Group consensus was that immediate action was needed to sustain the momentum created through the series of events and to maintain the lines of communication that were opened with government through the Roundtable. Some participants remarked on the patience they saw from officials at the Roundtable, and others were impressed by the engagement and critical analysis displayed by Senators and Members of Parliament.

The group agreed that the full agenda was a worthwhile use of their precious time. Indian farmer and filmmaker Masanagari Narsamma expressed her satisfaction with having met Members of Parliament. She underlined that it was meaningful for her to go to Parliament Hill and that she and the small farmers she works with do not usually have access to "the big people". Connecting with Canadian farmers was also important for the farmers who traveled to Saskatoon, and allowed the exploration of common ground between farmers in the North and South. Begari Sammamma expressed that hearing from Canadian farmers, who share pressing concerns such as the impact of biotechnology on livelihoods and biodiversity, "makes us stronger".

Significant connections were also established between international participants. Colleagues of Ibrahim Coulibaly were invited to India to discuss issues relating to experiences with genetically modified seeds. Ethiopian gene bank scientist, Melaku Worede appreciated a newfound analysis of the potential danger found in uncritical use of the term "science"; often used to glorify technological approaches to agriculture and resulting in the marginalization of farmers' knowledge. He committed to sending his "scientific" papers to the farmers for their comment and contributions. In return, the farmers expressed that they were encouraged to meet scientists who were open to hearing their views and who did not seek to impose their status on them. For farmers, the

exchange had altered their prior views of scientists as routinely opposing and denigrating farmer knowledge. The dialogue experience allowed them to see scientists as potential colleagues and collaborators.

At each of the events in the series, it was assessed that the historically marginalized, the farmers themselves, with all the knowledge and culture that they represent, were put in the forefront. P.V. Satheesh shared renewed commitment to ensuring excluded voices are heard at the center.

The Way Forward

Our experience has confirmed both a need and appetite for innovative dialogue opportunities on the issue of agricultural biotechnology. It has also highlighted some challenges for civil society in initiating dialogue with government on controversial issues. The Roundtable discussion was very broad, the parameters of which could be narrowed for any future exchanges. Having tested the format and the willingness of government to participate, and knowing how much more there is to discuss, we anticipate preparing another dialogue invitation.

The Working Group will continue to monitor Canadian public policy in this area. In addition to further engagement around the issue of Terminator technology, the Working Group will continue to follow development of a Canadian government “pro-poor science” platform on the road to the G8 meetings in Edinburgh and beyond. In addition, we have learned that the CIDA managed Biosciences in Eastern and Central Africa (BECA) project, including the environmental assessment and community consultation processes, are of particular concern to African colleagues, and further dialogue in this area will be required. With increased discussion internationally about investing in biosciences “centres of excellence” in developing countries, this is a much needed inquiry.

As recently as late May, top African biosafety negotiator and Ethiopian government representative Dr. Tewolde Berhan Gebre Egziabher was unable to obtain a visa to Canada in time to attend all of the Montreal negotiations of the Convention on Biological Diversity (CBD) Catagena Protocol. This incident was of concern to observers to the CBD, especially in context of the Canadian government’s position on Terminator that was discovered earlier in the year.

Overall, there is broadly shared concern over Canada’s position on agricultural biotechnology internationally. It is our hope that through dialogue with civil society in Canada and across the world, engagement on these issues can become consultative and constructive.

Appendix i

Roundtable Content: Summary of Presentations by International Participants

The roundtable was structured around three panels that dealt generally with the themes of production, biodiversity and the challenge of contamination, and food aid.

Prior to the three panels, **P.V. Satheesh** of the Deccan Development Society (DDS) in India opened the Roundtable with an introductory presentation that stressed the connection between agriculture and culture, “Sustainable Agriculture, Food Security and Biotechnology”. He spoke about understanding agriculture from the perspective of farmers in developing countries, something that Mr. Satheesh himself learned from the thousands of women farmers with whom he works. “I knew terms like biodiversity and environment were important but I didn’t know why,” he said. Mr. Satheesh stressed that biodiversity is not an environmental term but a cultural one and that “food, ecology and culture are indivisible parts of civilization. I shudder to think that we throw agriculture into a part of science and into a part of technology.”

As a witness to the complex and sophisticated production systems of small farmers in India, Mr Satheesh argued that, for the farmers he works with, the problem of hunger does not lie in agriculture but in politics; “It is the policies of governments, our governments particularly, which have driven people to hunger, not the farming practices.” India has tens of millions of tonnes of surplus grain in government warehouses and so Mr. Satheesh asked, “Why are 10, 000 farmers so desperate? It is not because we cannot produce enough. If at the national level India is food secure and there is still hunger, we must locate the issue of food security elsewhere – at the household and community level. It is from this perspective that food security becomes food sovereignty - where farmers depend on local production, storage and distribution. On a day to day basis agriculture offers us multiple securities: food, nutrition, fuel wood, livelihood, ecological security. All are embedded within our crop production systems and the moment you fragment them, divorce them, agriculture will fall on its face. It is from this perspective that we see genetic engineering.”

From this perspective, Mr. Satheesh questioned five promises commonly heard in the promotion of genetically engineered crops: increased yields, a solution to hunger, enhanced farmer income, greater nutrition and reduced pesticide use. “What should we do about genetic engineering? In my opinion, first lets go and sit down with small farmers - not for one day, nor for half a day, not with a few questionnaires but for a few months in various locations. Let’s sit down and ask them what they want and keep our options open, lets keep the cards on the table.” (DDS has piloted a “farmer’s jury” on the agricultural plan Vision 20/20 and the results can be viewed at www.dds.com)

“Why am I saying all this in Canada? Because I know of a few things that are happening here. I was a part of the Biosafety Protocol meeting in Bonn and I was listening to the Canadian delegate. I will tell you I was deeply disturbed then. I heard about what was

being attempted with Terminator Technology in Bangkok. I was deeply disturbed. I know you have been setting up biotech centers that will ultimately become genetic engineering centers and you have been promoting transgenic research in ICRISAT which is neighbour to us, just 60kms from where I work. All these are hurting us deeply, very deeply.”

Mr. Satheesh concluded, “Biotechnology, genetic engineering, is a war, its an aggression, its an aggression on civilizations therefore my plea to you is don’t do this, please stop it.”

Panel 1: Seeds and Food Production

Begari Sammamma presented details of her cropping system where, with five or six kinds of soils in the region, farmers grow their own crops - from their own knowledge. Ms Sammamma grows dozens of crops on her two acres of land in the Southern Indian state of Andhra Pradesh. She stressed that security for her and other farmers in the region is found in biodiversity and multicropping. Because the soils are marginal, “the only way we can survive is by growing multiple crops.” Ms Sammamma also made it clear that it is women who are the caretakers of this biodiversity: “The kind of seeds that we need is something that we women know intrinsically. Therefore, even when the planting is going to happen on the field, it is the women who carry the various kinds of seed to the field, mix them and hand it over to the man and the man only sows it.” She continued, “So these kinds of multiple seeds result in multiple kind of crops. As I said our lands are marginal therefore when we plant so many different kinds of crops even if one or two fail, we have access to the rest. And this is the kind of crop which gives us a daily relationship with the soil. We go to our farms almost on a daily basis, look at what is happening, keep that kind of relationship going.”

“These diverse crops also give us diverse kinds of foods. Our crops serve multiple purposes – food, fodder, nutrition for soil. Our crops are also our medicines. It is not that we have not known what monocrops are but it doesn’t give a fraction of the benefit that our multiple crops give. It’s not just the crops that we grow, it’s also the crops that we don’t grow that support us. Because we have such a respect for Mother Earth, Mother Earth gives back. Each different soil variety can host something like fifty of these different kinds of uncultivated foods which are the source of nutrition, which are the source of our strength. Because of all this that we get from agriculture, we worship agriculture. At harvest time we believe that Mother Earth is pregnant, pregnant with all kinds of crops, and crops in turn are pregnant. And at that time we do as we would for all pregnant women, we go and we offer different kinds of food to Mother Earth and we worship our farms. This is the kind of humanization of our agriculture which is very important.”

Rather than a picture of desperation or hardship, Ms Sammamma concluded that her farm for her is “full of happiness”. **Mananagari Narsamma** repeated this, saying that, “This is our land, this is our agriculture, these are our seeds. This is so green and so full of life and if we go there it gives us so much happiness.” In contrast to this picture of lush, diverse and nourishing farms, Ms Narsamma showed slides of Bt cotton fields. Ms Narsamma, with the Deccan Development Society, has produced a film on the failure of Bt cotton in

Warangal District, Andhra Pradesh. This is the area where many farmers committed suicide because of their mounting debt. Ms Narsamma stated, “ So from this kind of an agriculture, you people wanted to rescue us and you gave us Bt cotton. And this is the field of Bt cotton which we have seen in our neighbouring district of Warangal and this is how it looks – sparse, desperate. The farmers were promised they would have large bolls and high yields but this is the reality, the farmers were absolutely disappointed. The farmers were promised that there would be no pests and there would be a lot of profit. But fertilizer and pesticide costs were very heavy.” Ms Narsamma went on to show slides of farmers she met with who had trusted the promises made by Monsanto for high performance of Bt cotton. The farmers were despairing, they pointed to the failed crop on their land and asked, “what can I do with this? It is like my house is on fire.” When asked if they would grow Bt cotton, farmers emphatically said, “never again”.

Ms Narsamma finished, “So my plea to you is, when you would like to give something to farmers, you must first come and sit down with them, and for a long period of time, and hold a dialogue and ask them what is the problem with their agriculture. Now here the farmers were given a kind of seed which didn’t do anything for them. And ultimately who survived? Who prospered? It is the companies who prospered. It is the politicians who prospered, it is the scientists who prospered and the farmers died. The only option for the farmers was the noose. So please don’t let this happen and consult farmers all the time when you want to do something good for them.”

Ibrahima Coulibaly outlined how decades of foreign imposed agricultural policies have wreaked havoc in the agricultural sector of West African countries where approximately 70% of its population are farmers. “We produce cereals that we cannot sell because in the middle of the 1980s, following a period of financial insolvability of our African states, our policies called for Structural Adjustment Measures, as dictated by the IMF [International Monetary Fund] and the World Bank,” he explained, “These policies forced our governments to withdraw all forms of support to domestic agriculture. No support to production, no support to commercialisation, therefore, farmers were left to themselves, fully exposed to the forces of the market. At the same time, our countries were required to liberalise its economies, thus opening our borders to food imports. As there are food surpluses in the world, and that these are sold at extremely low prices, our businesses began importing these agricultural surpluses without having to pay any import tariffs. This is what devastated our agriculture in our countries. And this is why there is poverty in our countries.”

Mr Coulibaly then went on to describe how Mali developed export crops as a means to earn cash since the country could no longer live from cereal crops. Mali developed cotton agriculture because it is a product that is well known in the international markets and sells, or at least used to sell, well. Initially, Mali had a very healthy cotton industry where in the span of 20 years, the country’s production grew from 100,000 tonnes of cotton to 600,000 tonnes. Mali became the most important cotton producer in Africa and Malian cotton production was extremely competitive and efficient. Despite this, today the cotton producers of Mali are incapable of living off of their work since some countries (US and

European countries for instance, dump millions of tonnes of subsidized cotton on the world market.

Mr Coulibaly explained the price of Malian cotton is extremely weak on world markets and that West African countries are now being told to start producing GM cotton. He stated that, “Our production costs are weak because we do not buy cotton seeds, we do not use much fertilizer and we use virtually no pesticides. Even though we have demonstrated that we are the most competitive producers, we are now told that we have to produce GM cotton to be more competitive.” Mr Coulibaly stressed, “There is something wrong here and we need to have our voices heard.”

