Plant Genetic Resources and Food Security

Annex 5

Some Stories on the Inception of the International Treaty on Plant Genetic Resources for Food and Agriculture

José Ramón López Portillo and Francisco Martínez Gómez

Note by the Editors

The following contributions are written by two key country representatives: Ambassador José Ramón López Portillo y Mr Francisco Martínez Gómez, in the early debates on PGRFA in FAO. Without their courage, efforts and political wideness the International Undertaking and subsequently the International Treaty might have never been developed. Their testimony help to understand better how the negotiation process was initiated and the political context and human atmosphere in which it took place. Many of the invaluable anecdotes and facts described in this text are inedited and genuine. They reflect the personal experiences of the two writers during the early 80s, when they represented their country, Mexico, in FAO. Part I is authored by Ambassador of Mexico José Ramón López Portillo. Part II expresses the recollections of Mr Franciso Martínez Gómez, agricultural advisor to the Permanent Representative of Mexico to the FAO. The views expressed in this Annex are those of the authors and do not necessarily represent those of FAO, Bioversity International, or the editors of the book. Unfortunately, they were contacted too late to have their text included as a Chapter of the book. July 2012.

Part I - The Plant Genetic Resources Question: Some views and Recollections from the Beginning of a Never-ending Journey

José Ramón López Portillo

With hindsight we can all be wise and perceive our past understanding as enlightened and our decisions as guided by neat and clear objectives. In reality we are all blind to the future and to how things actually play out: present conditions often determine our interpretation of causality in the past and create their own tradition. I am now aware that my understanding of the Plant Genetic Resources (PGR) problem, as it was in 1983, conditioned the way I tried to contribute to solving it and the determination behind my actions. The work and thoughts of José Esquinas-Alcazar 'Pepe'; Francisco Martinez 'Pancho' and Patrick Moony 'Pat', sculpted the model I formed in my mind and that of the Mexican Delegation to the FAO. I can now see that even the experts could not imagine how increasingly complex and widespread these problems could be, and the actual routes that achieving the institutionalisation of the ITPGRFA would take. Foes became allies; sceptic believers; and early champions turned into marginal actors. All this said, and as things stand now, it seems that we were right in many of the conclusions we reached in 1983 and in our determination to act.

What follows is a description, with the benefit of hindsight, of the salient reasons that led me to support the case for action on PGRs; of the dominant structures and actors that challenged our endeavours; and the strategy we adopted to overcome them.

What we believed

By the time I arrived as Mexico's representative to the FAO in February 1983, I was already convinced that the viability of human life had been created by humanity itself and not provided providentially by Nature. I remember at the time I often discussed with my father the Aristotelian notion that human civilization actually implies inserting human ends in Nature by identifying, developing and utilizing natural resources. These were the exclusive result of human understanding of how Nature works and of the ensuing technological development to exploit and adapt them to human needs, (and in today's world, also of humanity's attempt to lessen the negative effects of such exploitation on the biosphere and on future generations). To my mind there was no 'Spaceship Earth', nor a god-like entity that would punish human intruders for upsetting nature's 'balance'. The process of constant adaptation by organisms to a changing environment and to evolutionary pressures in general, necessarily drove any population and species to the edge between survival and extinction. This process could not reach stability in space or time, as many fantasized at the time, but only locally and temporarily: some have calculated that 99.9% of all species that have ever existed have disappeared, precisely because they lived according to the dynamics of the biosphere and the 'laws of Nature'. Conversely, Earth's biosphere could not support any type of human civilization that happened to develop: there were good and bad human systems, institutions, policies and actions that could push humanity further towards the edge or reduce that risk.

These assumptions made it easier for me to become convinced by Pepe and Pancho's view of what was happening with PGRs and biodiversity in general, especially with regards to the accelerating rate of extinction of species and varieties within each species, and of our need to act. Actually, since 1979 Pepe, Pat and some Delegates mainly under the leadership of the

Mexican Delegation and Pancho as the driving force within it, had been promoting the formation of a body within FAO to study PGRs along with an international fund and conservation systems (see Chapter 10). There was no lack of resistance by rich countries and double play by FAO's Secretariat at COAG. It was Pancho Martinez who introduced me to Pepe Esquinas and in this way a frequent, creative and fun dialogue between us was started.

We agreed that PGRs were mankind's heritage received from hundreds of past generations and the foundation for our present viability as a species. However they represented a very special heritage since they were not only generated by the ingenuity, understanding and work of the ancestors of today's indigenous populations all over the world (just as language, religion, literature, traditions and archaeological artefacts constitute a nation's cultural heritage) but they represented a crucial component for the present and future survival and wellbeing of the various individual populations of the world. This ancestral effort deserved to be recognised and reclaimed by creating legal rights over that heritage with resulting obligations for the international community, which implied a global fund and gene bank.

The need for legal recognition of PGRs had become even more relevant in view of the accelerating expansion of our technological civilization and globalisation, which heralded potentially ominous effects for what some have called "The Sixth Extinction". The threat we perceived came partly from the increasing monopolization of technology and from the interrelated legal rights by breeders. I became convinced that not recognising farmers' rights to PGRs and their value was not only unfair but in the short term would endanger food security and the welfare of billions; in the long-term it threatened the viability of human civilization itself.

The objective

In the prevailing ideology of the early eighties many were convinced (I still am) that nations, private firms and the market economy in general needed to be lured, penalised or prevented from certain activities in order to guide them towards a proper and effective conservation programme and an equitable utilization of PGRs. We assumed that avoiding the imminent risks posed by our technological civilization depended on creating economic and political incentives that came with associated rights:

It did not take much effort to talk this through with the authorities in the newly inaugurated Mexican administration. Mexico's traditional support for this conception of PGRs, the obvious advantages for a country with the agricultural heritage of Mexico and my personal circumstances and familiarity with the political system in Mexico made it easy for me to receive the full backing of the Mexican foreign office, which gave me an important autonomy of action.

In Mexico's view, upholding rights to our heritage (equitable and beneficial utilization and risk of erosion of PGRs) would form the conceptual foundation for our position. In practice this involved proposing and supporting Farmers' Rights (FRs); drafting a legally binding International Undertaking (IU) that included those rights, an International Fund and Plan of Action for financing and acting on the collection, conservation and utilization of plant genetic resources, and an Intergovernmental Commission on Plant Genetic Resources capable of implementing the above.

Our logic was the following.

Farmers' Rights and the full package

Within the broad framework of collective rights of farmers and breeders, the claim of Farmers' Rights to plant genetic resources embodied not only an ethical principle, but also the basis for pragmatic consequences: preserving plant-genetic diversity, enhancing food security and sustaining economic progress in poorer communities, which the market economy was incapable of doing *per-se*.

