Disclaimer: unless otherwise agreed by the Council of UPOV, only documents that have been adopted by the Council of UPOV and that have not been superseded can represent UPOV policies or guidance.

This document has been scanned from a paper copy and may have some discrepancies from the original document.

———

Avertissement: sauf si le Conseil de l'UPOV en décide autrement, seuls les documents adoptés par le Conseil de l'UPOV n'ayant pas été remplacés peuvent représenter les principes ou les orientations de l'UPOV.

Ce document a été numérisé à partir d'une copie papier et peut contenir des différences avec le document original.

———

Allgemeiner Haftungsausschluß: Sofern nicht anders vom Rat der UPOV vereinbart, geben nur Dokumente, die vom Rat der UPOV angenommen und nicht ersetzt wurden, Grundsätze oder eine Anleitung der UPOV wieder.

Dieses Dokument wurde von einer Papierkopie gescannt und könnte Abweichungen vom Originaldokument aufweisen.

———

Descargo de responsabilidad: salvo que el Consejo de la UPOV decida de otro modo, solo se considerarán documentos de políticas u orientaciones de la UPOV los que hayan sido aprobados por el Consejo de la UPOV y no hayan sido reemplazados.

Este documento ha sido escaneado a partir de una copia en papel y puede que existan divergencias en relación con el documento original.

0267

UPOV

IOM/II/ 8
ORIGINAL: English/ French/German
DATE: March 25, 1986

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

SECOND MEETING WITH INTERNATIONAL ORGANIZATIONS

Geneva, October 15 and 16, 1985

RECORD OF THE MEETING

compiled by the Office of the Union

1. The President of the Council, Mr. Rigot, opened the meeting and welcomed the participants with the following words:

"In opening this second international meeting with your organizations, I would like to begin by welcoming on behalf of UPOV all those that have replied to our invitation and have decided to participate. I most sincerely and most cordially welcome you to this venue where we shall exchange information on a number of topics over the next two days.

"However, beyond the good will which, I am sure, will characterize this meeting, beyond the bonds of friendship that may be tied or strengthened, having acquired the experience of the first meeting with your organizations in 1983 and in order to avoid any misunderstanding or misconceptions as to the aims of this meeting, I believe it is worth describing again the tasks and the concerns of our Union.

"An intergovernmental organization based on the Paris Convention of December 2, 1961, UPOV is above all a tool to promote the protection of plant breeders' rights. Indeed, it owes its origins to the initiatives and policies of your own organizations of plant breeders. Although the Office of the Union prepares and implements the work and the decisions, the actual decisions are taken by the Council, composed of delegates from the member States. These

delegates, after having consulted with each other, after having heard the opinion of professional breeders, and you will therefore understand the usefulness of a meeting such as the present one, take a democratic, but sovereign decision. They do so within the limits laid down by both the Paris Convention and the domestic laws of each member State and with respect for the general interest and for that of the breeders, in particular, be they large or small.

"The general interest? Let us not forget the intergovernmental nature of our Union. Public authorities have more obligations and infinitely more extensive concerns than the private sector. Even if our governments essentially had plant breeders in mind when setting up UPOV, they did not, for all that, forget users and consumers. Indeed, the rights of one category are always defined by the rights of other categories.

"Are the statutory constraints excessive? This is a matter of personal opinion. In any event, like morals, laws also change! If you go to the beach you know full well that you can see things today that were hidden from your sight yesterday. A change in morals? Indeed, but also in the laws! Such are the concerns that move the members of the UPOV Council and which are behind the decisions they take, and will continue to take, without being authoritarian, but also without weakness!