Mr Coulibaly further explained how West African countries are under incredible pressure to accept GM seeds and he named the USAID lobbying bureau in Mali as an example. “The pressure methods used by multinationals and USAID are methods that I qualify as Mafia methods,” he said, “There is constant bullying and pressures on our political leaders and researchers. Its enough to make them go crazy. This is not a healthy climate because it leaves no space for debate or dialogue, no space to choose. I believe a democratic country needs to respect its people’s right to choose. When we do not have the right to choose, we are no longer in democracy. We believe a country like Canada, which in our minds is probably one of the most democratic countries in the world, must not side with other developed countries of the world who are seeking to impose things that we do not want.”

Camila Montecinos explored the question of whether the introduction of genetically modified crops has increased agricultural production. Ms. Montecinos presented multiple statistics based, for the most part, on US Department of Agriculture data. She argued that the data do not support a conclusion that GM crops are feeding the world with increased yields or nutrition, or reducing pesticides. The data does not exist yet to support such conclusions and present numbers, in fact, point to an opposite conclusion. In fact, the adoption of GM crops has meant the introduction of the new term “yield lag”.

Is GM feeding the world by some other means? Ms Montecinos argued that GM crops thus far have increased inputs for agribusiness, for example animal feed, oils, and cotton and crops that can produce drugs that we cannot eat but that they have not yet produced food that is enhancing nutrition. “Are we really getting food out of this?” she asked. In the context of the promise to feed the world with GM, Ms Montecinos raised the issue of Terminator technology and asked why the Canadian government would support or promote this technology, “especially when we see how important seeds are to food security, how important the control of seeds is to diversity.” Ms Montecinos argued that the goal behind Terminator was clearly to protect intellectual property protection and she argued that, “This property protection is illegitimate. Corporations are taking control of the seeds of the world through many means and patents are imposed in harsher and harsher ways all the time.”

Ms Montecinos also spent time answering the question, “Will GM crops reduce pesticide use?” According to numbers from the US Environmental Protection Agency, the total use

of pesticides is decreasing in the world as a general trend. However pesticide use in the US, where the majority of the world's GM crops are grown, has stagnated. The use of herbicides has actually slightly increased in the US (by approximately 5% in ten years, though not consistently). In Argentina and Paraguay, areas where GM herbicide-resistant soy is planted, the few figures that exist show that, in the first three years of planting GM crops, the use of glyphosate doubled. In addition, 165 000 rural families were displaced because they were not needed anymore in the countryside. Ms Montecinos argued that the GM crop was a part of this ongoing concentration of land. She also pointed out that there has been an increase in the cases of poisoning with glyphosate in particular. Lastly, Ms Montecinos discussed the problem of herbicide resistant weeds: "We were told that the danger of resistance was paranoia but Syngenta now says it is an on-farm reality." She pointed out that university studies are now instructing farmers to plant some conventional crops with the GM crops to slow the development of resistance.

Ms Montecinos concluded that, "Nothing in the figures can make a good case for biotechnology". She articulated her concern about the lack of choice farmers have in the current context of international trade policies and industrial agriculture and argued, "Please don't forget the context, biotech is not going to be an option in our countries, it is going to be an imposition. Once it is there, there is no way we will be able to choose. The World Bank and USAID are imposing new seed laws that are banning traditional seeds and it will be a crime to grow your own seeds. There are many attacks on traditional crops, and in this context, the introduction of GM crops will be compulsory. Keep this in mind when policy decisions are made."

The first question asked in the plenary coming out of the small table discussions following this panel was, "Do presenters see any possible place for 'Western' biotech as having a constructive role, under what circumstances could it play a constructive role?" and this question was answered in a number of ways. In the discussion, Ms Montecinos elaborated on her argument that "the right to choose should be kept in mind all the time and that this right is less and less respected. Initially scientists and companies said that weed resistance was not going to be a problem but now we are told it is here to stay and that we have to accept it. It is the same with GM contamination, we were told this would not take place and now tell us it is here to stay. Where is the choice?" Ms Montecinos argued that legislative and technological means, such as Terminator, are being used to attack the right to save seed and said that, "If biotech was to have any positive role, a basic demand to address would be the right to choose. But the way it is being introduced now there is no choice. We are even being told that talking about 'contamination' is biased and that we need to talk about 'adventitious presence' instead. We don't even have the choice for words anymore. These are the contextual issues we need to keep in mind. The technology is not being introduced into a neutral world." Ibrahim Coulibaly was also troubled by this question of choice and argued that a core debate is over intellectual property rights.

One of the small roundtables reported that they also discussed the need to be respectful about introducing new technologies and asked how we as a nation can be respectful of the social and cultural complexity that was described in the introductory presentation and

morning panel. Mr Satheesh's response to the question was to refer back to Gandhi response when he was asked, "What do you think of western civilization? And Gandhi responded 'I think it would be a good idea'". Mr Satheesh stated that, "GM would be welcome if it supported the diversity of our crops, our livelihoods and the ecological integrity of our agriculture as well as the control that the women have over this agriculture."

Ms Narsamma added, "If I listen to the discussion here, much of it is about how can more money be made, how can more income be made. Aren't we all dependent on Mother Earth? Isn't it our first duty to protect this Earth? And isn't it our duty to protect all the life forms, the environment which protects all these life-forms, the trees, the birds, the animals, that are around us? Shouldn't that be our first priority? And in doing that how do we help farmers to do that? If we don't talk about it then I don't think there is any meaning to these discussions. So we have brought agriculture to a certain level and it supports everything. If we destroy that, can we eat money and live? Obviously, there is a different way we must be thinking and if we don't think in that manner we always talk about destroying an insect, destroying a pest. But once upon a time, our agriculture worked with all those pests and insects and retained them and still survived. If we don't think like that, if we start only thinking of killing the insects and in the process making huge money for the corporations I don't think there is a future for us."

Panel 2: Biodiversity and the Challenge of Contamination

Moderator Gerry Barr introduced this panel with comments about the importance of hearing from those farmers who are directly affected by contamination as well as by gene bank scientists who face this growing reality.

Renowned Ethiopian gene-bank scientist **Dr. Melaku Worede**, argued that it was important to discuss the introduction of GM crops into areas of great biodiversity. Dr. Melaku stressed that, "In Africa there are a great many primary or secondary centers of diversification in the major crops that we all depend on for food. These crops are also at the center of the social, economic, and cultural lives of the great majority of the people that live in these places." He discussed farming on small-scale holdings as living repositories of the wide pool of genetic material that, "we all depend on to sustain production over years to come, as has been the case over the past centuries." Dr. Melaku articulated his concern that this diversity appears to be jeopardized much more so now than ever before due to the introduction of new technologies.

Dr. Melaku was concerned about contamination of farmers' fields resulting from unreported field trials as well as by the planting of grain obtained as food aid and the black market. Dr. Melaku added his concerns about scientific uncertainty with genetic modification and stated that, "The problem is much more serious than scientists working in this field tell us. They assure everybody that the impacts of alien genes entering farmers fields are minimal but the genes themselves are not necessarily stable. Benefits will be short-lived but other impacts in the long-term will be serious." In particular it is the impact on local biodiversity that concerned Dr. Melaku, "of course transgenic plants

are likely to go on displacing local varieties in much the same way as monocultures and hybrids have been doing.” The diversity of local varieties is also important for providing for local nutrition needs and in this context Dr. Melaku raised the example of “Golden rice”. He argued that the “Golden rice” illustrates the need for protecting and considering biodiversity, as even “Golden Rice” would rely on biodiversity to work since beta carotene is not bioavailable on its own, but needs to be consumed with other types of foods in order for the body to use it.

Dr. Melaku argued that, “in view of the risk profile as well as the great potential that exists in existing wide biodiversity why not drop the bucket in the developing world? Why not exploit the full potential that exists in the diversity that farmers have developed over centuries? There is so much diversity in the gene pool that can be captured. We don’t even know all of the diversity that exists. We are actually destroying this resource by undermining its importance in the first place. By advancing the products of biotechnology we are jeopardizing biodiversity as a whole. I think we should capitalize on the potential and that research should be directed towards supporting this particular element of development where genetic resources still abundant in these regions are conserved, enhanced and effectively utilized.” Dr. Melaku concluded that, “in my opinion, [GM is] not only inappropriate but also devastating to the small farms which constitute the great majority of the people in the developing world.”

Ms Melina Hernandez Sosa began by explaining how maize is central to indigenous cultures in Mesoamerica where it is represented in their temples and has been cultivated for more than 10,000 years. The Zapotec believe that maize was born and seeded itself into Man, that man is of maize and maize is tied to man. Ms Hernandez Sosa explained that in Oaxaca, the region she is from, there is a great variety of maize of different colours, shapes and sizes and that it is used to make a wide variety of foods such as tamales, and tortillas. She then explained how since the 1980s, this rich culture and agriculture has been attacked by government policies. “Before, we had a state organization called CONASOPA,” she said, “This institution served to set and maintain prices to guarantee a fair price for our products (such as maize and beans). Sadly, with the coming of neoliberal policies, CONASOPA was eliminated and the prices of our crops were left to be set by the market. This hit the indigenous people hard. Now, Maize from the US is coming into Mexico and it is being sold at a much lower price than its actual cost of production. 1 tonne of maize costs 4000 pesos, whereas the maize from the US costs 2000 pesos. As my grandfather says: ‘I am a farmer but I am forced to buy maize’. The problem is that the producers in the US receive subsidies from their governments and the maize enters Mexico with no tariffs or taxes applied to it. With these policies, the effect on our people has been very difficult and is forcing many of us to emigrate.”

Ms Hernandez Sosa explained how fields in the Sierra Juarez in Oaxaca, a region recognized as one of the centers of origin of maize, have been contaminated by GM maize. In 2000, two researchers from the University of Berkeley, California, David Quist and Ignacio Chapela, conducted research in communities of the Sierra Juarez and found the maize contaminated by GM corn. The researchers informed the National Institute of

Ecology and the National Commission on Biosecurity but these government institutions were silent and kept the information to themselves. It was not until 2001 that the information was made public during a forum that gathered various organizations in Mexico together. There, the National Institute of Ecology publicly admitted that, yes, in fact the maize from the States of Puebla and Oaxaca had indeed been contaminated with GM corn.

She then explained how this news triggered intensive reactions across Mexican society and how groups began to organize to disseminate this information. In 2003, 11 states were sampled and studies found that the maize in nine of these states had been contaminated with GM maize. In one community, researchers found maize plants containing traits from three different GM varieties of corn: Bt, Round-up Ready, and Starlink—a type of GM corn that was not approved for human consumption in the US but escaped into the food supply nonetheless.

Ms Hernandez Sosa went on to explain how this year, the Senate has approved a biosecurity law that is, in fact, a further threat to indigenous peoples and agriculture. “This law is more bio-insecurity law because it permits the introduction of GM plants and because favours transnational corporations such as Monsanto. Today, I say that we have an important task to defend our maize, and our seeds despite the fact that governments of developed countries do not like this, we will continue to defend our seeds. The governments know that our maize can save the world. It has done so in 1970 when in US, a plague devastated their corn crops. Researchers came to Mexico and brought back germplasm to the US, and this germplasm saved their corn. We will continue to conserve our maize.”

Ms Hernandez Sosa concluded, “Our maize has been here more than 10,000 years and has never harmed anybody. GM foods have been around less than 10 years and we know that they can harm peoples’ health and the environment. I want to invite the government of Canada to support our farmers, but not with this new technology. Support us to strengthen our current methods of farming which we know produce more than what can produce these new technologies.” Ms Hernandez Sosa called for the Canadian government to respect and support indigenous people’s rights to food sovereignty.