This view was based on two factors:

a. The indigenous populations of the world possessed crucial knowledge and understanding of their ecosystems. They had evolved pragmatic means of utilising their PGRs and, hence, they were best placed to preserve wild-races and maintain biodiversity. This know-how or what we might today call 'human capital' was not recognised or valued in the market or in law (so-called non-market values).

b. Only an international system based on worldwide cooperation would effectively facilitate the establishment of in-situ and ex-situ bank collections – including in vivo and cryopreservation.

In a similar way and in a fairly logical sequence we needed, on the one hand, an IU to legitimize these rights and make them compatible with existing and predominant breeders' rights and, on the other, recognize the resulting obligations by all countries and the international centres to collect and conserve plant genetic resources. This could only happen through an agreed and realistic Plan of Action supported by the necessary financial resources from an International Fund (Pepe and others estimated in the region of $350 to $500m, which was negligible in contrast with so many other irrational ways in which precious financial resources were spent). Finally, and most important, to achieve any of these we required an intergovernmental body at the highest political level, an Intergovernmental Commission on Plant Genetic Resources within FAO.

The international climate: Conditionality and limitations

After Mexico's pioneering stand during the FAO Conference of 1981, our objectives were reconfirmed and reshaped in a volatile ideological climate. After airing some of these suggestions with various delegates during the COAG meeting of 1983, for example, it transpired that in view of the unavoidable social, political and legal controversies regarding the ownership, free exchange and availability of plant germplasm, some delegates reached the conclusion that we were actually following some sort of socialist agenda. This rumour alarmed many more delegates from 'developed' countries because while most of the genetic diversity of major crops existed in developing countries, the interests associated with breeders' rights, biotechnology monopolies and profitable utilization of germplasm existed in developed nations and rich communities.

Since then and for many years, Pepe and I often reflected on these alarmist reactions, socialist ideas. For us it was clear that labour movements, women's rights, racial integration and increased social equality, left-wing political movements and so on, actually ended up

strengthening and stabilizing capitalism and liberal democracies. So, we were not trying to be anti-free-market, were we? It was during this time that I think Pepe and I became friends for life.

We were aware that the acceptance of FRs and a binding IU implied some sort of market regulation, but, unlike many who believed that any type of market regulation is harmful, we believed that it would act as a force for good. No economic theory had (or has) shown that a totally free market can set the 'socially most beneficial price for goods', or leads to their 'optimal distribution', or can 'respond to non-market values like the environment'. When an unregulated market economy results in huge differences in earnings out of all proportion to efforts, when small nations are at the mercy of big corporations, when the cultural, economic and environmental heritage of the weak is exploited without compensation, we definitely had the right to ask the world if this is what it wanted.

I was fully armed with this conviction.

The diplomatic dynamics of those days gave FAO delegates significant degrees of freedom to make on the spot decisions, instead of having to wait for instructions. If there was a general indication of the sense in which they had to act, everything else could then be cooked *in situ*.

Convincing delegates to support the general programme for PGRs proved much easier and faster than waiting for reactions from individual governmental bureaucracies that could be immensely complex and slow. However, persuading delegates that an Intergovernmental Commission on PGRs was pivotal to the PGR project was more difficult. This was in part because, as we had already discovered, the international environment was very politicised: tensions were heightened by the recent debt crisis that had hit much of the 'developing world' and was accompanied by "The South's" drive towards a NIEO (new international economic order). Stagflation stalked rich and poor countries, while East-West relations were strained. Every stance was anxiously viewed through the prism of this context and treated with great suspicion by all sides.

The noise engulfing our intentions became louder, not least because the subtleties of the plant genetic resources plan and its components were not as immediately accessible as well-worn partisan slogans. We were labelled as extremists trying to bring down a possible consensus based on milder propositions. The CGIAR (CG Centres network) and most developed countries became strongly opposed to our efforts, refusing to believe that we were not against breeders' rights *per se*, but only to the resulting monopolies on germplasm conservation and utilization, and against the negative economic and distributive consequences of an unfair system that was neglecting, or just incapable of stopping, the rapid loss of biodiversity. The questions we heard repeatedly were:

1. Why would anyone need an intergovernmental body at the highest level, when the FAO's Committee on Agriculture (COAG) could perfectly deal with these matters at a technical one?
2. What on Earth could one do with Farmers' Rights if there were no institutions or structures to materialize its ideals and objectives and when the key players opposed this concept in principle?
3. Why a fund, when no one would finance it?
4. The erosion of germplasm should be worrying in the long term, but not many understood why we should be worried now.

5. The international undertaking sounded like a romantic idea, but with no teeth at all.
6. Why complicate matters for the established plant genetic resources order (the old CGIAR system, breeders' rights and big research and development corporations') that at least provided new means to increase agricultural productivity?

What we really needed in order to answer these questions was to build a bridge between vested interests based on the prevailing intellectual property system and the resulting biotechnology monopolies on the one hand and, on the other, the need to protect biodiversity, guarantee equal beneficial utilization of PGRs for all and ultimately fight monopolies of any sort. We knew that Farmers' Rights, the Plan of Action and the International undertaking would be meaningless without a legally binding system and an institutional framework leading to effective mechanisms of compensation (mainly – but not exclusively - of developing country farmers). The main concern was how we, or anyone, could make them work.

In the eyes of many this whole issue remained all too idealistic and antagonistic with the prevailing system, and our endeavours could even make it all worse by provoking those with money, technology and power to oppose such efforts.

Nonetheless, there was the mounting evidence for the need to reduce and eventually halt the rate of extinction of species and varieties resulting from the *status quo* and the inconsistencies and weaknesses of the market economy (not to mention the far more detrimental planned economies of communist countries). Our proposition was that markets are generally incapable of reacting positively to long-term risks and environmental circumstances. Non-market values like the preservation of PGRs are not traded or valued and are not represented in supply-demand dynamics, unless a valuation is assessed from without (how much the world, a region or local population is prepared to pay for them). Non-market 'prices' needed to be forced onto the market through external agents, like governments, activists within the civil society. This remained a cornerstone of my position in the Keystone Centre Dialogue years later.

It was only many years later too that the CGIAR and many developed countries' accepted that the preservation of PGR diversity – and hence the sustainability of their multi-billion industry - could only happen if the whole world participated in that common task. However, it is my belief now that this change in attitude was as much the result of policies, mainly in PGR-originator countries, which were rapidly protecting access to their germplasm and stopping its free exchange.