"However, a sense of responsibility and respect for principles in no way exclude open-mindedness and cooperation with all those who trust in dialogue and the evolution of ideas. UPOV is neither an ivory tower nor a private circle. Can you imagine UPOV putting its efforts and zeal into the organization of a meeting of this kind solely for its own prestige? Open-mindedness, cooperation! For us, this means listening to others, hearing them explain and defend their points of view or the imperative reasons and circumstances justifying their demands, looking for points of convergence in order to identify a compromise that may lead to a solution satisfying the aspirations of the breeders and at the same time continuing to comply with the rules of UPOV. Are these aspirations not fully satisfied? If such is the case, let us show a little patience and wait for time to do its work. Time smoothes over many difficulties, changes the face of things, brings experience and makes way for the evolution that I mentioned a moment ago. In this case, I am thinking of variety denominations, a topic discussed at the 1983 meeting, and of the UPOV Recommendations, drawn up subsequently to take into account what had been achieved at the meeting and as a function of UPOV's obligations, which did not receive unanimous approval. I feel that before such a problem is discussed once more it would have been better to let time pass. In the light of experience acquired in implementing the Recommendations and as points of view and habits changed, the matter could have been reopened and new elements could have been examined with serenity to find a solution that would have met with maximum approval. However, the point of all this is to repeat that we never definitively close doors, that we remain attentive to your preoccupations and that our concern is indeed to satisfy them wherever possible. In any event, I shall subsequently be making a specific, concrete proposal in response to your organizations' wishes that the matter of variety denominations be discussed once again. In order to achieve progress in solving the problems that arise and to show a spirit of cooperation, each of your organizations has been requested to submit for this meeting and for each of the topics to be discussed a preparatory paper giving precise proposals that reflect your views and opinions on various matters. This would seem to me a way to achieve a constructive discussion. I believe that this lengthy introduction has been necessary in view of certain intentions and certain uncertainties.

"Be that as it may, we shall be beginning our discussions in a few moments on the five topics entered on the agenda for this meeting, three of which have been proposed by your own associations.

"All these topics are matters of importance. Two of them, minimum distances between varieties and international cooperation, were already the subject of our conversations on November 9 and 10, 1983. Documents IOM/II/2 and IOM/II/4 summarize the new factors that have arisen since that time and review UPOV's activities which should be taken into account at this present session.

"As regards the application of the UPOV Convention to the greatest possible number of botanical genera and species, UPOV has already studied this question and has communicated in document IOM/II/5 a set of draft recommendations on which you may wish to pronounce.

"As for the scope of protection, item 7 on the agenda, this perhaps concerns your associations' grievances. It is therefore with interest that we shall take cognizance of your documents and that we shall listen to you.

"The protection of the results of biotechnological developments, item 6, is certainly a topic of current interest. Two symposiums in UPOV, conferences and meetings in WIPO and in your own organizations, discussions within committees and working groups, of which there is one in UPOV, numerous publications, all these have already attracted considerable energies and have to some extent enlightened those minds that are interested. At this juncture, we feel it useful to know your opinions and to hold a broad exchange of ideas with those directly concerned. The "gene revolution" opens up many exciting prospects! However, will the hopes raised in the field of plant breeding truly be the reality of tomorrow or the day after? If these were but myths, what would in fact tomorrow's reality be? In any event, the question must be asked and examined since any reasoning in the legal field can only be based on reasonable hypotheses. In that respect, is the intrusion of patents for inventions in the field of plant breeding, and more exactly in that of new plant variety protection, to be considered inevitable? Or indeed is it impossible? Or inappropriate? Or, on the contrary, desirable? Is it already necessary to draw up principles that will in future regulate the cohabitation of patents and of plant breeders rights? Or will it be sufficient to develop and interpret those principles that already exist?

But that is enough--all these questions are in fact no more that the manifestation of our concern to look ahead! Indeed, the saying "To govern is to anticipate" is also that on which UPOV bases its every decision and action.

I hope that the clouds that were gathering at the approach of this meeting have now lifted. It is my ardent wish that we should together enjoy two days of enriching and constructive debate in a relaxed atmosphere."

Mr. Rigot invited the Vice Secretary-General, Dr. Mast, to introduce document IOM/II/2.