Panel 3: Food Aid and International Agricultural Policies

Dr. Mwananyanda Mbikusita Lewanika recounted the story from Zambia that became international news in 2001 when the Zambian Government rejected food aid because it contained GMOs. Dr. Lewanika thanked the Working Group for inviting him to tell the story from Zambia’s perspective. Dr. Lewanika began by discussing the origins of the Zambian food shortage. He explained that there are a number of factors that can lead to a food shortage but there are two major factors: natural disasters like droughts and flood and human-made disasters like internal conflict or civil. At the end of the day the two can create a food crisis which requires that people be assisted with food. In 2001- 2002 it was cyclical drought in Zambia that caused the food shortage.

Dr. Lewanika spoke about the food aid convention which allows that when food aid is given, either as food or as money to enable purchases of food, it should not interfere with the normal development plans of the recipient countries or interfere in the agricultural marketing and harvesting of crops. In other words, food aid should not be used as a form of dumping. The food has to be culturally acceptable to the recipient countries, meaning that you cannot give people food that is not eaten in that country. Where possible, food should also be sourced in that country or regionally first. “This is linked to what happened in Zambia 2001-2002 when we had a food crisis due to a drought. Droughts occur in Southern Africa periodically so there was nothing unique about that particular drought. But what was unique was that in the beginning of the 1990s we changed from a one party government to a multiparty government that embraced the structural adjustment programs of the World Bank and International Monetary Fund. Part of this was for the government to stop subsidizing agricultural production, stop being involved in the marketing of produce. This meant that all of a sudden farmers who had access to inputs such as fertilizer and seed now had to buy at the market price. That reduced the amount of food which was produced.”

“When it became known that we would have a food deficit in some parts of the country, there was discussion between the World Food Programme and the government. In that discussion, the World Food Programme did not inform the government that the food which was going to come was going to contain genetically modified grain. Somehow the news got out and an internal debate started in the country on whether the country should accept that or not. Then the government asked the World Food Programme not to distribute that maize until the consultation was exhausted. But the World Food Programme for the first couple of weeks went ahead and distributed the maize until it was made clear to them that they should stop. The debate was taking place almost everywhere – in public transport, in the newspapers, on radio, on TV. It all led to a national debate on whether the country should accept the GMO food or not. The overwhelming answer was that we should not accept GMOs. When this was announced to the world, the Zambian Government was asked to send a team of scientists to visit the US, South Africa, UK, Belgium, Norway and the Netherlands, just to gather information. This team talked to scientists, regulators, and special interest groups. After the visit they released a report that officially recommended to the government to not accept GMO food aid.”

The reasons that were given by the Zambian Government for rejecting the GM food aid included the concern that Zambia does not have the regulatory mechanisms to assess GM foods. Also, between the time when it was known that we needed aid and the time it was actually required, there was ample time to source GM-Free food. The World Food Programme emphasized food aid in the form of corn while Zambia eats other foods that are not genetically modified such as sorghum, millet, cassava, sweet potato. Dr. Lewanika stated that, “The other consideration was that globally there is a debate on GMOs, whether they are safe or not. So the view of the task force was that since there was so much uncertainty the government should use the precautionary principle and not accept the food aid.” A major concern for Zambia as with many other African governments, was environmental contamination since the system does not separate grain for food and grain for seed. As Dr. Lewanika stated, “If you give famine communities

grain, even if you are giving it as food, the natural thing is to save some of that seed and plant it.” Another important consideration was the health of the main beneficiaries of food aid, the most vulnerable in society, the underprivileged. “Some are immune compromised through poor nutrition, through HIV-AIDS, so the fear was that if there are any health problems associated with eating GMOs, they would be shown more in the people who are of poor health,” Dr. Lewanika explained, “We were reminded that in North America people have been eating GMO food for some time. But our eating habits are different. For us, corn is breakfast, lunch, supper and even the in-between meals. So its not something you just eat once in a while, and it is not just in processed form like the corn ingredients which are eaten in North America.”

“The reaction across the world was quite diverse. The Economist wrote that the Africans have silly reasons for not accepting GMOs, but others were supportive: that you cannot hold a people who are in need to ransom, that you eat or you starve. The other reaction was that the Africans were being influenced by international non-governmental organizations or by the Europeans - or the decision was made out of ignorance. We were not given credit for this as a conscious decision. In the history of our country and maybe in the history of Southern Africa, for the first time the government said we hear what the people have said and we hear what the scientists have said. So I expected the scientific community to be pleased that our government was listening to scientists. But this was not the case. The other reaction was like that of the Norwegian government, though it was not very directly involved. The Norwegian government offered to assist us to develop capacity in biosafety. It even made the government ratify the Cartagena Protocol on biosafety more quickly than expected. The Zambian work has benefited the scientific community since, for the first time, taxpayers felt that scientists were worth the salaries they were getting, however little they were. And based on that, the funding for science in Zambia has improved a little bit.”

Appendix ii

Biographies of International Participants

Africa

Ibrahima Coulibaly is from the village of Nangola in Mali. He completed his studies in agricultural engineering and then established himself as a peasant farmer. As a farmer he got involved in various peasant farming organizations including the Association of Professional Producers of Mali where he is now Manager of External Affairs. Mr. Coulibaly is one of the first peasant farm leaders to participate in the formulation of agricultural policy in Mali. He is a member of the Executive Committee of the African Network of Peasant Farmer Organizations. He is also President of the National Coordinating Body of Peasant Farmer Organizations that was chosen by the Malian government to be the coordinating body to help build Mali's new agricultural policy and law, and is mandated to hold public consultations. Mr. Coulibaly is also a founding member of the Malian Coalition for the Preservation of National Genetic Heritage.

Mwananyanda Mbikusita Lewanika is Executive Director of the National Institute for Scientific & Industrial Research (NISIR) Zambia and is Chairperson of the South African Development Community Advisory Committee on Biotechnology and Biosafety. In addition, he has been on the Zambian Government delegations to Ministry Conferences of the World Trade Organization. He was also the Zambian representative in the negotiations that led to the adoption of the Cartagena Protocol on Biosafety. In 2002, Dr Lewanika presented a position paper on behalf of the Crop and Soils Research Branch Ministry of Agriculture and Cooperatives, National Science and Technology Council and NISIR to the government on the topic of genetically modified food aid.

Dr. Melaku Worede is internationally renowned for his pioneering work in plant genetic research and in restoring the foundations of Ethiopia's food security. In 1989, Dr. Worede was the recipient of the Right Livelihood Award (often referred to as the "alternate Nobel Prize") for his achievements in the field of genetic research. Dr. Melaku is a leading Ethiopian genetic material expert and ex-Director of one of the world's finest gene banks, the Plant Genetic Resource Centre located in Addis Ababa. He presently serves as International Scientific Advisor to the USC's Seeds of Survival Program.

Asia

Periyapatna Venkatasubbaiah (P. V.) Satheesh has been working for over two decades with low-income rural communities, including small and marginal women farmers in the semi-arid tracts of South India. His work has focused on productivity enhancement of degraded lands, sustainable agriculture, watersheds, rejuvenation of common property resources, and strengthening food security in poor communities. Mr. Satheesh is one of the founding members of the Deccan Development Society (DDS), a two-decade old grassroots organization that works with women's *Sanghams* (voluntary village level associations of the poor) in about 75 villages 100 kms from Hyderabad, the capital of the South Indian state of Andhra Pradesh. The 5000 women members of DDS represent the

poorest of the poor in their village communities. Mr. Satheesh has also been instrumental in setting up a number of community level structures including the Community Grain Fund (a community level food security system) and the Community Gene Fund (community seed banks).

Begari Samamma is a small farmer and highly regarded seed keeper in the South Indian state of Andhra Pradesh. Ms Samamma is an ecological farmer and practices a highly biodiverse farming system based on traditional local varieties to meet her family's food and nutrition needs. She was one of the pioneering small farmers in India who, 15 years ago, started practicing permaculture principles on her farm. For the past ten years Ms Samamma has also been working with *dalit* (so called "untouchable caste") women's groups, helping them organize ecological farming. Ms Samamma has been one of the leaders of the 5000-strong community of women in the Deccan Development Society, a grassroots organization through which the women have established community food and seed security systems.

Masanagari Narsamma owns about two acres of farmland in the South Indian state of Andhra Pradesh. Dozens of crops thrive on her biodiverse farm, grown through ecological practice, without the use of chemicals. Narsamma has organized dozens of women to practice ecological farming and has provided leadership to thousands of women, becoming an icon in her community. Narsamma has traveled to a number of South Asian countries including Bangladesh, Nepal, Pakistan and Sri Lanka to participate in seminars, consultations and farmer exchanges, articulating women's perspectives on biodiversity in agriculture. In 1997 Narsamma acquired filmmaking skills and was instrumental in setting up Community Media Trust, the first media organization in India that is completely owned and managed by rural women. She filmed the participants' visit to Canada.

Latin America

Melina Hernández Sosa is Zapotec from the Oaxaca region of Mexico. She comes from a community of small farmers and grew up helping her family grow crops, of which corn is the most important staple. Ms Sosa and her family live in the region of Mexico where local corn varieties were found contaminated with genetically modified corn. Ms Sosa works with the the Unión de Organizaciones de la Sierra Juárez de Oaxaca (UNOSJO), a non-governmental organization that provides technical and organization support to farmers in the region. She also works with rural women on issues of reproductive health and women's rights.

Camila Montecinos is an agronomist who, for 17 years, worked at the Centre for Education and Technology in Chile, the first Chilean non-governmental organization to work with farmers on agricultural issues. She is also the former global coordinator of the Community Biodiversity Development and Conservation project. Ms Montecinos currently works for Genetic Resources Action International (GRAIN) and has worked with farmers all of her professional life.

Appendix iii**List of Roundtable RSVPs**

Name	Title	Organization
Dr. Nigel Skipper	Director, Departmental Biotechnology Office	Health Canada
Mireille Prud'homme	Associate Director, Food Policy Integration	Health Canada
Annie Hlavats	Strategic Communication Analyst, Research Program	National Research Council of Canada
Isabelle Delage	Technical Barriers and Regulations Officer	International Trade Canada
Jodi Robinson	Trade Policy Officer	International Trade Canada
Hugh Moeser	Deputy Director, Biosafety, Trade	Foreign Affairs Canada
Elizabeth Gomes	Biotechnology Officer, Office of Biotechnology	Canadian Food Inspection Agency
Phillip MacDonald	National Manager, Plant Biosafety Office	Canadian Food Inspection Agency
Kimberly Empey	Senior Analyst, Biotechnology Strategy	Canadian Biotechnology Secretariat (CBSec)
Kelly Brannen	Project Officer, Biotechnology Strategy	Canadian Biotechnology Secretariat (CBSec)
Theresa Patricio	National Science Office	National Science Office, PCO
Jean Woo	Research Officer, RoKS and Biotechnology	International Development Research Centre
Simon Carter	Team Leader, Rural Poverty and Environment	International Development Research Centre
Paul Dufour	Senior Program Specialist	International Development Research Centre
Wardie Leppan	Team Leader, Sustainable Use of Biodiversity	International Development Research Centre
Daniel Buckles	Team Member, MINGA	International Development Research Centre
Erin O'Manique	Research Officer, Sustainable Use of Biodiversity	International Development Research Centre
Tanya Trevors	Program Officer, Program against Hunger, Malnutrition and Disease (PAHMD)	Canadian International Development Agency
Iain MacGillivray	Agriculture Policy Branch	Canadian International Development Agency
Barbara Shaw	Agriculture Policy Branch	Canadian International Development Agency