Back in 1983 we had to raise our banner and to make it visible as a statement of our intentions and to open formal discussions and negotiations. Pepe, Pancho and I discussed our objectives and our options. We chose to act quickly and targeted the forthcoming 1983 FAO Conference as the best chance to follow up on the landmark achievements of 1979 and 1981.

The strategy

Pepe Esquinas, Pancho Martinez, Pat Moony, Cary Fowler, Henk Hobbelink, M.S. Swaminathan and many others mentioned (and not mentioned) in this book were the brains behind the content and shape of the PGRs package. The Mexican Delegation would spearhead the political negotiations. It was composed of relatively young people - I myself was 29 years old – and we had been permitted a remarkable degree of autonomy by our government. It was a heady mix that gave us clarity of purpose and decisiveness that, looking back now, a more cautious older-age, vested personal interests and experience of compromise might have counselled against. In 1983 we were convinced and, with Pepe Esquinas (who has never stopped looking like his fellow Manchego Don Quixote), were ready to tilt at giants that everyone else said were immovable windmills.

I had been thoroughly briefed about the PGRs package set to be discussed during the 1983 Conference and what we needed was some sort of middle ground with other potentially sympathetic delegations. Our basic intuition was to follow the old political, diplomatic and bureaucratic strategy of maintaining a credible extreme position and identify who was where in the geometry that it established. After discussing the matter we concluded that the decisive factor would be the establishment of an intergovernmental body at the highest political level possible within the FAO. So, this became our main focus.

The most we managed to achieve was the FAO's Committee on Agriculture (COAG) calling for the establishment of a committee within its workings and an IU, so our next opportunity was to energetically promote upgrading COAG's recommendation to the November Conference and adopt the Intergovernmental Commission on PGRs instead, along with a stronger IU and an international fund to finance a global system of ex-situ bank collections. However, developed countries and the FAO's Secretariat torpedoed our proposals all the way, while other delegates seemed apathetic or failed to grasp their importance. Particularly frustrating was COAG's call for a lower – and much slower - technical committee within COAG to further the PGRs package.

After being prevented from properly discussing this subject in Commission II of the Conference, Pepe persuaded us that we should seek to induce the founding of the Intergovernmental Commission on PGRs during the plenary through cunning legal manoeuvres. We received help from some cautiously sympathetic legal advisers within FAO. They pointed to a way for us to force a discussion and a vote during the plenary session to amend the Basic Texts and create the Intergovernmental Commission on PGRs. Some delegates (particularly Brazil, Costa Rica, Cuba, Ethiopia, India, Libya, Peru, Senegal, and Venezuela, among others) were advised about this.

It was not clear exactly what would happen if this attempted coup within the Conference succeeded – or for that matter if it failed. Many feared that whatever the outcome of the vote our efforts would enrage developed countries so much that they would demolish the whole idea by refusing to participate in the Intergovernmental Commission on PGRs and dismissing the IU and the Plan of Action. To some extent this did happen for a couple of years despite our early success. Nonetheless, I am still convinced that a less aggressive posture would have led to a weak non-political forum mainly dominated by vested interests. After all, the embedded interests in the *status quo* were so great that more than 20 years were necessary to reach the ITPGRFA.

How critical circumstances lead to unpredictable results

As it happens in complex systems the route that events take and their results are generally unpredictable and hence very difficult to guide. This is what happened before and during the FAO Conference of 1983 and the PGR initiatives thereafter.

One unpredictable and unseemly series of occurrences was that along the way to the Conference I experienced various attempts at intimidation by developed country delegates: I was insulted in corridors (a Nordic country Delegate, for example, said they had 'to tame me') and I even discovered I had a mole in my Delegation. Let me briefly recall two events.

Based on the autonomy that my Government allowed me, I introduced as many cases as I could in as many *fora* possible (but particularly in COAG) as to how big transnational corporations and bio-monopolies in general obstructed achieving food security for all; an equitable utilisation of PGRs; fair trade conditions for developing countries; and the fight against global poverty. I repeatedly asked that in view of their fundamental importance the FAO should gather sufficient information and allow us to debate these issues within a COAG subcommittee. Among other things, I mentioned that the actions of these corporations could be perceived as "galloping imperialism". This led to a virulent reaction from the United States of America and a few other countries, which was expected. What I did not expect was that a top official from the State Department approached me during a reception at the American residence and challenged me by saying that he had consulted with my government and that my statements did not represent Mexico's official position and I should stop my discourse on this. I retorted that I would not receive instructions from him, which prompted an angry series of threats including his intention of lodging a formal complaint to the Mexican government. In any case he was either bluffing or was ignored.

Another grotesque attempt at deterring me was by co-opting a member of my Delegation - who happened to have strong links the Unites States of America through his wife and carrier – to gain information about my plans and advanced notice of the contents of my speeches. It was soon apparent to me that the delegation of the United States of America was anticipating my statements and blocking my moves. I set a trap. I prepared a violent draft statement in the COAG on the domineering food and biotechnology strategies aimed mainly at corporations based in the United States of America, and showed it to the suspect. When I asked for the floor, the Delegation of the United States of America requested to speak after me. I read my declaration, which, of course, was completely different to the draft. The delegation of the United States of America had already received instructions to read a very serious statement against me, and they did so without even listening to what I had said. Everyone was astounded and confused by their statement. I made a point of order, asking the United States of America to withdraw its declaration. They did not, but the mole had been exposed and trapped. The evidence was sent to Mexico and that member of my delegation was fired.

It could have all gone differently and I might have been removed instead, but as it was, it strengthened my resolve. As I have mentioned we were stuck with Commission II of the Conference, which did not allow us to further the proposal of an Intergovernmental Commission on PGRs. I tried to open a useful debate on this and get proper and clear answers from the FAO Secretariat, but they would not help. I insisted and at one point I had a strong exchange of words with the Legal Adviser who was blocking my queries. I never received a clear answer regarding the viability and advantages of amending the Basic Texts. Furthermore, strategically this subject was left to the very end of our proceedings and the Chairman, C. Ntsane, then told us that there

was no more interpretation time. No report was passed on to the plenary. We were very disappointed and it all appeared to us as a well-orchestrated attempt to frustrate our efforts. Pepe was also up in arms until he and later I received legal advice that confirmed that our options were not finished and we could reintroduce this matter directly to the plenary and vote on it.