2. Dr. Mast (Vice Secretary-General of UPOV) added to the words of welcome spoken by the President and expressed on behalf of the Secretary-General of UPOV, Dr. Bogsch, who was also Director General of WIPO, and thus their host, his best wishes for the success of the meeting. He then pointed out that developments since the last meeting with the organizations, which was held in 1983, were reported on in document IOM/II/2. Those developments were divided

into three topics: minimum distances between varieties, international cooperation, recommendations on variety denominations.

In respect of the "minimum distances between varieties," he wished to explain briefly for the information of new participants what was meant by UPOV under that heading. The term "minimum distances between varieties" was to be understood as the extent of the difference that had to exist between a newly applied for variety and any other variety if the new variety were to qualify for protection. The stance taken on this matter naturally affected the degree of homogeneity that had to be required of a new variety and subsequently influenced the assessment of the scope of protection of a protected variety. Those matters had been discussed in UPOV in the past with considerable passion and in great detail within two Committees, that was to say the Administrative and Legal Committee and the Technical Committee, where a number of important conclusions had been drawn on which, however, he would not comment in detail, since he did not wish to anticipate the debates under item 3 of the agenda, "minimum distances between varieties." At the time the document was drafted, it had not been known that the topic was to form part of the agenda. This had occurred at the request of CIOPORA, to which UPOV had agreed. He nevertheless wished, under that first heading, to mention paragraph 12, which reflected the essential result. Discussions in UPOV had shown that it was not possible to find a magic formula or indeed any formula, in respect of minimum distances between varieties, which would provide a solution to all possible cases. The Committees had therefore come to the conclusion that there was no point, for the time being, in continuing the discussions before new practical cases arose. Such cases could arise from one day to the next and that was indeed almost certain to happen. The comment made in paragraph 12 did not therefore mean that the problem was to be buried for all time. UPOV was simply of the opinion that there was not much purpose at that time in pursuing the debates before additional material became available. That was why paragraph 13 of the document then expressed the wish for improved contacts in the discussion of that matter. That item was very likely to be raised again at the meeting. As could be seen from paragraph 13, UPOV--and that also applied to the UPOV member States--explicitly advocated such contacts, but felt that it was more appropriate for them to take place basically at national level and for discussions to be held in the individual offices that were closer to practical matters and in which discussions could be more informal. Paragraph 13 further mentioned the fact that the request for detailed information in respect of the decisions taken as a result of the comments made by the associations on the test guidelines had been complied with. The Office of the Union had informed the representatives why it had not been possible to take into account certain comments or wishes. He felt it was the normal procedure to act in that way. It was perhaps difficult for the Office and for the associations to determine after years of discussion how UPOV had reacted to a proposal made by an association on specific parts of the procedure and it also did not necessarily lead to improved cooperation between UPOV and the associations when UPOV was forced to inform them years later that their proposal could not be adopted in some specific case. Nevertheless, UPOV had felt that it was right to give such information. UPOV, for its part, had expressed the wish that rather more comments should be sent to it in respect of the test guidelines. So far, there had been a particular lack of comments on the test guidelines for fruit, ornamental and forest tree species.

As regards the second topic of "international cooperation", Dr. Mast observed that his task was an easy one since the question constituted a separate item on the agenda, item 4. A report on the developments in the meantime could therefore be left until the discussion of that agenda item. The Office

of the Union had drawn up its own report on developments in that area in document IOM/II/4.

The third topic related to the Recommendations on Variety Denominations, adopted by the UPOV Council at its last session, which had not been received with great enthusiasm by all the associations. Those recommendations on variety denominations were to replace the former Guidelines for Variety Denominations. The final text was reproduced in a separate document, UPOV/INF/10, and had been included in the UPOV Collection of Important Texts and Documents as Section 14. Paragraph 15 of the document referred to the fact that UPOV had put in hand a pilot scheme for the centralized examination of proposed variety denominations. Two offices would examine in practice whether it was possible to carry out a centralized examination of variety denominations. That examination was being carried out by the German Plant Varieties Office in respect of Begonia elatior and by the United Kingdom Office in respect of chrysanthemum. Those examinations had not yet been completed. Once the schemes were operational, those two offices would carry out a complete examination of the suitability of the filed variety denominations. The examination was to cover all criteria for the suitability of a variety denomination, subject to the limitations of the office carrying out the examination.