Name	Title	Organization
Anne Germain	Senior Program Officer, UN and Commonwealth Programs	Canadian International Development Agency
Anna Curtner	Environment Specialist	Canadian International Development Agency
Jamie Graves	Assistant Director of Operations, Mainland Southeast Asia Program, Asia Branch	Canadian International Development Agency
David M Johnston	Agricultural Specialist, Central America	Canadian International Development Agency
Frank McDonald	Chief, Cross Sectoral Policy Development	Agriculture and Agri-Food Canada
Peter Pauker	Chief, Cross Sectoral Policy Development	Agriculture and Agri-Food Canada
Namatié Traoré	Economist/ Statistician, Life Sciences Statistics Section	Statistics Canada
Stuart Lee	Science and Technology Policy Analyst	Environment Canada
Anna Albovias	Biotech Policy Analyst	Environment Canada
Andrew Hurst	Policy Advisor, Biodiversity Convention Office	Environment Canada
David Liston	Counsel, Agriculture and Agri-foods	Justice Canada
Wilma Hovius	Legal Counsel	Justice Canada
Dr. Mwananyanda Mbikusita Lewanika	Agricultural Specialist	National Institute for Scientific & Industrial Research, Zambia
Dr. Melaku Worede	Plant Geneticist and Scientific Advisor	USC Canada, Ethiopia
Periyapatna Venkatasubbaiah Satheesh	Co-Founder and agricultural extension expert	Deccan Development Society, India
Begari Sammamma	Agriculturalist	Deccan Development Society, India
Masanagari Narsamma	Agriculturalist and documentary film maker	Deccan Development Society, India
Melina Hernández Sosa	Agriculturalist, and peasant farmer leader	Unión de Organizaciones de la Sierra Juárez de Oaxaca (UNOSJO), Mexico
Ibrahima Coulibaly	Manager of External Affairs	Association des organisations professionnelles paysannes (AOPP), Mali
Camila Montecinos	Agronomist and Program Coordinator	GRAIN, Chile

Name	Title	Organization
Regassa Feiyssa	Executive Director	Ethio-Organic Seed Action, Ethiopia
Gerry Barr	President and CEO	Canadian Council for International Cooperation
Anna Paskal	Program Officer	Inter Pares
Colleen Ross Weatherhead	National Women's President	National Farmers Union
Susan Walsh	Executive Director	USC Canada
Awegechew Teshome	Program Director, Seeds of Survival Campaign	USC Canada
Pat Mooney	Executive Director	ETC Group
Lucy Sharratt	Researcher	Polaris Institute
Mark Hathaway	Coordinator, Food Security and Biotechnology Issues	United Church of Canada
Sylvie Perras	Coordinator	Africa-Canada Forum
Lloyd Strachan	Ottawa chapter Co-Chair	Canadian Organic Growers
Benoit Girouard	Secretary General	Union Paysanne
Tom Beach	Executive Director	Agricultural Institute of Canada
Peter Gillespie	Program Manager	Inter Pares
Eric Chaurette	Program Manager	Inter Pares
Kevin Armstrong	Health Secretariat	Assembly of First Nations
Wilf Stefan	Researcher	Cornucopia Group
Molly Kane	Executive Director	Inter Pares
David Rain	Senior Manager, Core Programs	USC Canada
Peter Dowling	Farmer, Member of Ontario Council	National Farmers Union
Andrea Cumpson	President, Kingston Area	National Farmers Union

RSVP NON-ATTENDANT		
Name	Title	Organization
Marcus Ballinger	Senior Policy Advisor	Environment Canada
Tim Hodges	Associate Director, Access and Benefit Sharing, Biodiversity Convention Office	Environment Canada
Jock Langford	Senior Intellectual Property Advisor, Biodiversity Convention Office	Environment Canada
Dr. Campbell Davidson	International Genetic Advisor	Agriculture and Agri-Food Canada
Osman Elmi	Senior Multilateral Officer, International Development Policy	Agriculture and Agri-Food Canada
Ann Kavanagh	A/ Deputy Director, International Development Policy	Agriculture and Agri-Food Canada
Chris Payette	Senior Policy Advisor	Agriculture and Agri-Food Canada
Zella Osberg	Senior Policy Advisor	Agriculture and Agri-Food Canada
Brian Harrison	Novel Foods Section, Food Directorate	Health Canada
Ryan Hum	Science Policy Analyst, Departmental Biotechnology Office	Health Canada
Dr. Richard Isnor	Director, Biotechnology Horizontal Initiatives, Genomics Health Initiative	National Research Council of Canada
Chris Moran	Senior Trade Policy Officer, Technical Barriers and Regulation	International Trade Canada

Appendix iv

Proceedings of the Standing Senate Committee on Foreign Affairs Tuesday, March 8, 2005

<http://www.parl.gc.ca/38/1/parlbus/commbus/senate/Com-e/fore-e/pdf/09issue.pdf>

Issue 9 - Evidence

OTTAWA, Tuesday, March 8, 2005

The Standing Senate Committee on Foreign Affairs met this day at 5:04 p.m. to examine the development and security challenges facing Africa; the response of the international community to enhance that continent's development and political stability; Canadian foreign policy as it relates to Africa. TOPIC: Agriculture and related subjects.

Senator Peter A. Stollery (*Chairman*) in the chair.

[*English*]

The Chairman: Honourable senators, it is after five o'clock and I am calling the meeting to order. At the end of our meeting, I would like to ask people to stay behind because we have an important budget matter that should be dealt with in camera. It has to be in by March 10 because of the budget system.

Honourable senators, welcome to this meeting of the Standing Senate Committee on Foreign Affairs. We are continuing our special study on Africa, as ordered by the Senate on December 8.

[*Translation*]

It is our pleasure today to welcome three witnesses from Africa who will be speaking to us about agriculture, a very important issue related to other areas such as international trade, social issues, nutrition, et cetera.

Our first witness is Mr. Ibrahima Coulibaly from Mali. Mr. Coulibaly started his career as a peasant farmer. He is now the manager of external affairs for the Association of professional producers of Mali. He also sits on the Executive Committee of the African Network of Peasant Farmer organizations and he is also the President of the National Coordinating body of Peasant Farmer Organizations, an organization that is working on drafting a new agricultural policy.

[*English*]

Next, we will hear from Dr. Regassa Feyissa, who is the Founder and Executive Director of Ethio-Organic Seed Action, an Ethiopian NGO working on sustainable agro-biodiversity management and use. He is acknowledged for his research and collaboration

with farmers to protect Ethiopia's agricultural biodiversity and find markets for their agricultural products. He also won a Slow-Food Award in 2003.

I am a member of the Slow-Food organization, so I am very aware of the group.

Finally, we will hear from Mr. Lewanika, Executive Director of the National Institute for Scientific and Industrial Research, Zambia. He is Chairperson of the South African Development Community Advisory Committee on Biotechnology and Biosafety. He has been on Zambian delegations to ministerial conferences of the World Trade Organization and was also the Zambian representative in the negotiation that led to the adoption of the Cartagena Protocol on Biosafety. Welcome to the Senate of Canada.

I would also like to take this opportunity to thank the organization Inter Pares and its executive director, Ms. Molly Kane, who made us aware of the visit to Ottawa of our three witnesses. Thank you for your kind cooperation.

[Translation]

Mr. Coulibaly, you now have the floor.

Mr. Ibrahima Coulibaly, Manager, external affairs, Association of professional producers of Mali: Thank you Mr. Chairman, and thank you honorable senators for coming to hear us today. As the chairman already stated, I come from Mali, a country located in the Sahel region, a vast and very diverse region of western Africa whose main characteristic is pluviometric instability — in other words this is a region where it does not rain very often. It is also a region that is very dependent on agricultural production. Between 60 and 70 per cent of the population make their living from agriculture, in one form or another.

In the region I come from, the situation is becoming more and more difficult. In the mid 1980s, our countries embarked on structural adjustment programs under the impetus of the IMF and the World Bank. Under those programs, our countries had to liberalize their economies. With that liberalization all support to agriculture was eliminated. Under this new framework the situation of our producers became very fragile which led to several problems in our food production, which is the basis of our agricultural production, because at the same time our economies were opened up to food imports which in turn caused farm income in many cases to go down.

We had many crops besides food crops, for example cotton. Many farms therefore turned to cotton, a very different type of crop that is harvested for export on the international market. Over the past few years though, cotton has run into enormous problems on the international market because of subsidies in developed countries such as the United States, Greece and Spain.

We are now at an impasse; we can no longer make a decent living from food production and we can no longer turn to different crops such as cotton. That is our current situation,

in a country where agricultural production occurs on small family farms, measuring between five and ten hectares each maximum. Now we are being told to turn to biotechnology.

Just to give you an example, a farm in Mali does not have access to farm credit, therefore it has no access to production supplies nor to a guaranteed market for its products. In other words our income is in a situation of chronic instability. We have absolutely no idea how much we will make in undertaking our activities. We are subject to changing climate conditions.

Currently we are being overwhelmed by pressure from developed countries such as the United States, who have established a lobbying office in our country to convince us to use GMOs, more specifically genetically modified cotton, which is not appropriate for our conditions simply because we do not have the amount of water that the seeds require in order to reach their potential. We do not have access to the farm credit that is required for this genetically modified cotton to reach its potential. We do not understand why we are being pressured to use these technologies that are not adapted to our conditions, at a time of differing cotton prices on the world market.

We are here today to talk to you about this situation and to tell you that we are farmers and that we want to continue to make a living and live with dignity. In order to do that we need to draft policies that protect the interests of the majority of our population, the farmers. This will not happen if we do not protect our food production, which is now illegally competing with the imported food invading our markets as a result of the WTO and the World Bank's liberal policies.

GMOs are a huge threat for us because we have no way of preserving our biological diversity other than by cultivating it year after year. We do not have a gene bank. We are going to lose this biological diversity if we adopt a technology that we have no control over. Furthermore, this biotechnology, for example genetically modified cotton, is patented by multinationals and threatens to dramatically increase the cost of production for our farms.

It is therefore for all these reasons that we do not want this technology to be imposed on us. We want to be able to choose our own policies and protect the interests of the majority of our population. That is why we want to ask you, as a government and members of Parliament, to help us so that we will not be made to make choices that will further impoverish the majority of our people.

I will end with that. I would be happy to answer any questions you may have.

The Chairman: I would like to explain to those senators who are not very familiar with Mali that this country borders the Sahara near the bend within the border with Niger. It is an area of nomadic farming. It is on the other side of the Sahara, within West Africa. In the south you have cotton production and in the north you have nomads. Am I correct?

Mr. Coulibaly: Yes.

[English]

The Chairman: It is simply that we are hearing names of countries that some of us are not familiar with, and that is my point. Mr. Feyissa, please proceed.

Dr. Regassa Feyissa, Founder and Executive Director, Ethio-Organic Seed Action, Ethiopia: Thank you for giving me this opportunity to mention a few issues regarding biodiversity as related to food security. As we all know, particularly those of us from developing countries, our lives are strongly linked to resources. The linkages are so strong that they determine the entire day-to-day life of society at all levels. I would like to recall Canada as one of the countries that played a strong role right from the beginning in founding the Convention on Biological Diversity, in particular, in pushing for the human being as the centre of this convention. To date we have achieved a complete convention, having responsibilities as member countries to implement the requirements of the convention.

In the case of developing countries, where the life of society is closely tied to natural resources, gaps are always created — and not very deep analysis — that end in disruption of the existing systems where we are trying to link biodiversity to food security.