So, during the adoption of Commission II report in the plenum, I asked for the floor and insisted that the issue of the Intergovernmental Commission on PGRs had not been given the necessary time or granted sufficient legal advice. Mexico demanded that an alternative text be submitted to the plenary to amend the Basic Texts, which asked the Council during its next session (scheduled the following day) to create an Intergovernmental Commission on PGRs that should meet during the COAG ordinary periods, or when called by the Director-General of the FAO.

The Chairman of the Conference was John Block, Secretary of Agriculture of the Reagan Administration and he was not favourably disposed to any of this. Block asked Ntsane (Chairman of Commission II) to comment. The latter reported that there were questions from Mexico to the Legal Advisor and that nothing was resolved. After that Block rejected our proposal. I immediately made a point of order referring to the fact that the Chairman of the Conference could not disregard such a proposal and that according to the Basic Texts (I cited the respective Articles) he was subject to the plenary and not vice-versa. I insisted that if there was no objection, my proposal should be adopted.

In view of my persistence he would not open the debate, but proposed instead to resolve the issue with a show of hands. Block's counting (hence also the FAO-Secretariat's) turned out to be biased against us. I knew this with certainty because I had anticipated this and asked various members of my Delegation to place themselves in different parts of the plenary room to count the votes. Block came out with 25 in favour and 30 against (plus abstentions); we counted 27 in favour, 21 against.

After the rigged counting of votes, Block told Mexico that we had fought a good fight, but the matter was closed. Of course, this would not dissuade me and I made another point of order demanding that, in agreement with the Basic Texts (other Articles were cited), a nominal vote should be cast. My demand led to great confusion at the Chair and amongst the Secretariat as to whether the Chairman was "absolutely obligated by the rules", as Block himself stated and hence if he had to make a roll call.

In the meantime, the delegation of the United States of America and others showed their irritation with me: at one point I was actually asked how I could 'dare challenge' a US Secretary? I remember thinking at that point that this was no longer an argument but another personal threat and an attempt at intimidation. In a young person like me, this could only boost my resolve.

At that point Brazil supported my motion. Others had picked up on the previous voting irregularities. Furthermore the fact that a US Secretary tried to manipulate the counting of votes opened the eyes of many delegates as to the importance that developed countries attached to these matters. Soon a critical mass emerged that could no longer be halted on this subject and which in some ways has continued until now.

After practically suspending the plenary for frantic consultations, Block asked me to withdraw my request of a nominal vote, which at that point meant accepting defeat. I told him I

respected him and his good will and that I understood the difficult position he was in, but that I had to maintain my demand.

Even the Director-General of FAO was called in to participate and he asked me again to present my proposal. I did so, emphasizing that it would allow for works on the PGR programme to start immediately and at the highest level, instead of having to wait two years and end up with a weaker mandate and programme. Instead of a roll call, a new and careful show of each country's banner was counted. I accepted. The results were surprising: more delegates had now voted and Mexico's proposal was supported more strongly: 37 in favour, 30 against and 29 abstentions. The amendment to constitute an Intergovernmental Commission on PGRs was adopted followed by applause. Of course, developed countries complained that their 'finely tuned package' had been disrupted and reservations were introduced. Mr Block, on the other hand, like a good sportsman, came and congratulated Mexico for fighting a good fight. This was an honourable thing to do and said volumes of his stature.

The then past and future

I have focused on events in 1983 because they set some solid foundations for what came next, which the various chapters of this book describe with much clarity, technical expertise and consistency. It is worth remembering that by 1989 the Intergovernmental Commission on PGRs had recognized Farmers' Rights on the value of their native genetic material. A concerted interpretation of the International Undertaking allowed countries with reservations to join the UN-PGR efforts. Soon the three categories of donors were represented and offered a unique opportunity for cooperation. As the Summary of Discussions Held in Washington DC in June 1990 acknowledged, the Intergovernmental Commission on PGRs helped facilitate the search for and equitable distribution of responsibilities and benefits derived from the contributions from all donors.

In my letter of resignation as Permanent Representative in early 1989 addressed to the newly inaugurated President of Mexico, I emphasized the importance of Mexico's role in promoting conservation and equitable utilization of PGRs and biological diversity in general, and its fundamental importance to achieving food security and sovereignty, as well as protection and support for poorer farmers and peasants.

I continued participating in issues related to PGRs first as a member of the Programme Committee of the FAO and a participant in the useful meetings of the Keystone Centre Dialogue, and later as Chairman of the Council of the FAO, where I supported as much as I could the debate, promotion and adoption of the PGR agenda.

An attempt at closing hindsight remarks

In today's global economy and interdependent world, the Intergovernmental Commission on PGRs has become a focal point that opens the way for a universal system where donors of PGRs and donors of technology and funds have been able to contribute and benefit on a fairer basis. Nonetheless, as suggested before, there were two additional reasons for developed countries and the CGIAR joining the Intergovernmental Commission on PGRs and accepting the International Undertaking and Farmers' Rights: First, the sudden interest in the preservation of PGRs and their fair utilization created a global awareness that soon led to a very rapid increase in restricting free access and exchange of germplasm.

Second, unbiased and transparent new evidence showed that the extinction rate of PGRs and related wild races and conserved germplasm was much more serious and dangerous than previously thought. The future sustainability of food security and germplasm-based business were compromised. This led most countries to ultimately accept the International Undertaking and later the ITPGRFA, as well as the introduction of more effective programmes for *ex-situ* and *in-situ* conservation - particularly of wild-races linked to main crops and of diverse eco-systems.

A couple of years after its creation, the Intergovernmental Commission on PGRs asked for a Code of Conduct on Biotechnology to be prepared. A less biased and more transparent system within the UN had been created to analyse the effects of biotechnology on conservation and utilization of PGRs and on its availability. Biotechnology monopolies could now be under attack and the old CGIAR system was being transformed to include and respect the interests and rights of farmers and developing countries.

In coming decades the exponential growth of knowledge and technology, particularly genetics, information technology, medicine, nanotechnology and robotics will transform our world in unforeseeable ways. Nonetheless, the challenge will remain on how to allow more than a billion people in extreme poverty - mainly farmers and peasants - and several other billion that live in poverty, to achieve a dignifying and productive life, while conserving the world's diverse ecosystems and natural resources. All that has happened up to now regarding PGRs should be seen as merely the first shy and incomplete steps towards reaching food security for all and saving our global civilization.