3. Mr. Rigot thanked Dr. Mast for his introduction to document IOM/II/2 and asked the organizations for their reactions or their comments if they had any and, more particularly, whether they wished to speak in respect of the Recommendations.

4. Mr. Royon (CIOPORA) thanked UPOV for having invited CIOPORA to the meeting. He wished, first, to make a number of observations on problems which were minor ones, but which were nevertheless organizationally useful and which he would call practical problems. It would possibly have been more agreeable to have a more concentrated meeting, possibly on a single day, beginning fairly early in the morning and finishing at more or less the scheduled time, but with less breaks. If other meetings in future could work in a more concentrated way, this would be most agreeable to the professional associations.

Mr. Royon stated that the CIOPORA Delegation would have occasion, as the meeting went through its agenda, to give its opinions on the developments since the meeting with international organizations in November 1983. CIOPORA had in fact sent documents that briefly summarized its point of view. That point of view, which had perhaps evolved over time, was nevertheless based on the fundamental consideration that it had been defending for almost 25 years, that was to say since the adoption of the Convention. Little by little, UPOV and some of the national plant variety protection offices had come closer to that point of view, and that was encouraging, but the members of CIOPORA felt that the evolution was somewhat slow. The President had said in his introduction that things had to be left to time; however, a further saying claimed that time was money, and it was certain that the business world, the breeders' world, could not always wait too long. He had also said that to govern was to anticipate. Mr. Royon felt that it was extremely important, within UPOV, to utilize not the data from the past nor, perhaps, even today's data, but to endeavor, wherever possible, to look towards the future, to avoid, in the words of General De Gaulle, always being one war behind. Mr. Royon wished to leave the various items to the agenda, but first to speak of the problem of variety denominations and the problem of the UPOV Recommendations.

Mr. Royon stated that, following the correspondence between the two associations, ASSINSEL and CIOPORA, and the Vice Secretary-General of UPOV, it was certain that if the two associations were present, it was on the understanding that they would have the possibility of making themselves heard on that matter, which for them was not only important, but absolutely essential and urgent in view of the practical difficulties facing their members every day when filing applications for plant breeders'rights certificates in various countries. CIOPORA adopted a resolution in June 1984 concerning the UPOV Recommendations. The resolution was sent to UPOV and unfortunately, except for an acknowledgement, CIOPORA had never been informed of any comments by UPOV on the resolution, despite the fact that it comprised extremely important points requiring immediate attention on the part of UPOV. It was quite by chance, and altogether indirectly, and indeed very tardily, that CIOPORA learnt in March 1985, that was to say after the event, that the Recommendations it contested had been adopted in October 1984. The officers of CIOPORA had then acted with the idea that the meeting with non-governmental organizations in October 1984 would be the obvious time and place to talk again of that important matter on which they had received no reply. In his introduction, the President had spoken of dialogue. During the past months, CIOPORA had not felt that the will to enter into a dialogue existed on UPOV's side in respect of that specific matter. Without going into detail, CIOPORA therefore repeated the two essential requests that it wished UPOV to examine very rapidly. Firstly, amendment, should those Recommendations be held indispensable by UPOV, or useful, of very specific points referred to in the resolution and already raised in the past, particularly when discussing the first Guidelines in 1973. The second request, a very specific one, was a problem of recognizing trade practice. CIOPORA had organized a system for forming denominations that had existed for over 30 years and which had worked to the general satisfaction of all breeders. It also worked to the satisfaction of the users that worked with them and CIOPORA considered that, although the system had already operated for a considerable length of time, it was necessary, particularly in view of certain points mentioned in the Recommendations, for it to be officially recognized by UPOV. That was CIOPORA's request, and if it was accepted, CIOPORA could be more indulgent with the rest of the Recommendations. Mr. Royon wished also to point out that the CIOPORA Delegation would appreciate, assuming that the meeting ran to schedule and did not suffer unfortunate delays, the possibility of meeting in committee, perhaps a restricted committee, while it was still in Geneva, perhaps during the following day.