Technology in agriculture and production should be promoted, improved and extended to all corners of the world in such a way that it targets the core problems dominant at that level. Unfortunately, we have seen over decades, and still see today, indiscriminate approaches to promoting production in agriculture to alleviate poverty. It is unfortunate that because of the disruption of the system and inappropriate approaches to the problem, we have created such a gap that, in most cases, available options have disappeared. To date, regions such as Africa, having lost all options, are suffering the consequences of unintentional but indiscriminate pushing of technological or other ways to overcome those problems.

For example, Ethiopia is at the centre of diversity for various crops, but is also known for hunger and famine. In Ethiopia, over 85 per cent of the population is living by agriculture, but practising the traditional methods. At times, that is the wrong way and can be perceived as backward, but it still supports itself.

The interaction to promote productivity with modern technologies could not take into account the basic grounds upon which the entire agricultural production system is built.

As a technician, I may be one of those who unintentionally, because of lack of proper knowledge, are feeling the consequence of the drawback in productivity, the misunderstanding of the true nature of the problems. We have seen that in a country where problems and resources and cultural practices are so diverse, the approaches to overcome the problems are also diverse. Entry points vary from place to place. I am not sure that this has been understood for years and years, particularly in those countries like

Canada that have always been there supporting the process of overcoming problems such as famine or drought or shortage of food.

This may not be unique to Ethiopia, but I would like to stress that biodiversity is focusing on humans. There is a strong relationship between people and the resources around them, and the appropriate use of these resources requires an understanding of this attachment. We believe that the technologies that are pushed have created some gaps. We are concerned that in the already existing situation, more indiscriminate or planned approaches are going to be put forward for certain African and other regions that will lead to trouble.

I would finally like to stress that it would be very useful, particularly considering the policy approaches, if local resources and capacities we support with external backstopping can strongly consider the situations on the ground, including the policy arrangements and the policy guidelines within a given country. I think this would be one of the correct ways to contribute to security.

The Chairman: I will ask one brief question. We know that in Mali the agricultural situation runs from desert to the forest. In the north there are herds and in the south it is cotton. Would you tell us what the main agricultural products are in Ethiopia? You are in a highland area. Would you like to tell the honourable senators what we are talking about?

Mr. Feyissa: Ethiopia ranges from the pastoralists, the lowland, to highland that rises up to 4,500 metres. The farming systems are complex and can be grouped into three main areas, the highland farming system, the intermediate and the lowland, where pastoralists are dominant. Here is a situation where the entry points to address those questions are diverse.

The Chairman: I do not want to put words in your mouth, but as I recall, you have a considerable number of rice paddies. There is quite a lot of rice grown in areas I have seen, and coffee. Would you like to give us examples of a few crops? I realize it is a complex geography. What are the three largest produced crops in Ethiopia?

Mr. Feyissa: One of the major crops is wheat, particularly durum wheat, because the country is a centre of diversity and seriously affected for decades by the displaced. The others are barley in the highlands and coffee in the west and southwestern part of the country. That is a humid, tropical area. Then other widely used crops are sorghum and maize.

Mr. Mwananyanda Mbikusita Lewanika, Executive Director, National Institute for Scientific and Industrial Research of Zambia: Chairperson and honourable senators, thank you very much for giving me an opportunity to say something concerning the development of Africa. From the beginning, I acknowledge that the responsibility to develop Africa belongs to Africans, but from time to time, everyone needs assistance.

I also acknowledge that efforts to assist Africa develop have not been very successful. There are a number of reasons. One of the reasons is the governance itself. The issue of governance is being addressed now. If you look at the geography of Africa, there are very few military governments, very few dictatorships. Part of the problem of governance was the inheritance of the Cold War syndrome, where some countries were being supported by the Soviet Union and some countries were being supported by the West. Regardless of how bad those governments were, as long as they fitted the ideology they were kept in power. All of a sudden, we are being told “You have to be democratic.”

The other issue is multilateral organizations that have assisted Africa, the World Bank and the International Monetary Fund. The intention is to assist, but the method did not work. For example, up to the early 1990s, Zambia was self-sufficient in food, but once we started implementing prescriptions from the World Bank and the IMF, reducing subsidies to agriculture, reducing spending on social services like health and education, our poverty level started increasing. Even though agreements are made through consensus, our voice is not as strong as the voice of a country like Canada or the United Kingdom, so our interest, in most cases, is not served by multilateral organizations.

Even in negotiations, if you look at the Zambian delegation, in most cases it is two or three people. The developed countries have lawyers and specialists, so you do not have a level playing field. There is a need to try to assist us, but even where we are supposed to have an equal voice, we need more help to acknowledge that we are partners, but weaker partners.

The other problem with the assistance is that it is usually directed at addressing symptoms. The symptoms are disease and environmental degradation, but the problem is poverty and also the low optics of science and technology. If assistance is targeted at addressing the problems, then you can see that in the future we may be self-sufficient. If the assistance continues addressing the symptoms, then it will be a Catch-22 and the problems will continue.

The other issue I wanted to share with you is, in the year 2002 we had a food crisis in Zambia. At the peak of the food crisis, the government did not accept food aid that contained genetically modified organisms.

There were a number of reasons. The first reason was that we were not even told from the onset that what we were being provided contained genetically modified organisms. That is contrary to international norms and against the convention on food aid.

When we looked at our capacity, we saw that we did not have a framework to assess GMO like many countries do, on a case-by-case basis. When we looked at what was happening globally, we saw that scientists are divided on the issue. Some scientists say there is no harm, but some say there is a potential for harm.

The target groups of the food aid are the most vulnerable in society. Some of them are immune-compromised due to poor nutrition and, sometimes, HIV/AIDS. If there are

health problems in those people, the problems would be aggravated.

The other reason the government used was that if you give a farmer some food in the form of grain, the natural instinct is to eat some and save some for planting. That would actually mean harming local varieties of maize.

The third reason the government used was that when it was known there was a food crisis and the government expressed concern, there was enough time to source non-GMO food within Zambia itself, within parts of Zambia with surplus food. There were also some countries within Africa that had surplus food. However, the World Food Program said that according to their regulations, they can only buy from the cheapest source, even if it meant that source was as far away as the U.S. The feeling was that we were being forced to take GMO food, and it was a question of either you take it or you starve.

What happened since then is that there was a redoubled effort by the country to improve agriculture production. Since then, we have had a surplus in food.

The last thing I wanted to say is that there is a school of thought that genetically modified organisms will stop hunger. They will not stop hunger. If anything, they contribute to food insecurity.

Senator Carney: I want to congratulate you all on your clear presentations of a very complex issue. I want to confess that I had to look at the map to see where Mali is. I have been to Kenya several times, but many of us do not know Africa to the degree that you do. I support the chair in his efforts to clarify some of the information for us.

You must be interested in us. I wanted to assure you that most Canadians are only two, or at the most three, generations off the farm. I do not know about my colleagues, but if you scratch any Canadian, his father or mother or grandparents were farmers.

We are very interested in your experiences. Some of us can milk cows and plant potatoes, like me because I am an Irish Canadian and that is what we did to live.

I wanted you to be aware that while we may seem to you to be strangers who cannot comprehend the enormity of your problem, we do want to learn from you.

It is hard to know where to start because you have presented this so clearly. Let me start with Mr. Lewanika. It bothers us that the World Bank and the international agencies have been unable to help you. We pour a lot of money and goodwill into those agencies. You have given us clear examples, such as genetically modified food and other issues. What could they do that would help you, or is the culture in those institutions so poisonous, so disturbing to your agriculture, that they cannot be helpful?

We cannot change the culture of the IMF or the World Bank — slashing subsidies, cutting back, balancing budgets, et cetera — but what could we as donors to those associations do that would actually help you on the ground?

Mr. Lewanika: The first thing is that projects must start from the grassroots. They cannot be top-down. Also, there is the issue of one size fits all. Even though we come from the same continent and maybe we have the same problems, there is some uniqueness. When somebody tries to assist us, it is best to go to the grassroots to learn what the problem is.

There is a tendency to bring experts. Some of these experts have never been to Africa before. We have local experts who could be used.

Senator Carney: Do your colleagues have examples?

[Translation]

Mr. Coulibaly: The World Bank financed cotton production in Mali. Within twenty years, through loans from the World Bank, Mali became the major producer of cotton in Africa. More recently, with problems related to the decline in prices, our unions have organized. We now negotiate prices with the state of Mali's cotton company before seeding. Before each season we negotiate prices first. We went on a production strike and the government is now talking to us.

This year we negotiated a price with the producers. At the beginning of the season the price was 210 CFA francs per kilo. However by the time the cotton had matured, the price on the international market was too low and the World Bank told the government of Mali to renegotiate the price with us. If it did not comply, the World Bank threatened to cut its credit to the government of Mali. The government knew that if it went ahead with this, serious problems would arise in the cotton production zone. So it did not weaken. The World Bank says that it is trying to eliminate poverty and yet it cuts the income of the poorest. This is what is happening and you can see it for yourselves.

The government of Mali has had serious problems with the World Bank this year because it refused to renegotiate a price that has already been negotiated with the cotton producer unions.

[English]

Senator Carney: Your suggestion is that the World Bank and other institutions are too inflexible, with a one-size-fits-all attitude, as you say. They need to be more flexible and based more on the grassroots. I understand that.

In Canada, our aid program is usually based on the fact that we respond to requests from countries. If so, why are your countries not asking us for the aid that you want? Am I putting that correctly?

The Chairman: There is a disconnect, I guess.

Senator Carney: We say, “Well, we only do what you ask us to,” but you are saying that many of the things that we do are not helpful. What is the answer?

Mr. Lewanika: Bilateral aid is very helpful, and you can see the results. However, the aid that comes through the World Bank and the IMF is actually difficult to —

Senator Carney: That is helpful. I have one question to help us. My notes say that Mr. Coulibaly has established himself as a peasant farmer. You completed your studies in agricultural engineering and then established yourself as a peasant farmer. How would you describe a peasant farmer in Mali?

[*Translation*]

Mr. Coulibaly: I would like to start by describing life on a family farm to you because there are no individual farmers in Mali, such as you have in developed countries. These are families that work together, family farms.

In one family you may find up to 100 people working the land. Of course there are smaller groups within these large families and generally the families cultivate rather small areas because our agriculture is not very mechanized.

Our agricultural implements consist of plows pulled by oxen; that is generally what we use. In Mali, 55 per cent of farm families use that type of equipment. The other families, the other 45 per cent, do not even have a plow and oxen. Those are the kinds of difficult circumstances these families live in despite all the aid this country receives. In 2005, this is the case in Mali.

Most of these families produce primarily grain. This is food production. We produce first to eat, not for the market. The market is a complementary activity, after food needs have been met. We grow cotton because it brings in more income than grain. The price of grain is usually too low to meet financial needs. That is why several families began growing cotton.

Just to give you an example, a family growing three hectares of cotton, with the right amount of fertilizer, after a good raining season, can earn a maximum of \$400 Canadian. That will cover the financial needs of that family for the 12 months of the year. That is the income of an average family because farms measure on average three to five hectares.

However, there are cases of families in debt. This is what happens in most cases. If the season is not good, if there has not been enough rain, then most of these families will not earn anything. There have been cases where the cotton company, under systems that provide fertilizer on credit to farmers, has seized the only farm implement from these families: their oxen.

This is the general situation we are in and it is in this context that we are being asked to further reduce our income by cutting prices to producers. In the year 2000, we went on

strike because the government wanted to cut our cotton income. Since then we have been able to negotiate fairly fair prices with the government of Mali.

[*English*]

Senator Grafstein: I, too, want to welcome all the witnesses. I want to ask you some questions about farm policy. We are dealing with individual questions and I really want to talk about systemic farm policy.