Part II – International Agricultural Germplasm Negotiations in the FAO (1981-1983). Anecdotes, Comments and Interpretations

Francisco Martínez Gómez

Introduction

The aim of this section is to carry out a retrospective reflection on a period of international negotiations on agricultural germplasm. Specifically, the draft resolution for the "Creation of an International plant germplasm bank of agricultural interest under the jurisdiction of the FAO", submitted for consideration by the 1981 Conference as well as the negotiations at the FAO Committee on Agriculture in June 1983. The historical circumstances in this period were also decisive for the outcomes. These included the context of the Cold War era, the beginning of the Reagan Administration and the expectations created by business people and politicians around the first results of biotechnology. This, together with the incorporation of intellectual property rights regarding the development of varieties in the legislations of certain developed countries, altered the expectations of large pharmaceutical and agricultural businesses regarding the use and exchange of agricultural germplasm.

Perhaps now the ideas surrounding the creation of a plant germplasm bank under FAO control can be understood better as an act of resistance and as a quest for new, alternative directions. It is evident that in the case of agriculture the trends toward the greater concentration of production by a few corporations and an increasing level of genetic erosion have become prevalent and more acute, as documented in the Introduction to this book and Chapter 10. Resistance to these trends has increased, even though perhaps not sufficiently. However, reflection on a process as complex as that which occurred around this initiative at the FAO in 1980-83 and the international atmosphere in which this occurred, is by nature subjective, since ideas and reflections that may be reconstructed in the light of subsequent events will always be conditioned by the writer's ideological background and orientation. However, despite its limitations, the narration of past events whose motives are still under discussion is undoubtedly rich and necessary as experiences can provide ideas, information and reflections for future discussion. Preference will be given in the narrative to some anecdotes that I experienced in my capacity as agricultural advisor to the Permanent Representative of Mexico to the FAO, alongside certain other central figures who promoted the initiative.

Whose side I am on and what we believe in

On the whole, ideas that shape and give rise to actions already have a background. Thus the draft resolution for the Creation of a Plant Germplasm Bank was driven by a network of supporters that took shape after its creation was suggested by José Esquinas (Pepe) to the Spanish Agriculture Minister, in his capacity as Chairman of the FAO Conference in November 1979.

In our case, we supported this initiative as a result of the influence and determination that came to us from our past, from reading academic articles that had previously pointed out the relevance and significance of the ideas surrounding the creation of such a bank. My father is a distinguished plant breeder, one of the first to earn a doctorate in this subject in Mexico, a person who, through the practice of his profession was permanently sensitive to the evaluation of the social impacts of economic and agricultural policies on rural development. In the course of his career as a plant breeder, he questioned the way in which international institutions for the

preservation and exchange of agricultural plant germplasm were set up. In his capacity as Director of the "Productora Nacional de Semillas" (a public national enterprise dedicated to seed production) in the early 1970s, he told me about the problems he had maintaining this public organization due to pressure from giant foreign seed corporations. Thus before taking up the post of Agricultural Advisor in the Mexican Permanent Delegation to the FAO in 1979, it was clear to me that the established arrangements in the international agricultural research centers were inadequate. Farmers' interests were not considered in decision-making on systems for the preservation and exchange of germplasm for seed production.

That said the first-hand experiences shared with me by my father in the 1970s were reinforced by information and expert analysis in sociology and agricultural economics I had read, which charted the trend toward the concentration of agricultural production in a few corporations and the exclusion of much of the rural population in Mexico and in developing countries in general.[1] It was clear to me that there was a significant, if not unique, cause and effect relationship between the setup of the institutions responsible for the conservation, exchange and use of germplasm for agricultural and pharmaceutical purposes on the one hand. On the other hand, the trends pointed out in agriculture and the outcomes in international forums such as the FAO and the CGIAR have been partly responsible for the practices and other regulations involved in these tasks. In this context I met Pepe Esquinas, almost by accident, when I attended a meeting of the International Board for Plant Genetic Resources (IBPGR) at FAO in 1981.

Pepe was a restless person with a genuine concern for solving the problem of genetic erosion and with the technical background and social awareness to understand the need to create a fair and sustainable order for the conservation and exchange of germplasm. It was obvious that he could see that the policies, standards and actions of the institutions were not at the level required to avoid these problems and that it fell to the FAO forum to contribute to these goals as an agency of the United Nations. The significance of having convinced members of Spain's Permanent Delegation to the FAO and the Agriculture Minister himself to seek the adoption of the aforementioned resolution for the creation of the international bank of plant germplasm was typical of his courage. The initiative did not progress at the time, but nevertheless the experience was important for the later attempts made at the FAO Council in June 1981 and the Conference of that year.

From the time of the IBPGR meeting at FAO in early 1981 we began to meet fairly regularly to try to raise the proposal again. There were no major problems over reaching agreement and starting to look for support and strategies to boost the initiative. After consultation with authorities in Mexico the initiative was proposed again at the FAO Council in June 1981, this time after the support of the governments that were Council members and representatives from the Latin American region had been requested. The FAO Secretary during the Council, through Dr. Bommer, head of the Department of Agriculture, was against the proposal, as were some delegates representing the governments of developed countries. Nevertheless the few paragraphs put forward in opposition to this initiative in the Council report helped us to prepare an initiative that would provide a better response to the objections. For Pepe and myself, the implications of the initiative made devoting more time to this task worthwhile since we considered it to be of primary importance, and with this conviction we began to prepare for the November 1981 FAO Conference. Aware of the opposition that the two previous attempts had elicited, we agreed that it was necessary to prepare a document for distribution to delegates presenting the draft resolution once again with an executive section and another in which the content, rationale and implications of the proposal were set forth in more detail. We sent this

document to Mexico City, and with the support of the authorities, began to distribute it to all the delegations before the Conference. During this period Pepe and I often met near the FAO premises or in the same building to discuss the strategies.

Pepe always promoted and consulted with various officials and experts over the feasibility of the proposal for the establishment of the Bank. In 1981, as the expert in charge of the International Board for Plant Genetic Resources in Latin America, he found the proposal was widely accepted at the technical meetings he attended in several countries in the region. This support was circulated to FAO delegates in Latin America in the abovementioned draft document. Favorable declarations were also obtained from experts in various Asian countries. The fight for his ideas is a hallmark of his personality. As Pat Mooney says, he has been the Don Quixote of the struggle over agricultural germplasm since 1981.