5. Dr. Mastenbroek (ASSINSEL) said that ASSINSEL also appreciated having been invited to the meeting and welcomed the opportunity of discussing with UPOV and with the other international organizations the problems that concerned its members.

Dr. Mastenbroek said that he wished to make a few remarks on paragraph 13 of document IOM/II/2, in which it was stated that UPOV was trying to improve contacts with breeders and users of varieties and that a start had been made in the case of Begonia elatior by the German Federal Plant Varieties Office. ASSINSEL was glad that a beginning had been made and sincerely hoped that progress would be speedy and substantial. ASSINSEL had offered on previous occasions to cooperate very closely with UPOV, in particular on technical matters. It believed that several of its members could be considered to be real experts on variety distinctness to mention just one matter, and that it would be beneficial both to breeders and to UPOV if there were close cooperation on such technical matters.

Dr. Mastenbroek said that he also wished to comment on paragraph 15 of the same document, which concerned the Recommendations on Variety Denominations. Here too ASSINSEL had expressed on several previous occasions the wishes of its members and it was not completely satisfied with the difference between the earlier Guidelines and the new Recommendations. The progress was not very substantial and certainly not all of its wishes had been satisfied. Those wishes were well known. One of the main concerns was why in recommendation (2)(v) it was acceptable to have combinations of letters and figures in that order but not in the reverse order. Why was that allowed only for certain species and only in those member States in which that type of denomination was established for those species? Breeders in other UPOV member States, maize breeders in particular, strongly wished to have the same possibility. The argument that farmers would have difficulties in recognizing cultivars was false. Farmers in the United States of America had been able to cope with such denominations. They were no better educated than their European colleagues and the extension services in Europe published at least as much information concerning choice of varieties as their American counterparts. ASSINSEL could see no reason why European breeders should not have the same possibilities as their colleagues on the other side of the Atlantic Ocean. Dr. Mastenbroek went on to note that ASSINSEL did appreciate recommendation (7) which maintained the possibility of a breeder using a series of variety denominations that become associated with the company or individual breeder, so that there could not be any misunderstanding about the origin of the variety. In general, however, and in particular with regard to recommendation (2)(v), the Recommendations were felt to be too restrictive and ASSINSEL would very much appreciate their being revised. Dr. Mastenbroek said that he wished to second the proposal of Mr. Royon to have a discussion in a small committee at the earliest possible opportunity.

6. Dr. Freiherr von Pechmann first expressed gratitude for the invitation on behalf of AIPPI and then referred to the President's introduction and to the statements made by Dr. Mast. Both of them had observed that UPOV had taken the results of the previous meeting into account when drawing up the new Recommendations on Variety Denominations. If he correctly remembered the discussions at that meeting, the results of the discussions had certainly not been sufficiently taken into account in the new version of the Recommendations. He wished to support what had been said by the representative of ASSINSEL. If the breeders, multipliers and other trade circles were able in such a large country as the USA to consider a given variety denomination as pronounceable and, as it was so nicely worded, easy to remember, then he was unable to understand why that should not be possible in the other UPOV States. Indeed, recently, variety denominations had been objected to because they contained four syllables, on the grounds that the Guidelines stated that excessively long words, that was to say those comprising more than three syllables, and which had no existing meaning, could not be accepted. To cite but one example, a variety denomination "Sinolaninaro" was perfectly pronounceable and, in his view, was easy to remember. He would like to point out that the intelligence quotient of the average specialist should not be underestimated.

7. Mr. Rigot wished to begin with a first reply on the matter of practical organization raised by Mr. Royon. Mr. Rigot believed that the delegates of the member States would also be pleased to begin earlier and therefore to finish earlier. They also were not used to beginning their day at ten o'clock, or at least not when they were working. If everyone agreed, the time of the next meeting would therefore be brought forward.