At one time, we looked at various models of agricultural policy. I spent some time in China and looked at their agricultural policy, the special responsibility households. I have taken a look at the Israeli commune and the cooperative model. I have taken a look at the Cuban, Chilean and Costa Rican models. We have heard about individual problems, but have any of the three witnesses taken a look at successful agricultural policies in various countries and determined which ones would be most suited to the particular facts of their country?

Let me give you an example from Ethiopia. Ethiopia, and I am sure this is well known to the witness, makes probably the best coffee in the world after Kenyan coffee. It is a cash product; it is world class. You can get a very good cup of Kenyan or Ethiopian coffee at two or three of the coffee stands in this building. Have any of you looked at other models and said “This is a model that we can adopt?”

There is a Canadian model, of course, as well. The Canadian model was beset with problems for the better part of half a century. After the war, various governments attacked that problem by changing the agricultural system — not just the farmers but the system and the size of farms and the cooperation amongst farmers.

My question for the three of you is have you looked at other systems and come to the conclusion that there are one or two models that have been very successful — the Chilean example, the Israeli example, which have been very successful in arid circumstances — and beneficial to the farming communities that they serve?

The Chairman: Dr. Feyissa, would you like to have a word?

Mr. Feyissa: Let me say a few words. Unfortunately, I am not that informed about farming policies in other countries. However, I can still talk about some problems that we have now in our country to explain why agriculture is lagging behind and discuss what the gaps are within the policy.

It is well accepted by the majority of the people that the land tenure system is one of the serious problems in maintaining the sustainability of agricultural productivity. Farmers do not have a clear right to use, or ownership of, the land. This has always discouraged farmers from making the investment that the land requires for at least five, six, seven years. This is one of the serious gaps we have. There are policy gaps and there is confusion.

There is a model that development of the country will be based on the direction of agriculture or industrial agriculture. The problem is that we could not find a direct indication of which is which — where we should start. Here is where the policy starts, but it does not finish its direction.

The core problem is the land tenure system. As of now, that is hampering productivity and interferes with traditional institutions in the absence of well-shaped policy.

This is a short synopsis of the current situation in Ethiopia.

Mr. Lewanika: First, farmers need access to markets and a fair price for their produce. They need the required inputs, that is, things like seed and fertilizer. They also have to shift from dependence on rain-fed agriculture to irrigation. However, when you move toward irrigation, you cut out a certain segment of farmers who cannot afford irrigation equipment.

[*Translation*]

Mr. Coulibaly: The only success factor in an agricultural policy is the price that a producer can get. A policy cannot be built on selling one's production at a loss. That is the case for all African countries. There are no miracle solutions. That is why developed countries such as Canada provides subsidies to producers so that they can continue to make a living from their work for ten months. The World Bank has clearly forbidden our countries to provide subsidies since the 1990s. We cannot support agriculture.

At the same time, liberal policies and the opening of our markets to food imports has been imposed on us. We are therefore competing with imported food products that are in fact the food surpluses from developed countries. How can you expect us to manage under these conditions?

We are asking you to allow us to make choices that will protect the interest of the majority of our people and that will allow us to protect our borders from food imports and from the surpluses from developed countries. Furthermore, we want to have access to our own markets because we have been marginalized within our own markets. I assure you that in western Africa, wheat is quickly becoming a part of our food habits. Why? Because wheat and bread cost less, even though they are not sold at their true price. Wheat is more expensive in Canada than it is in Senegal and Bamako. Is that normal? Yet that is reality. That is why we cannot break out of this situation.

[*English*]

The Chairman: We heard a very similar story about Mexico, where subsidized imports of beans and maize have driven millions of people off the land.

Senator Grafstein: Canada, China and Cuba, three countries with different political

systems, all apply essentially the same principle, that being product-by-product farm marketing boards. In China, the government told all Chinese farmers, of whatever commodity, that they would provide a certain quota for which they would pay a fixed price and that the farmers would be free to sell anything produced beyond that at market prices. That same idea prevailed in Israel, Cuba and Canada.

Do any of your countries have the concept of a farm marketing board that allows farmers to produce a specified amount, which gives them their fixed income at a very low rate, and provides incentive for them to go beyond the quota level for further market distribution?

[Translation]

Mr. Coulibaly: Until 1985 Mali had a grain board. It was the World Bank that called for the elimination of the board. It no longer exists. It was at that point that poverty in the rural areas started to rise. Since there was no longer any support, prices began to fluctuate. In that kind of situation, producers have no control over their income. I do not even know if this kind of government-run marketing board exists in developed countries like Canada. In our countries, the idea of having the State play a role, with large State marketing entities, is taboo. It would be unacceptable to talk about it today in our countries.

[English]

Mr. Lewanika: The same is true in Zambia. Until 1990, we had a grain marketing board, but we had to dissolve it when we implemented the structural adjustment program of the IMF and the World Bank. They also insisted that the government give no assistance in agriculture, that agriculture be left to market forces.

Mr. Feyissa: That is the case in Ethiopia as well.

Senator Di Nino: Welcome, and thank you for coming here.

We hope that we can learn something from you that will lead us to make recommendations to our government.

Are most farms in your countries owned by farmers, owned by individuals and leased to farmers, or owned by governments that allow people to work them? Could you tell us how that works in your countries?

Mr. Feyissa: In the land policy of the country, it is stated that land belongs to the government and the people. When interpretation comes down to action, it is the government that decides, not the people. That causes a problem. There is currently an argument about this statement, in that it does not clearly define to what extent the government owns the land and in what form, in what form the people own the land, and what the linkages are between the people and the government in deciding on the style of

usage and ownership rights. There is confusion about that.

This has an implication for the investments of farmers. Farmers invest for five to seven years in plantations and soil conservation or nutrient maintenance. It has become a disincentive that eventually destroys farmers' capital, because with no one looking after the soil it is dying and becoming no one's resource, which impacts overall food production.

Mr. Lewanika: The basic principle in Zambia is that land has no value. It is the development of land that has good value. We have two types of land; traditional land, to which you cannot have title, and non-traditional land, to which you can have title. When you have title, you own the land for 99 years, after which it reverts back to the government.

[Translation]

Mr. Coulibaly: In Mali, the land tenure system is such that all land belongs to the State, but common law, which is the community's rights to use the land, is also recognized. Every village has a land entitlement and all the families in the village have the right to work part of that land. In theory, the land cannot be taken from the families who farm it.

With the new agricultural policy that we are developing, the government is in agreement with us that the rights of these families to use the land needs to be formalized. We have not yet gotten into the details, but we have proposed that secure title be given so that the families have ownership of the land and can therefore feel secure. There is also developed land that belongs to the State, and the State controls things in that case.

[English]

Senator Di Nino: That is very useful.

The other message that is coming across, as the chair says, is that the World Bank, the IMF and other organizations of a similar nature seem to be creating more problems than they are solving with their approach. Certainly I would imagine the requirement that the agricultural community deal with their products at a world-level market would create problems for countries.

If you could write my portion of the report dealing with those two issues, the World Bank and the IMF, what would you change? How would you do it differently, acknowledging the fact that some assistance is required through these organizations? I would like the response of all three, if possible.

Mr. Lewanika: Part of the problem is that there is no transparent mechanism to evaluate whether the World Bank and the IMF are succeeding in different countries. They do evaluate projects, but we do not hear the feedback. If there could be an independent body to monitor and evaluate projects that come through the World Bank and the IMF, and

also if they started listening to the people instead of prescribing one-size-fits-all development strategies, that would be helpful.

Mr. Feyissa: Sometimes the approaches do not consider the local conditions. I can provide an example. Some years back, inputs were subsidized by the government because those low-input cultivars that farmers could grow were discouraged through imposition and farmers were told that to increase food, they should not grow them, and the government did the same.

Recently, there was another imposition that the government should not subsidize farmers. By then, farmers did not have seeds that can be grown without inputs. Inputs are not there. The price of the input has gone up because it was privatized and there was no market that absorbed farmers' produce to let them pay back the debts.

This is a situation where the condition became a serious disincentive for farmers to produce. This is one of the roles that were not considered in the example in Ethiopia.

[Translation]

Mr. Coulibaly: I believe that if we really want to improve the way that financial and international institutions deal with our country, we cannot ignore the results of their past actions. We need to look at what has been done, see where there have been problems and even assign responsibility. We cannot understand how it is that poor countries are used as guinea pigs for approaches that are not even used in the countries that fund those institutions. This is unacceptable.

In fact, we are used as guinea pigs for economic models that do not exist anywhere else. We need to figure out who is responsible for that. People are poor because of that situation. The kind of poverty that we see in our country did not exist 20 years ago. There is more poverty than before the World Bank set foot in our countries. But who is responsible? That needs to be examined.

The Chairman: We will be asking the World Bank questions ourselves. You are giving us questions to ask them.

[English]

Senator Di Nino: I would like to make a request of our witnesses. If you can add to the responses that you have given this evening, I would appreciate it if you could send to our clerk any thoughts, particularly as to how you think problems can and should be solved so that, obviously, the results would be what you are looking for. That would be useful. When you return home in the next month or two, if you could send us some information, we would appreciate that. Thank you very much.

Senator Mahovlich: What is the most effective way for donor countries to contribute to improved agriculture and development in Africa? What can we do in Canada to help

Africa? Do we send farmers or lawyers? It sounds like this is a political problem. When the World Bank got involved, they changed policy. It was political, was it not? Is this what we have to change to stop the hunger in Africa?

[Translation]

Mr. Coulibaly: What the donor countries could do, in fact, is to give us legal assistance today to fight the World Bank in the courts. I think that this would be worthwhile, because we feel that we have been the victims of prejudice. We feel that the damages that we have suffered need to be addressed. In my opinion, this might be something that could be done. The second thing might be to avoid sending experts or farmers, since if you ask a Malian farmer what he needs, he will tell you that he needs a plough, a pair of oxen and water to irrigate his field. He will not tell you that he needs genetically-modified seed. If you can help prevent genetically-modified seed from being imposed on us, that would be very helpful. Developed countries and multinationals are currently pushing us very hard to accept GMOs. This is not something that the farmers are asking for.

[English]

Mr. Feyissa: There may be no need to send lawyers. There also may be no need to send someone to tell farmers how to farm, because farming in the world is so diverse and the knowledge is so wide. Farming is so diverse across regions. One important thing is that the rule is working in such a way that it is starting from the wrong point. We have still a wound from the green revolution. As a technician I am not against that. Irrationality is a problem now. It is not yet healed. Local resources and capacities are not used; they are rejected. The imposition is backward. That was how it moved. It seems like there is a need to assist in empowerin the capacity to exploit the local resource to improve, enhance and promote the technology in line with improvement of the local capacity, and to fill the gaps where that local capacity and resources do not match. This is where close attention is needed.

Mr. Lewanika: What we would request is to have a level playing field. If in the process from planting to selling, subsidies are allowed somewhere, let them be allowed everywhere else. Let the negotiations on agriculture go through the World Trade Organization. If they say, "No subsidies," let it apply to everyone. Do not let those who are more powerful find ways to get around it, because we cannot.

The Chairman: I will just remind members, because some may have forgotten, we had the World Bank before us when we were involved in our NAFTA study, and it was not an impressive meeting. They were telling us things that turned out not to be accurate.

[Translation]

Senator Corbin: I am tempted to describe Mr. Coulibaly as the Jose Bove of Africa. That may not be accurate, but you are very enthusiastic and I admire you. It is clear that

you love your country.

I always listen to speeches carefully and pay attention to the choice of words and expressions. Language is the vehicle of culture, and if we do not understand people's culture, there is something missing in our aid programs. The World Bank and other financial organizations tend to try to impose concepts, language and models on you such as evaluation parameter, performance, annual growth, average annual growth and strategic remedy.

