



A Not-so-Thanksgiving Story

Seedy Solutions in Switzerland?

The Biosafety protocol on GM crops was a big thing in January, but the meeting about to begin in Neuchatel addresses a "clear and present danger" to world food security. A brave little band of "biocrats" could decide the fate of the scientific exchange of crop genetics. Their political bosses don't even know they've left town!

The Biosafety deal struck by governments in Montreal in January was intended to make the world safe from (or for?) transgenic crops. But what about the safety of those pedestrian seeds that are the basis for virtually all genetic crop improvement? The stuff that lets bio-engineers juggle genes and allows farmers to breed new diversity that can meet the stresses coming with global warming? Whereas the biosafety protocol tries to prevent the unwanted movement of GM seeds around the world, another treaty is being developed to facilitate the exchange of seeds for scientific research.

In a hotel just outside of Neuchatel high in the Swiss Alps, 40 governments will meet this Sunday (through Friday, the 17th) to swap seeds and devise a system of cross-border exchange intended to keep crop genes flowing for scientific purposes. While some of the controversial GM seeds are implicated, most of the negotiating will focus on several million varieties of "farmers' seeds" - traditional heirloom seeds of workhorse crops like rice and wheat. But the negotiators know something even their political masters seem unaware - or unconcerned - about: the seeds on the table in Neuchatel are the first link in the global food chain and are at the scientific centre of today's and tomorrow's food security.

<u>Hunger March</u>: For six years now, an intergovernmental commission of the UN Food and Agriculture Organization (FAO) has been hard at work revising an obscure "below the radar" agreement called the International Undertaking on Plant Genetic Resources. The intergovernmental negotiations have been painfully slow, in part because agricultural bureaucrats (dubbed "biocrats") have been unable to persuade their ministers that the issues at stake are of world-class importance. The slowness is also because the issues on the table, for those who sow seed and those who like to eat - are critical, complex, and (ultimately) commercial.

A year and a half ago, the Commission's feisty chair, Ambassador Fernando Gerbasi of Venezuela, decided to turn up the heat. He asked the 160+ governments of the Commission to select a "Contact Group" of 40 governments representing world regions and dragged them into a series of intense closed-door sessions. At the last round in Tehran, Gerbasi literally locked disputing diplomats in a room and refused them food or refreshments until they reached a compromise on one sticky point. He got his way.

If Gerbasi is successful, his Neuchatel meeting will finalize what should become a legally binding treaty that will govern the movement of the world's most important seed stocks and breeding material for the world's most vital food crops. From Neuchatel, the Contact Group report will go to Rome for a full meeting of the FAO Commission on Genetic Resources for Food and Agriculture (CGRFA) and then to FAO's governing body. If there is a deal in Neuchatel though, the rest is a piece of cake - until the treaty shows up in national parliaments and congresses for ratification. At that point the politicians will have to take notice.

<u>What's the food fight</u>? Central to the negotiation is a proposed "multilateral system of germplasm exchange". Since the adoption of the UN Convention on Biological Diversity in 1992, governments have come to realize something that has always been true - that they have sovereignty over biomaterials including seeds and the genes inside seeds. They have also come to realize that some of this material is increasingly

valuable: first, because biodiversity is becoming a scarce commodity with species dropping like flies into extinction. What the folks bellying up to the salad bar don't realize is that crop genetic diversity is evaporating at twice the rate of tropical rainforest loss. Second, a booming biotech industry regards seeds and genes as fodder for their high-tech innovations. Almost overnight, governments from the Andes to the Horn of Africa - with vast treasure troves of biodiversity - began closing their borders halting national and international seed exchanges.

Global food bowl: Fair enough, but "globalization" reached agriculture about 500 years ago. Today, about eight crops make up 75% of everything we eat from Ouagadougou to Washington. The world's top 20 crops account for at least 90% of world caloric consumption. What does the world do about potatoes for example - a crop domesticated in the Andes that is now vital to food security from Southern Africa to the Himalayas? Or bread wheat, domesticated by farmers in Ethiopia and the Fertile Crescent but grown in almost every country on earth? According to the International Plant Genetic Resources Institute - a Rome-based body charged with conserving crop germplasm and encouraging its development - the bottom has literally fallen out of scientific exchange of the very stuff that keeps food on the table. Cut off the gene flow for these crops and there will be no breeding defense against new pests and diseases or climate change. Without a steady supply of hardy farmers' wheats from Africa and the Middle East, rust could overtake the North American crop within a matter of years.