Mr. Rigot believed that the comments made in respect of variety denominations had been recorded. It had been agreed that there would be no discussion on the matter at that meeting but simply that the comments would be recorded. The Consultative Committee had decided the preceding day on a meeting of UPOV experts and experts designated by the professional organizations in order to rediscuss all the problems relating to variety denominations. It had scheduled that meeting for the beginning of next year, and contacts were to be made in order to settle its date, nature and composition.

8. Mr. Royon replied that ASSINSEL and CIOPORA would like to have a short meeting of a restricted committee, even a very restricted committee, on that matter during the following day. If it should not prove possible to have such a meeting on the next day, they would then wish to be heard at least on the items which they wished to have amended in the Recommendations.

9. Mr. Rigot thought that it would be possible to give an answer to that question during the afternoon. Mr. Rigot closed the discussions on item 2 of the agenda. Since item 3 concerned "minimum distances between varieties," he gave the chair to Mr. Elena, Chairman of the Technical Committee, and requested him to preside over the discussions.

MINIMUM DISTANCES BETWEEN VARIETIES

10. Mr. Elena (Chairman of the Technical Committee) said that it was a pleasure for him to act as Chairman for item 3 of the agenda, which concerned the question of minimum distances between varieties. The item had been included in the agenda at the request of CIOPORA. Mr. Elena noted that a document had been submitted by that organization and said that he would like to start by asking Mr. Royon to present it.

11. Mr. Royon read out the document submitted by CIOPORA (reproduced in Annex II to document IOM/II/6 and also, for convenience, in Annex II to this record). He noted that the document included a brief reference to mutations. CIOPORA believed that the question of minimum distances and the question of mutations were two entirely separate problems. It thought, however, that a better definition of minimum distances might to some extent make an indirect contribution to solving the problem of the "mini-mutations" that occurred so frequently in many species.

12. Mr. Elena said that, before seeking specific comments on the document submitted by CIOPORA, he would like to ask if there were any general remarks that the other international organizations wished to make concerning minimum distances between varieties.

13. Dr. Mastenbroek indicated that ASSINSEL had not submitted a document because it had nothing to add to what it had put forward at the previous meeting, two years earlier. ASSINSEL did not wish the minimum distances to be decreased. What it would appreciate instead would be the determination of additional distinguishing characteristics so that new varieties could more readily be distinguished from existing ones. ASSINSEL agreed that it was virtually impossible to lay down in words a description of what minimum distances should be and that the question should be dealt with species by species.

14. Mr. Donnenwirth (ASSINSEL) noted that the interpretation of novelty given by UPOV enabled protection to be given as soon as a difference was observed in respect of one characteristic, however small it might be, once it enabled the distinction to be made. That favored both the infringer and the plagiarist breeder. It seemed to him that 1% of difference could give an infringer a 99% chance of being recognized as the true inventor, whereas 99% similarity in fact only gave the protected breeder a 1% probability of the rival variety being declared identical with his own. He agreed that he had possibly exaggerated that feature intentionally, but that if one thought of the question, there was truly nothing in the concept of distinctness, as set out by UPOV, to prevent such a thing happening. Rather than to look for differences, which would always be found, it was preferable, in his opinion, that decisions to grant protection to plant varieties should be based on the assessment of the balance between similarities and differences where those were credible and justified their existence. Otherwise, the declarations of good intentions in the UPOV Convention were likely to remain a dead letter. Mr. Donnenwirth indeed felt that if one gave way to facility, that was to say if there was a decline in the best material, the progress expected by agriculture would be slow to appear since the maintenance of genetic variability resulting from the creative activities of breeders would have been completely obscured. By setting the boundary at its proper level, breeders would be given an incentive to undertake a true research and creation effort that would necessarily imply maintenance of genetic variability and would thus ensure genetic progress.