If I understood you correctly, Mr. Coulibaly, I do not think that applies in any way in your case. Before we claim to be able to help you, we must learn your language, your way of doing things. That is the fundamental flaw in all of our aid programs. It seems obvious to me. Even the financial institutions in which we are involved seem to lack a fundamental respect of your life style and objectives. Not only do they impose policies on you, they also interfere in the internal administration of your country. And as you said, people are impoverished as a result.

Second, and this is a very important point, this is International Women's Day, at least it is in Canada, and I believe it is throughout the world. Could you talk about the role of women in agriculture in your country, because I believe they play a key role there, do they not?

Mr. Coulibaly: I will start with your last question regarding the role of women. Women play a central role in our families. When people look at the situation in Africa from the outside, generally all they see is polygamy, genital mutilation and the fact that women have no right. The fact is that if we look very closely, we see that women, particularly rural women, play a very important role. Everything depends on women. Families cannot exist in all countries without women. That is impossible. They play a role not only in agricultural production — and they are tremendously involved here — but also in taking care of the home. The entire economic core of a family depends on this. I can assure you that many women, even in rural communities, are engaged in independent farming activities the revenues from which are theirs to use as they see fit. However, it is true that there is still a great deal to be done to ensure that African women generally can achieve the level of emancipation women achieved in the developed world. The important thing is the economic emancipation of women. Once a woman becomes economically independent, all the other rights follow automatically. That is where this real struggle lies. We will not be able to change people's attitudes about genital mutilation or polygamy until women are economically independent. In many places, women cannot be prevented from engaging in economic activities. Even in rural communities, women are free to engage in economic activities.

We no longer have any freedom of choice as regards policy, and I think that is what triggered poverty. If you look at the figures of the World Bank itself before its program was introduced, you will see that poverty was not increasing very much. Once the support system for agriculture was dislocated, all the agricultural supports were dismantled. Apparently this cost the government too much.

The entire health care system was dismantled because it was too expensive. The same is true of the education system. I can tell you that today public schooling exists in name only. If students really want to learn something, they have to go to private school. So the poor are even more marginalized than they were before the World Bank became involved. There were no private schools in Mali before the World Bank came in. Today it is the children of the elite who have access to education.

The same thing happens with health care. If you do not go to a clinic, you will not get care. There were no private clinics in Mali before the World Bank arrived. Before the World Bank came in, I can tell you that a grain farmer knew what he was earning because the price of grains was set by the Mali Farm Products Board, which was a Crown corporation. It bought grains at the same price throughout the country, and then sold it to consumers. This entire system has been dismantled.

Mali can no longer go back to that type of choice; it is no longer possible. Putting figures into columns, on tables or charts does absolutely nothing to solve our problems. Quite the contrary. All these figures mean absolutely nothing.

It does not help us to say that all the adjustment programs that were implemented have done absolutely no good, because Mali is more in debt than it was before. In 1980, Mali had almost no debt. Our debt today is some 3,000 billion CFA francs. That means that the debt of each person in Mali is several hundred million CFA francs. And yet the living conditions of each inhabitant of Mali are not commensurate with hundreds of millions of CFA francs. This is a revolting situation. This is why the developed world must focus on debt forgiveness. Our rural people are paying off this debt today because we pay income tax to pay down the debt. We are repaying loans that were of no use to us, which simply impoverished us. Our incomes are very low because our markets have been opened up. We cannot sell our agricultural products for a decent price and we have to pay income tax to pay down the debt, which has given us nothing.

[English]

Mr. Lewanika: Since you mentioned that today is International Women's Day, the best teacher I have had, who had a lasting impression on me, was my mother. Really, you cannot go beyond that. The majority of small-scale farmers are women. They are not discriminated against when it comes to getting title. Where they used to have problems is getting loans for agriculture, but that is being addressed. There is a problem in education. When they start school, you have almost the same number of girls and boys, but as they progressively go further, the girls start dropping out, so they need to address the issue of girls' education.

Mr. Feyissa: As colleagues said, today is a great day for women. Women in Ethiopia are the best selectors of varieties and the best breeders. It is thanks to the women in Zambia that there is such variety and diversity in the range of crops today. This is important for us and I am very pleased to be able to say this, sir.

[*Translation*]

Senator Robichaud: You are saying that poverty has increased in your respective countries since the IMF and the World Bank imposed certain requirements on you. Is that correct?

Mr. Coulibaly: Absolutely.

Senator Robichaud: That is certainly something that can be seen, but when your governments raise these issues with the IMF and the World Bank, what is their reply when it is pointed out that poverty has increased because you have to comply with the requirements of these institutions? Can they not see it themselves?

Mr. Coulibaly: Our governments know that poverty has increased since the introduction of structural adjustment, but a country that cannot afford to pay its government employees a monthly wage has absolutely no manoeuvring room. That is the situation in which our countries find themselves. The World Bank pays these salaries.

Can you see how an administration can work when government employees are not being paid? In such a situation, how can you expect politicians to raise these issues! They never raise them. We are the people experiencing these problems and we are the ones who have to raise them today. Politicians are aware of them, but they never raise them. The proof is that the World Bank is still the champion in all categories in the war on poverty in our countries. The World Bank was the institution that developed the Poverty Reduction Strategy Paper. Why? Because the World Bank knows it is responsible. It is taking the lead precisely to avoid any legal challenges, perhaps.

That is why the World Bank established the Poverty Reduction Strategy Paper in all African countries. But I can tell you that if you read these strategy papers, you will see no reference to farm income. There is no reference to income at all. You may see many things in these papers, but you will not see that. Farmers have their right to improve their income by selling their products. That is the basis of everything. We represent 70 per cent of the population.

We have never been involved in these poverty reductions strategy papers that were developed without consulting the farmers. We do not acknowledge them. We think this is just a means used by the World Bank and its experts to drag things out.

[*English*]

Mr. Feyissa: Honourable senators, I can say that it is not easy for citizens in many African countries to understand the structure of the governments in their respective countries. Any arrangements made, at whatever level, are a kind of in-house issue between the World Bank or other organizations and small offices at high levels.

There have been three or four institutional arrangements in agriculture in Ethiopia because of impositions from the ministry and line organizations. In such cases, decisions in respect of local policies are made by large global institutions. The effect is such that individual citizens are suffering. It is sad that such global representation of nations and institutions does not provide space for citizens of our countries so that they might be aware of what is going on. That is how it works.

Mr. Lewanika: The relationship between the World Bank and most countries is one of high-percentage funding for their budgets. For example, 80 per cent of the Zambian budget is funded through the World Bank, so the relationship continues. Like they say in cowboy movies, he who has the gold makes the rules.

[*Translation*]

Senator Robichaud: I think you are telling us that you are caught in a vicious circle, are you not? You know from experience that what is being proposed will only make people poorer. Is that not correct? You refer to the high percentage of your people who depend on agriculture, and of course, agriculture is an activity carried out in rural communities. You say as well that these people can no longer earn their livelihood from farming. The rural regions will probably lose people to the urban centers, because these people can no longer meet their needs. Is that what is happening? The problem will be moved elsewhere.

Mr. Coulibaly: That is exactly correct. That is why we are sounding the alarm. Approximately 70 per cent of the population is involved in farming; it may have been 85 per cent a few years ago. That means that people who can no longer earn a living from farming, that they give up and move into the cities. We have some very large cities in Mali today, and our country has barely 11 million inhabitants. One of our cities has a population of almost 2 million today. This is ridiculous. However, in this city, there are no jobs; there are no factories or any viable economic sector. That means that these huge cities we are building are becoming impossible to live in, because if the people who come from the country cannot find employment in another economic sector, they will not be able to live decently. That means we are facing an explosive situation in the medium term. And the politicians know it. This always crops up in their speeches. They are afraid of this uncontrolled urbanization, with all these people leaving the country to come and live in the cities.

[*English*]

Mr. Feyissa: This will continue, and at the same time, there is a great deal of silence from outside. At times, those of us who have opportunities to see various forums are quite surprised by the silence. There is no market, there is no infrastructure, there is no support at the ground level, there is no promotion of products and there is no incentive at various levels, as in the case of the coffee that you mentioned. In Europe and North America they say there are no suppliers for our coffee. The coffee is produced but it does not have a market. As a result, the coffee plants are uprooted and replaced by other kinds

of crops. That is the situation.

Mr. Lewanika: Migration to the urban areas has created another problem, because those cities and towns cannot provide services to unplanned-for squatters. That has led to an increase in crime, which has become a very big problem.

The Chairman: On behalf of senators, I thank you for your interesting and important testimony. The problem of rural people moving to the cities has been the curse of many countries. An example of that is Bogota, Columbia, where 3 million people are living in hovels. It is possible to see where the city actually stopped functioning in the 1950s as more and more people migrated from rural areas. The same problem is occurring in Africa.

The committee adjourned.

Appendix v

**No More Technological “Silver Bullets”:
A Policy Brief on Canada’s Role in Africa’s
Agricultural Underdevelopment**

Policy brief prepared for the Standing Senate Committee on
Foreign Affairs-Africa Study

By

The Working Group on Canada’s Policy with Regard to Agricultural
Biotechnology and Developing Countries

Ottawa May 2005

This brief was prepared in response to a request from the Standing Senate Committee on Foreign Affairs for information on Canadian foreign policies and their effects on agricultural development in Africa.

The brief is presented by **The Working Group on Canada's Policy with Regard to Agricultural Biotechnology and Developing Countries**. The Working Group is made up of international development organizations, farmers groups, and other civil society organizations including: Canadian Organic Growers, ETC Group, Inter Pares, National Farmers Union, Social Justice Committee, The United Church of Canada, Union paysanne, and USC Canada.

“What can we do in Canada to help Africa? Do we send farmers or lawyers? It sounds like this is a political problem” (Senator Frank W. Mahovlich, March 8 2005).ⁱ

The Canadian Senate committee's discussion of the role of science and technology -- especially biotechnology -- in Africa is timely. When the G8 summit takes place in Edinburgh in July this year, leaders will discuss a Canadian initiative for a "Pro-Poor" science strategy for developing countries. While the details are still being discussed, we understand that elements of the strategy include support for scientific research related to climate change, new nano-scale technologies, and agricultural biotechnology. In a recent article in *New Scientist*, Prime Minister Tony Blair's scientific adviser, David King, wrote of the importance of the G8 creating new scientific Centres of Excellence in Africa, and specifically lauded Canada's BECA initiative (Bioscience Centre for East and Central Africa) being established in Nairobi, Kenya.ⁱⁱ However, a careful look at the history of scientific adventurism in Africa over the past 60 years offers a cautionary tale for the G8's deliberations as well as for Canada's involvement in BECA. Canada and Britain, in particular, have good reason to tread carefully.

There is no doubt that science and technology have an important role to play in international development. As with most interventions, however, "context" is everything. If new technologies are introduced into a foreign environment in the absence of a clearly understood demand and careful preparation -- including the right of the recipients to say "no" -- there is every risk that the tool will take priority over the purpose.

In January 1950, then foreign minister Lester Pearson flew to Sri Lanka to attend the Colombo Conference of Commonwealth Foreign Ministers that launched Canada's foreign aid programme. Pearson was keenly aware of both the importance and the limitations involved in pressing new technologies upon marginalized peoples. Pearson not only created the External Aid Office and then CIDA but, in his later years, publicly advanced the idea of an "international development research center" which was later founded in May of 1970. Thus, Pearson was a friend to science but an even greater friend to the South.

When Mike Pearson realized he would be unable to attend the second Colombo meeting, he sent a message to its Chair warning that:

*“The Delegation (...) should also look with scepticism at overly grandiose schemes of development. Ordinary handpumps may be more suited to some regions than vast irrigation works; and ploughs may be more needed than tractors”.*ⁱⁱⁱ

He was right to be concerned. Again, it is worth stressing that the first Chair of IDRC was not a Luddite - he was simply attuned to context and keenly aware that science and technology are merely tools -- not solutions.