Pepe struggled and sought by every means to preserve the key concepts of the proposal that gave force to the importance behind the creation of the bank. I remember that in our discussions he and I got to the point of making explicit criticisms against the giant seed corporations to justify the importance of creating an international plant germplasm bank. However, because of the reasons put forth by the opponents in previous attempts, we agreed to reject that idea. We felt that it was more appropriate to use the value of freedom rooted in government policy and societies such as the United States. In this case, to ratify the free exchange of germplasm collected from the centers of origin of the crops, which was already standard practice in national and international institutions, and to reaffirm this principle for all types of agricultural germplasm, including that which had already undergone a technical process of genetic improvement, was the objective. This constituted a *de facto* demand that agricultural plant germplasm collected in the lands where the crops originated should be given the same treatment in terms of exchange and benefits as that which had been genetically improved. In the end, however, the arguments and reasoning were submitted for review by the members of the FAO Secretariat and government representatives from developed countries, who, pressured by the industry that benefits from the use of germplasm, maintained the institutional order in accordance with their interests. Nevertheless, the move toward the free exchange of plant genetic resources was crucial and was formalized in the FAO's International Undertaking on Plant Genetic Resources of 1983.

In the weeks leading up to the November 1981 Conference, the conversations between Pepe and me intensified. He was working as part of the IBPGR Secretariat within FAO official at the time, when many of the top-level directives of both institutions were not in favor of the initiative, so we tried to keep a low profile at our meetings. But that was not always possible because of the speed with which adjustments to the proposal were made. During those months Pepe was subjected to questioning by his superiors and possible dismissal because of his firm support, courage and conviction that what he was doing was right. During the last two weeks the original version of the draft resolution was modified so that it could be accepted by the FAO Secretariat, even though by then it had the support of several of the delegates from GRULAC and the Group of 77. However, the opposition under the leadership of Bommer from the FAO secretariat, led to the secretariat preparing a proposal that was more sympathetic to the interests of the opponents. The role of negotiating with Dr. Oscar Brauer, an official reporting to Bommer, fell to me.

This proposal gained strength from the arguments in favor of creating an international plant germplasm bank under the jurisdiction of FAO that would serve as a guarantor in the exchange

of agricultural germplasm and it effectively opposed the already existing property rights schemes.[2]

The issue of agricultural germplasm regulation

Pepe and I often discussed the importance of considering genetic resources as the common heritage of mankind, and this idea made sense because in fact the institutional framework created in Mexico and in countries where major centers of agricultural crop origin are located for ex situ conservation of germplasm was based precisely on the unrestricted availability of agricultural germplasm and it continues to be based on this. In other words, it is founded on the principle of giving away crop genes for further development of improved varieties as common heritage and the proposal was intended to generalize that regulation for all seeds. The governments of some countries that had introduced legislation empowering companies to obtain intellectual property rights were opposed to this. The United States had already approved the first law that made it possible to establish these rights over almost all crops for the first time in the late 1960s, which was ratified and extended to all crops in 1980. Since most governments at the time did not have laws granting intellectual property rights for plant breeding, the choice we were making was reasonably sensible, so we hoped that most governments would support the idea that agricultural crop germplasm was common heritage. Work in the academic sector reported the risks of concentrating the production of seeds and other agricultural inputs in the hands of a few transnational corporations. In this regard the work of Pat Mooney and Cary Fowler clearly shows that the system of intellectual property rights that had been established by the governments of some developed countries is unfair [See Chapter 10]. They used these reflections and analysis for dissemination among the delegates from developing countries and also to justify the value of the proposed creation of the international plant germplasm bank under the jurisdiction of FAO to the representatives of governments of developed countries.

The support network for this proposal included Pepe Esquinas, Pat Mooney, Cary Fowler, Henk Hobbelinck and government delegates from developing countries. In late 1981, it faced opposition that argued that the existing authorities were sufficient and that there were no funds to establish the proposed international bank. In fact it was a confrontation in the field of the international institutional order of plant genetic exchange in which the discourse of academics from the social science perspective, NGOs, scientists, international functionaries and government representatives was confronted by the emergence of a new discourse based on intellectual property rights promoted by the industry that had gained the support of governments of some developed countries. The great work done over thirty years by Pat Mooney, leader of the ETC Group, and Henk Hobbelinck, director of GRAIN, is very laudable. They published reports on policy analysis and civil society statements on this crucial issue for the future development of agriculture and the life of the rural population worldwide. There were many delegates who had a prominent role in negotiations on agricultural germplasm at the 1981 FAO Conference, including the representative of Libya and the President of the Group of 77 (whose technical and political knowledge of the subject and whose efforts were crucial to ensuring the support of this important group in favor of the proposal), and the recently arrived Permanent Representative of Mexico, Antonio Juan Marcos Issa, who successfully took over the leadership promoting the initiative. The work of the representatives of Peru, India, Yugoslavia and Ecuador was also very important. At the end of the debate 25 delegates were in favor, 12 agreed with the resolution but not with the debate and 7 were against it.

The support of the majority of the representatives for the proposal

How did the great majority of government representatives to the FAO support the initiative to create an international plant germplasm bank of agricultural interest under the FAO in November 1981? How were support networks for the proposal created? And which were the arguments and elements of discourse compiled to discredit the opponents' arguments? How did they use such arguments in favor of the proposal and ultimately to isolate the rivals, as that was precisely what happened in late 1981 with the adoption of Resolution 6/81?[3]

The concern over high levels of genetic erosion was an argument that helped convince the delegates to play a more active role in negotiations supporting the initiative. As noted in several previous chapters, this is a problem shared by all citizens. It does not go away but grows, forcing reflection and demanding improved actions to reduce these levels of genetic erosion. The other argument that could have been significant to explain the support and the active mobilization of participants was and continues to be the need for greater involvement of governments and farmers' organizations in developing countries in the decision making of national and international institutions responsible for the conservation, exchange and utilization of germplasm worldwide. Also, more recently consumers have started to adopt a more active role in demanding food production to become fairer, healthier and more environmentally friendly; a demand that has implications for the global order in the area of conservation, exchange and use of agricultural germplasm.

At times it was frustrating to see impotence in the face of the removal of important points justifying the international bank during the course of negotiations and their replacement by others of little consequence through the action of certain members of the FAO secretariat and a very few, but powerful, representatives of developed countries. Pepe and I were often moved to remark on the real problems that could be seen in FAO as a result of the framework of inequalities and low profile in the representation of poor farmers and the authorities of developing countries. Pepe and I had these chats in the café, when leaving the office, or over meals inside or outside the FAO. However, the events set the agenda and content for our conversations, and we really had to keep generating strategies without stopping and make the most of the conditions offered to us by the circumstances of the Cold War era and the forum. In this period, inside the FAO fora (Conference, Council, Commissions and Committees) there was a North-South confrontation among almost all the topics of the agenda. In such circumstances the demand for a better benefit-sharing mechanism for the conservation and utilization of agricultural germplasm could be included in the FAO Conference agenda. There were good chances that such topic could be adopted by the Group of the 77 and GRULAC. Although, the FAO fora could not overcome chronic problems that had existed in developing countries such as delays in the build-up of agricultural technologies that had resulted from low levels of investment compared to developed countries in their agricultural research systems, including the relative low number of researchers, insufficient infrastructure, and low economic resources for dissemination of technology and local scientific knowledge. In addition to this, which was itself serious, the perception being formed in the discourse on the use of agricultural technology had been highly reductionist and had been articulated in response to the requirements that agricultural markets have demanded over time. Thus for example, Paul C. Mangelsdorf, a Harvard University botanist specializing in maize, highlighted the objectives of the Rockefeller Foundation in the preface to the book *The Races of Maize in Mexico*: …"When in 1943 the Rockefeller Foundation… began a practical plant breeding program it was evident,

almost immediately, that a survey of maize varieties was necessary […] A systematic collection program began that was *originally totally utilitarian in purpose*."[4].