Seed Swap? It is an irony of agriculture that the world's "grain-poor" countries (those poorest and hungriest) are "gene-rich" and those that are "grain-rich" (have surpluses) are "gene-poor". Most of the world's seed diversity lies in the South: Africa, Asia, and Latin America. While every country needs access to crop breeding material, the "grain-rich" countries of the North are perhaps the most vulnerable. Negotiators from the South in Neuchatel are well aware that they have something valuable. They also know that multinational seed companies and agri-business in the North profits from access to their genetic "raw materials". The task in Neuchatel then is to make a "swap" so that the world's most important and universally dispersed crops can be exchanged freely among scientific researchers in the countries that sign the treaty. In return, the North - including the seed industry - will ante up the money necessary to conserve invaluable genetic material and finance programmes that will improve food security in the South.

The High Cost of Global Seed Security?

- □ The minimum annual upkeep for the new International Thermonuclear Experimental Reactor soon to be constructed in France is estimated at \$320 million.
- □ The U.S. Government spent \$360 million on the Human Genome Project in 2000 alone.
- □ The USDA (Department of Agriculture) designated \$325 million in 2000 to bridge the "digital divide" in rural USA.
- □ Europe and the US Government are each spending about \$500 million in the coming fiscal year on basic research into nanotechnology.
- □ A White House proposal to increase NIH (National Institutes of Health) spending by \$318 million was rejected by Congress as being too low.

\$350 million or bust? In 1996, a scientific conference convened by FAO and attended by 150 countries adopted a Global Plan of Action for this purpose and established an annual price tag of approximately U.S.\$200-\$350 million. Since then however, the Plan hasn't seen any action and there is no hard money on the table. In the absence of the North's cash and commitment, the South is stalling on seed exchange and coming up with absurdly short lists of crop species (such as rice or sorghum) that would be part of the "facilitated [free] access" system.

Short Shopping List: In an earlier Contact Group meeting, Gerbasi asked each region to come up with the list of crops they wanted to see part of the multilateral system of exchange. The U.S. and Europe together with Australia wanted every species that could be prepared at the kitchen sink. If you merged the lists that came back from the "gene-rich" countries of Africa, Asia, and Latin America, however, you could only find five crops commonly accepted.

This might be good political strategy but it is bad menu planning. Colonialism has often led to more of a country's crop genetic diversity ending up in gene banks in the hands of the colonizer than in the fields of the colony. No country is remotely self-sufficient in crop germplasm. Short lists mean starvation.

<u>Dilemma for Public Breeders</u>: The short grocery list is a real problem too for the largest network of public agricultural researchers working in the South. The Consultative Group on International Agricultural Research (CGIAR) has the world's largest collection of unique farmers' seeds in their gene banks and helps breed new varieties for about 30 basic food crops. Unless the Neuchatel negotiators can agree to keep all these crops within the "facilitated access" system, funding for - and germplasm flows of - crops not on the list will wither and die. Yams, for example, are a basic food crop for some of the world's poorest people. Two of the world's three yam breeders work for the CGIAR. But yams are not one of the five widely accepted crops for exchange. Unless this changes, CGIAR's yam programme will come to an end.

Political "climate change" needed bumping along from Rome to Tehran to Neuchatel, Fernando Gerbasi's little band of biocrats has come close together on many of the major issues. They know somewhere between U.S.\$200-350 million is needed and they know the range of species has to be widened. They know what could happen if they fail. Most of all, they know that neither the funding nor the food is on the table now because their political leaders back home remain unperturbed. The Americans think they can always "order out", the British prefer to eat "Indian" anyway, and the French seem to believe the only worthwhile food is rooted out by pigs.

The Last Thanksgiving? After six years and endless nights of negotiations, Neuchatel could also be the end of the road. If there isn't major progress in the Alps, Gerbasi will have nothing to carry to Rome. The negotiators might not have the will to continue. The effects of failure will not be felt immediately. The CGIAR will gradually shut down most of its crop improvement programmes over the next 3-5 years as the work becomes impossible to continue. Over time, consumers in the North will notice food prices going up and food quality going down as global warming ravages their normally abundant harvests. More people in the South will face malnutrition. The U.S. negotiators - who have been slow enough to see the importance of a deal for their own country - are now anxious to find agreement as a matter of national security. But Washington is otherwise engaged these days and then the Americans have to celebrate their Thanksgiving...

For further information:

RAFI has been invited by the Chair of the Contact Group to participate as the Civil Society observer to the Neuchatel negotiations. Silvia Ribeiro of RAFI will attend the meetings and will be reachable by phone, fax, and e-mail as follows from November 11 to 16.

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Additionally, background information and details can be obtained from the following RAFI staff members:

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