If we were to undertake a thorough examination of the history of scientific adventurism in Africa since World War II, it would be a long, exhausting - and depressing - account. Here are but a few examples...

1940s-50s: *Not peanuts!* – In 1946, Britain's Labour Government (Dr. King take note) sought to both stock their national larder and improve agricultural productivity in East Africa by encouraging their colonies to take on groundnuts as an export crop. £25 million were committed to cultivating 13,200 square kilometres of groundnuts in what is now Tanzania. However, the British ignored incompatible soil conditions and underestimated climatic uncertainties such as floods and droughts as well as wildlife hazards and local labour concerns. The groundnut scheme was ultimately abandoned in 1951 – wasting an investment that swelled to £49 million and damaging the lives and livelihoods of all the farm families and pastoralists displaced by the experiment.^{iv}

1960s-70s: *Missed revolution* – The so-called Green Revolution that began in the 1960s missed Sub-Saharan Africa. This is both the "good news" and the "bad news". It was especially bad news for CGIAR (Consultative Group on International Agricultural Research) that brought together the diverse Green Revolution initiatives of the 1960s and early 70s to promote high-yielding, semi-dwarf wheat, rice and maize (corn). From its inception in 1972, to 2003, CGIAR has spent roughly 45% of its annual budget in sub-Saharan Africa supporting four Centres of Excellence.^v This amounts to US\$ 3,116 million invested over 31 years. Canada, the UK, USA and Australia have taken the lead in the CGIAR— especially in Africa.^{vi} The international panel led by Maurice Strong that evaluated the work of the CGIAR at the end of the last decade acknowledged that despite years of scientific intervention and massive expenditures, the CGIAR has little to show for its work.^{vii}

We noted that this is both bad news and good news. The good news is that the “one-size-fits-all” orientation of the Green Revolution missed Africa. The continent was spared the industrial homogenization of its food crops and still has enormous biological diversity from which Africa can strengthen its own food security and food sovereignty.

1970s-80s: *Half-baked* – In the mid-'70s, Canada built a huge automated bakery in Dar Es Salaam, Tanzania. The bakery not only undermined the small local bakeries already operating, it also undercut demand for indigenous crops and created a demand for Canadian wheat. The bakery began baking bread in 1976, five years later than planned and cost Canadian tax payers \$1.7 million-- 3 times as much as the original budget. The bakery has gone down as one of the most famous examples of inappropriate foreign aid in modern history.^{viii}

1970s-1990s: *Wheat dreams* – In an attempt to meet the manufactured demand for wheat, CIDA launched a \$100 million dollar wheat production project in Tanzania to feed its bakery. Pastoralists and villagers were driven off 100,000

acres of their land to make way for wheat and the tractors that had so concerned Mr. Pearson three decades earlier. Inter-tribal relationships were poisoned, people were beaten, imprisoned and killed, and land disputes continue to this day.^{ix} Not only is this project an assault to human rights, it is also a momentous economic failure, with the farms still dependent on Canadian aid twenty years after their establishment.^x The repercussions of this failed scientific adventure continue to be an embarrassment to Canada.

2000s: *Biotech's silver bullet?* – Now we have a Canadian and British government proposal for "Pro-Poor" Science in Africa. Canada has already launched BECA as yet another Centre of Excellence. Without sufficient consultation, this \$30 million venture was born out of the G8 summit in Canada. While the Canadian government insists that BECA is not a biotech centre but a biosciences centre, this is not the impression left in Africa or with CGIAR. At the FAO Commission meeting in Rome last November, for example, a representative of the CGIAR from ILRI (the institute that will host BECA) told the assembled governments that BECA is nothing less than a biotechnology centre. Certainly the plethora of agricultural biotechnology centres, promotional and "training" efforts undertaken by US Government agencies, such as USAID, the biotech corporations and "NGOs" such as the ISAAA^{xi}, would suggest that BECA is just another one of these promotional efforts having little to do with "Pro-Poor" science or food sovereignty.

What does all this mean for aid programmes and, in particular, for science and technology in Africa? It certainly does not mean that we abandon science and technology as one of the tools to further well-being. It does mean that we must view new scientific tools with "scepticism" (as Mike Pearson advised half a century ago) and we should keep science in the context of a broad development agenda. In light of 60 years of underdevelopment in Africa, here are some fundamental considerations to keep in mind when developing policy:

Agricultural policies need to be guided by what local actors know and be built from the bottom up. The era of Big Box Science must come to an end. Africa has had enough "white elephant" Centers of Excellence. Agricultural and rural development strategies are being developed by Africans themselves. Many of these ideas include a scientific component. Our resources should support these initiatives and we should encourage collaboration within and between governments in the region; between governments and civil society -- especially farmers' organizations and community associations -- and between governments and academia. The significant resources Canada now gives through CIDA and IDRC to initiatives such as CGIAR and BECA should be converted to support for rural development and agro-ecological strategies that will strengthen food sovereignty throughout the continent.

"(...) if you ask a Malian farmer what he needs, he will tell you that he needs a plough, a pair of oxen and water to irrigate his field. He will not tell you that he needs genetically-modified seed" (Ibrahima Coulibaly, Malian farmer).^{xii}

We must remember that poor people are not guinea pigs. Highly-vulnerable communities whose resilience has been weakened are not good subjects for someone else's well-intentioned experimentation. It is always best to build from the community's own strengths rather than to introduce new uncertainties. As Ibrahima Coulibaly, a Malian farmer, stated before the Senate Committee hearing in March regarding the meddling of the World Bank and the IMF:

"We cannot understand how it is that poor countries are used as guinea pigs for approaches that are not even used in the countries that fund those institutions. This is unacceptable".

We must recognize that Africa is a highly diverse region of enormous biological diversity and that one-size-fits-all policies simply do not work. Africa is a centre of origin for coffee and for a range of cereal crops such as sorghum, pearl millets, finger millets, fonio and African rice. It is a secondary centre of diversity for temperate crops such as barley and wheat. Rather than ignore this diversity -- a treasure that has been built up by thousands of generations of African farm families -- we should see in it what Africans see in it: the building blocks of food security and rural development. Moreover, Canada's food security, and for that matter, the global food system, is inextricably linked to the in-situ conservation and sustainable uses of agricultural biodiversity that is mostly found in the Third World. Let us not forget that North American barley was decimated in the 1950s in Canada and the US following an outbreak of yellow dwarf virus. These crops were only saved thanks to resistant genes found in an Ethiopian barley variety.^{xiii}

We must ban Terminator technology nationally and support an international ban at the United Nations. In 2000, the UN Convention on Biological Diversity called for a *de facto* moratorium on the introduction of Terminator. Terminator (or, Genetic Use Restriction Technology) is a genetically-modified seed technology that renders seed sterile at harvest time thus forcing farmers to purchase new seed every growing season. FAO, CGIAR, governments such as India and Brazil, prominent scientists, and a number of international seed companies have all agreed that the technology should not be allowed. However, in February this year, the Canadian government delegation to a scientific subcommittee of the Biodiversity Convention had orders to try to end the moratorium and to "block" any other outcome. Canada's position surprised other governments and shocked the Canadian public. African countries, in particular, consider Terminator technology as a threat to food security. Since the Canadian government customarily insists upon "science-based" decision-making, it was especially distressing to see our government attempt to block scientific deliberations in search of a purely political outcome. If Canada is to have any credibility in proposing a "Pro-Poor" science strategy at the G8 meeting in July, it must amend its Terminator policy to support a ban on the technology within Canada and also oversees.

We must not continue to impose neo-liberal economic policies. We must be aware that the World Trade Organization, regional trade agreements, and bilateral trade agreements -- as well as the interventions of the World Bank and the International Monetary Fund --

can destroy the most constructive efforts to create food security and well-being. Canada must direct its negotiators at the WTO and elsewhere to adopt not a "Pro-Poor" science strategy but a "Pro-South" trade policy. Canada can provide leadership in supporting policies that protect farmer livelihoods and local markets. Canada's wheat board and supply management boards have been fundamental for Canadian farmers. Similar instruments existed in Africa until they were dismantled by IMF and World Bank's structural adjustment measures. Canada can help rebuild these institutions and call for flexibility for countries to establish domestic agricultural policies that benefit their own citizens.

We must support democratic processes that empower countries to develop their own agricultural policies to ensure food sovereignty. When Mike Pearson helped establish the International Development Research Centre in the early '70s, most of the development debate centered on the concept of "Liberation Theology" - the notion that social change comes about through political negotiation and change led by people. Today, the aid debate -- such as it is -- is focused on "Liberation Technology" -- the whimsical hope that trickle-down technologies will somehow re-dress our social failures. As the Massey-Ferguson tractors rusting in the fields throughout Africa testify, there are no simple solutions – no silver bullets. There is no technological shortcut to social justice.

ⁱ Mahovlich, F.W. Statement made during the Standing Senate Committee on Foreign Affairs hearing. March 8, 2005.

ⁱⁱ King, D. 2005. Science to offer hope to Africa, in: *New Scientist*, March 19, 2005.

ⁱⁱⁱ Pearson, Lester B. 1972. *Mike: Memoirs of the Right Honorable Lester B. Pearson*, Volume 2, University of Toronto press, Toronto, p.110

^{iv} www.explore-government.com/government/T/Tanganyika_groundnut_scheme.html

^v The four Centres of Excellence are: the International Livestock Research Institute (ILRI) and the World Agroforestry Centre (both in Nairobi, Kenya), the International Institute for Tropical Agriculture (IITA in Nigeria) and the West Africa Rice Development Association (WARDA) temporarily located in Nigeria. CGIAR, 2003. *Annual Report*, p.53. Available on-line at: www.cgiar.org/pdf/ar2003_section6.pdf

^{vi} Canada alone has contributed over US\$ 381 million to CGIAR over the course of 31 years. In 2003, Canada invested US\$ 22.8 million (including a grant for US\$ 1.9 million from the International Development Research Centre- IDRC). Source: CGIAR, 2003, *Financial Report*. Available at: www.cgiar.org/pdf/ar2003_section7.pdf

^{vii} Mooney, P. 1998. Member of the Science Panel of the Third Systemwide Review of CGIAR.

^{viii} Carty, R. and V. Smith, 1981. Underdevelopment Assistance. In: *Perpetuating Poverty: the Political Economy of Canadian Foreign Aid*. Between the Lines, Toronto. Pp. 71-74.

^{ix} Monbiot, G. 1994. The Scattering of the Dead. *The Guardian*, November 23.

^x Lane, C. 1991 *Wheat at What Cost? CIDA and the Tanzania-Canada Wheat Program*. In: *Conflicts of Interest: Canada and the Third World*. Between the Lines, Toronto. Pp. 133-160.

^{xi} The International Service for the Acquisition of Agri-Biotech Applications supports the transfer of agricultural biotechnology to developing countries. It is partially funded by such biotech giants as Dupont, Monsanto, and Syngenta. For more information: www.isaaa.org

^{xii} Coulibaly, I. 2005. Statement made during a hearing of the Standing Senate Committee on Foreign Affairs. March 8, 2005. Translated from French.

^{xiii} It is estimated that the resistant strain saves farmers in the state of California alone US\$ 150 million in pesticides each year. Source: Qualset, C.Q. 1975. Sampling germplasm in a centre of diversity: an example of disease resistance in Ethiopian barley. In: *Crop Genetic Resources for Today and Tomorrow*. Edited by Frankel O.H. & J.G.Hawkes. Cambridge University Press, Cambridge. Pp: 449-453.