The past reflects intentions that have not been completely erased over time. The interests and proposals of the protagonists of traditional agriculture are still absent from the definition of the global order in terms of agricultural germplasm. Modernization and the development of capitalism in agriculture have suppressed practices for the conservation and appreciation of agricultural germplasm that were used in the models of traditional agriculture. Details of genetic erosion provided in the Introduction and Chapter 10 are a testament to this.

Contradictions in the definition of the global order for the exchange of agricultural germplasm

The discourse that defined the order in terms of agricultural plant germplasm in Mexico as in other countries emerged in the midst of contradictions. The impetus for the modernization of agriculture in the country had characteristics similar to those observed in other countries; the organization of conservation and the exchange of agricultural germplasm were configured under US leadership. This was logical given that the country was in the vanguard in terms of the configuration of the most advanced production models. Insofar as this technology-production model was spread to developing countries the demands and requirements of small farmers were marginalized, not only in developed but also in developing countries. From the outset, the agricultural modernization model had notable limitations and shortcomings in several key aspects:

1. Growing levels of genetic erosion of crops;
2. Near-continuous displacement of small farmers, particularly those from indigenous and rural communities; and
3. Concentration of the production and distribution of food and other goods from living things in a few firms.

This state of affairs with contradictory actions framed the fact that in 1976 the Ministry of Agriculture gave permission for private companies to conduct agricultural research to develop varieties and that in 1978 the Mexican Government asked for admission as an observer to UPOV. This represented the first steps towards the acceptance of intellectual property rights in the development of varieties. At the same time, it encouraged and became the *de facto* leader of the proposal for the "Creation of an International Plant Germplasm Bank of Agricultural Interest under the Jurisdiction of FAO," designed to view genetic resources as common heritage and to give greater powers to the United Nations in the regulation of exchange and eventually the usufruct of these materials. In many ways, they were options that went in different directions. In this contradictory scenario at the heart of government, national and international institutions regarding the international system of agricultural germplasm in the early 1980s, the work of Pepe Esquinas and the whole network of people who contributed to the debate at the 1981 FAO Conference in favor of a system centered on the viewpoint that plant genetic resources were common heritage is extremely significant in the history of international negotiations around plant germplasm.

Perhaps one of the most meaningful expositions on the issue was that of Indira Gandhi, the

Indian Premier Minister, during FAO's 1981 Conference opening speech when she stated that: "gene resources belong to mankind". Indira Gandhi's stance is undoubtedly currently valid, but it is clear that neoliberal speech is not moving in that direction and therefore a "common sense" approach has been developed in which Indira Gandhi's statement seems to have no place. However, I believe that this is the central deliberation point to establish a genetic resources global order. There is still a contradiction between considering plant genetic resources as mankind´s heritage and the ownership of these resources based on intellectual property rights. Such contradiction will be the object of further international negotiations in the future.

FAO - Agriculture committee meeting: The scenario of the North-South confrontation

Maybe one of the most critical moments of the international negotiations took place during the FAO's Agricultural Committee meeting where southern countries successfully avoided the proposal being aborted. After the approval of resolution 6/81 at FAO's Conference, diplomatic action against substantial ideas of the initiative was accentuated; one of those ideas, for example, was the creation of international legislation that, under the auspices of the United Nations, would assure the availability of gene resources for all the world´s countries.

If governmental diplomatic action to support the proposal took opponents by surprise in 1981, by March 1983 the circumstances were different because, during this period, opponents had the time to organize an offensive inside and outside FAO. Basically they wanted to keep unchanged the already established institutions and policies on the matter. Thereby, during the Agricultural Committee reunion, an assault to disqualify and abort the initiative took place.

The document[5] elaborated by FAO's Secretariat to discuss this matter in the Agricultural Committee meeting showcased disproportionally the positions of opponents to the proposal of creating the international bank. The presentation of the document during the meeting brought about a reaction opposite to what its creators expected. Developing countries representatives protested and disqualified the document. At the beginning of the debate José Ramón López Portillo as head of the Mexico's delegation pointed out that "in all sincerity, document COAG/83/10, elaborated by the Secretariat, does not contain the sufficient elements, does not allow to ponder how important creating the international bank is, nor does it show the alternatives for its implementation and the implications and reaches of the International Convention".[6]

Some developed countries' delegations also pointed out the deficiencies of the document which in turn caused FAO's General Director to promote the creation of a workgroup composed of (North and South) governments to help FAO's Secretariat to re-elaborate the document, which would be later submitted for consideration by FAO's Council and Conference. The creation of this workgroup was established in the Committee's report.[7]

In the debates on the matter that took place during the Agriculture Committee meeting, 30[8] of the 44 delegates who made a stance were in favor to have plant genetic resources considered the heritage of mankind, two opposed and 11 did not take any posture. Most supported the subscription of the international agreement, 23 in favor, 11 abstained and three opposed. On the matter of creating a FAO controlled Bank, stances in favor were greater with 19 in support, though there were nine against. Nonetheless, nine delegates favored the proposition but with some reserves. Eleven delegates out of 31 that did not take a posture on this matter requesting for the document to be revised, 24 were in favor of having the workgroup help the Secretariat

make a new document. On this particular topic, one opposed but none of the other 17 speaking delegates made a stance on the matter.

Despite the 30 stances in favor of having plant genetic resources considered the heritage of mankind, the final report did not include any allusion to this position. This reflects the existing pressure against this posture exerted by some members of FAO's Secretariat. In this case, there was no allusion to these positions is a policy tending to invalidate the proposal, given that the idea of the heritage of mankind invokes a resistance stance against the use of any form of private property on agricultural germplasm.