15. Mr. Desprez (COMASSO) wished to raise two matters. The first was that of breeders participating in UPOV's technical working groups. UPOV had advised the breeders to have meetings at national level. The breeders had followed that advice and enjoyed excellent contacts with national experts; however, when all those government experts met together within the framework of UPOV, everything seemed lost, that was to say, although agreements had been reached at national level, it seemed that at international and UPOV level the same agreements were not forthcoming. Mr. Desprez was not sure what could be done to make sure the message got home. He admitted that it was difficult to envisage holding meetings with a very large number of experts, but wondered whether the professional organizations could not designate, for each species, a representative who could possibly be heard by the expert groups when UPOV discussed those matters.

The second matter was the problem of minimum distances. Mr. Desprez believed that only the experts qualified for the species in question were capable of saying whether the variety was a new one or not. It was impossible to define what constituted minimum distances around a table or in a meeting room or in a written text. If it was wished to continue defining them, the problems would arise in future just as they had arisen up till then. The only solution was to have valid experts who would take a sovereign decision on whether a variety was different or not. Mr. Desprez considered that the intellectual honesty of the experts could nevertheless be trusted since they had no direct financial interest in declaring a variety to be new or not, but that it would never be possible to lay down the definition of minimum distances on a piece of paper or in a computer.

16. Mr. Royon wished, on behalf of CIOPORA, to express his satisfaction at the preceding two statements. He felt that they could possibly be combined to find an approach towards a solution. Indeed, it was difficult to define minimum distances on paper or in writing. It was not only difficult, but

probably impossible, except maybe for certain specific characteristics, but as a whole was certainly impossible. He therefore felt that it was necessary for that very reason that the cooperation between the official experts and the professional experts should be intensified.

Mr. Royon wished to return, however, with emphasis to the comments made by Mr. Donnenwirth. CIOPORA had already had the occasion to underline the problem of resemblance rather than difference. Mr. Royon believed that once again reference had to be made to the concept of infringement under other industrial property rights, which was assessed not on the basis of the differences but rather as a function of resemblance, that was to say resemblance for the specialist. That was very important since if titles of protection were to be issued on the basis of differences that could appear through the use of highly sophisticated methods such as those that had been referred to, electrophoresis and others, he believed that it would lead to aberrant solutions that would indeed make it easier for ill-intentioned persons to commit infringements.

17. Dr. Troost (AIPH) said that AIPH believed that it was a good thing to determine the differences between the varieties. It was good for the validity of the protection, for the breeder and also for the user of a variety. He was aware that when a mutant was clearly distinguishable from the variety it came from it was a new variety. It therefore seemed to him that if the scope of the protected variety was greater then the problem of mutants would diminish.

18. Mr. Elena said that he wished only to confirm that UPOV experts who worked in the field and not just around the table, generally agreed that the question of minimum distances between varieties should be tackled species by species. That was also the decision of UPOV's Technical Committee.

19. Dr. Freiherr von Pechmann commented that the views presented by AIPPI at the meeting on November 9 and 10, 1983, had not changed. AIPPI considered that an important characteristic was to be understood as one that was important for the variety concerned by reason of its economic value, to ensure that protection was not afforded for just any completely unimportant characteristic in practice which then nevertheless removed the new variety from the scope of protection of the previously existing right. As Mr. Royon had so rightly stated, infringements in other fields of industrial property were normally not identical with the protected article, but would always be found slightly outside the wording of the protection right concerned, and such was frequently the case for varieties as well. He wished therefore to confirm once again what he had already said at the previous meeting, that was to say that not only the infringement courts in the field of variety protection determined the scope of protection of a variety but also the offices when they attached such importance to a further, minute, unimportant characteristic, with the result that variety protection could be afforded to the plant concerned.