Local culture also played a role in the case of the location of the centers of diversity and origin of the crops, which were the southern countries. There was also another territorial opposition, which was the place where investments and technology came from, that is the North. Developmentalist projects and nationalist ideology still dominated amongst the elites of southern countries governments; such political ideology linked quite well with the ideas behind the proposal. Under this discourse was the notion of autonomy that demanded unrestricted control over natural resources. The Group of 77 and the developing countries regional groups' speech was more sensitive to the anti-colonialist stances that retook the ideas about uneven development and dependency.

Although there was an atmosphere favorable to the proposal among the majority of the representatives of FAO member governments, it was evident that the leadership that José Ramón assumed with the support of other colleagues in Mexico's new delegation to the FAO was very significant. José Ramón's team was made up of young people who had participated in leadership positions in the "Sistema Alimentario Mexicano" (a national program run by the Mexican Government from 1978 to 1982). The Mexican Food System attempted to strengthen the development of small farmers while contributing to the reduction of poverty and malnutrition, which historically affected agricultural communities and rural areas. It was concerned with the displacement of small farmers and was suspicious of the consolidation of large food corporations. This is why personalities like Sr. Roberto Guadarrama and Sr. José Ramón López Portillo were identified with the objectives of creating an international plant germplasm bank and the social implications that this involved. In this case the actors played a crucial role: they ratified the direction that the political establishment was giving to the process at the meeting of the FAO Agriculture Committee. The leadership that José Ramón assumed in confronting the virtual elimination of the proposal and managing to channel the initiative into an alternative that ultimately led to the creation of the Commission on Genetic Resources of FAO and the International Undertaking on Plant Genetic Resources in 1983 were significant actions in my opinion. His determined defense of the proposal at that point prevented the initiative from being aborted. His participation in negotiations during the 1983 FAO Conference and in subsequent years was crucial to an issue that certainly has and will have a great importance for the development of world agriculture.

Final thoughts: What was the contribution of the international debate on PGRs in FAO during the 1980-1983 for further international negotiations?

It was a period in which the dissemination of information and the interchange of reflections around the topic among permanent governments' delegates to FAO, FAO functionaries and a few NGO representatives built a discourse to look for a new international order for the exchange and use of plant germplasm. The stances in favor and opposing the proposal to create the bank

served the purpose of having governmental representatives fix their postures while understanding the meaning of some technical language often charged with high political content. Behind this technical language there were hierarchies and government policy position on genetic resources being established where the absence of southern countries governments and civil society's interests and participation was noticeable. Ideas and analysis from people from the North inside and outside FAO provided very valuable information for FAO delegates from southern countries. The fact that the negotiations on plant genetic resources continued in FAO through the approval of the International Undertaking on Genetic Resources for Food and Agriculture and the creation of the Commission on Plant Genetic Resources represented a step forward to establish the International Treaty on Genetic Resources for Food and Agriculture.

Although the International Undertaking was not binding, it was relevant not only as background and a base for the negotiations that opened the way to achieve the International Treaty on Genetic Resources, but also for future deliberations in the international negotiations.

The International Undertaking established that genetic resources are mankind's heritage and that those gene materials, including those that had been (artificially) improved, were to be the subject of free exchange. Given the high levels of genetic erosion, the high concentration of agro complexes observed in modern industrial agriculture and the exclusion of millions of farmers who cannot survive on their agricultural production, it is important not to disdain the great political advancements reached with the adoption of the FAO International Undertaking. This political text should be read once by everyone, people and government representatives, and reflected upon. It is necessary to go beyond the reductionist view that conceives these valuable resources as simple commodities and mere instruments for some transnational corporations to have better market position and to eliminate competitors. It is evident that both states and the large transnational corporation representatives are not willing to cede in the near future and that, therefore, negotiations have taken place under the presence of intellectual property rights and the limited operationalization of the collective rights established in the International Treaty on Genetic Resources through Farmers' Rights. This, however, does not mean that this achievement is not considered significant and promising for future generations.

Given the discussion among this diverse group of actors and different lines of arguments we may note the following: first, that among government actors the discourse on the subject has not been uniform. A discourse has prevailed that is based on following the path of modernity imposed from the centers of power that have organized the exchange of germplasm according to the demands of agricultural markets. However, voices that promote alternative models closer to the needs of producers and with an agro-ecological perspective have always been present. Secondly, I believe that the context of the Cold War permitted a scenario that turned out to be more favorable, not only for attracting government representatives to support the proposal, but also for defending it despite pressure from representatives of governments of developed countries under the leadership of the United States. Lastly, a redefinition of the order was attempted over an issue whose logic was not sufficiently appreciated. Many of its elements are still valid so that it can be revisited in the near future with the aim of ensuring the increased sustainability of rural communities and agriculture.

Notes

[1] Some specialists in the field in Mexico such as Dr. Gonzalo Arroyo, Fernando Rello, Gustavo Esteva, Armando Labra and Lorenzo Meyer anticipated the growing role of large corporations in the development of agriculture. A few FAO books such as FAO Agriculture: Toward the Year 2000 published in 1981-82 took note of this.

[2] To see the changes between the original version and the negotiated version see: Martínez Gómez, F., *La Globalización en la Agricultura: Las negociaciones internacionales en torno al germoplasma agrícola, Plaza y Valdes Editores, México DF, 2002*.(Globalization in Agriculture: International negotiations over agricultural germplasm), Chapter 2, pp. 65-91.

[3] Twenty-first Session of the FAO Conference (Rome, 7-25 November 1981).

[4] Wellhausen, EJ, LM Roberts and E. Hernandez (1954) *Races of Maize in Mexico. Their Origins, Characteristics and Distribution*. The Bussey Institution of Harvard University.

[5] See FAO. 1983. "Proposal for the establishment of an international genebank and the preparation of a draft international convention for plant genetic resources (Conference resolution 6/81)". Theme 10 (a). Agriculture, March 21-30, 1983. Rome, Italy.

[6] Intervention of the Mexican Delegation. Agriculture Committee. March 21-30, 1983. Subject. Proposal for the establishment of an international genebank and the preparation of a draft international convention for plant genetic resources". Permanent Delegation of Mexico to FAO. Rome, Italy, p. 2.

[7] FAO (1983) "Draft Report-Part 2" Agricultural Committee, Seventh Session, March 21-30. 1983. COAG/83/REP/2. March 30, 1983. Rome, Italy, p.10. § 39.

[8] Data from records made by Dr. Roberto Guadarrama S., Economic Advisor to the Permanent Delegation of Mexico to FAO, during the Agriculture Committee Session. March 1983.