20. Dr. Mast referred to the statements made by Dr. von Pechmann. He felt that a difference had to be made in the discussion between the granting procedure, in which the minimum distance played a part in assessing distinctness, and infringement proceedings, where the scope of protection played a decisive part. Those two cases nevertheless constituted two quite different questions. In the first case, it was a matter of whether an office could grant protection to a further variety. In the second case, it had to be assessed how far protection under a granted right could extend. Dr. von Pechmann had already mentioned that, in that second case, the decision was taken by infringement

courts, that was to say by independent courts, to whom UPOV could not issue instructions in any way, whether by means of guidelines or recommendations. In such a case, it could only be hoped that the courts, which were competent in many countries for patent litigation, would not hold the view that plants with only slight differences were no longer covered by the scope of protection of the variety. He believed that, in such a case, one could more or less rely, however, on the experience and judgment of the courts. Dr. von Pechmann had also mentioned, however, that the scope of protection was influenced by the decisions of the offices under the grant procedure. That was more the case under the UPOV system than in patent law since the UPOV system could grant fully independent protection for every new variety that differed sufficiently from other varieties. He believed also therefore that Mr. Royon was justified in linking those two matters. Decisions taken by UPOV in respect of the grant procedure, the drafting of test guidelines, the selection of characteristics to be included in guidelines, the classification of the expressions of characteristics, all those factors naturally had a direct influence on the scope of protection. However, UPOV's influence could only be direct in the case of the grant procedure. He believed therefore that those two areas, despite their close relationship, had to be clearly separated in the discussions.

21. Mr. Royon thought that the explanations given by Dr. Mast were useful since the two areas, grant procedure and procedures during infringement proceedings, were indeed different. Mr. Royon believed that it was important for UPOV to deal with that problem since it had not to be forgotten that judges had as yet only a limited practice in proceedings for infringement of plant varieties and that it was useful for UPOV to define its policy from that point of view also. He would be very perturbed to think that there was a risk of infringement being considered some day as what he could call identical infringement and not similar infringement or imitation. He believed in fact that a variety had to be protected not only against any reproduction of the variety itself by unauthorized persons but that the protection should extend around the variety within the limits of a perimeter that had to be defined, even if it was difficult to do so. He was convinced that, at such time, the matter could be left to the judge who, in all equity, would be capable of evaluating the point from which infringement would begin.

22. Mr. Elena believed that, from a technical point of view, the same question was involved both in the case of a new variety and in the case of an infringement. From a technical point of view, it was the minimum distance that had to be determined and laid down.

23. Dr. Böringer (Federal Republic of Germany) said that the question of the important characteristic raised by Dr. von Pechmann, particularly the angle from which importance was to be judged, was as old as the Convention itself. Indeed, to be honest, those matters had already been discussed in the period preceding the Convention. The UPOV Council had finally adopted a recommendation, to be used for practical purposes until further notice, that an important characteristic was one to which, so to say, botanical distinctness could be applied and which was only important to that extent. He would like to hear from the other associations whether they shared AIPPI's view that UPOV should once more reflect on the question whether the concept "important" or "important characteristic" was to be interpreted as being necessarily a functional characteristic, that was to say an economically important characteristic. If such were the case, then all the implications would have to be accepted. And those implications could possibly be enormous.

24. Mr. Desprez wished to reply to the question put by Dr. Böringer. He believed that a complete separation would have to be made between agricultural crops and the others. As regards the agricultural crops, one nevertheless often had the conviction that a variety was different when it gave agronomic or technical values that were very different, which was not the case for horticultural plants, for roses or for all species in respect of which the agronomic and technical value was not measured. If a variety filed as being new gave agronomic and technical values in a prior examination that were very significantly different from a variety which it resembled morphologically, it was necessary for the experts to endeavor to find differences since an important economic reason existed for entering the variety as a new one.

25. Mr. Royon thought that it was difficult to answer the question put by Dr. Böringer since he was sure that within one and the same association all the breeders would not agree on the reply to be given. It would therefore be very hazardous on his part to express a categoric opinion on that matter. He nevertheless believed that it had to be said that if the concept of a characteristic important for distinctness was to be applied to the value of a variety within the meaning used when drawing up the official lists issued in some countries for agricultural crop varieties, the CIOPORA breeders would certainly be opposed to such characteristics being taken into consideration. The breeders felt that the concept of protection of plant varieties and the concept of lists of marketable varieties had to be kept separate. As was the case with patents, an invention could be new, could give an industrial result, but have no economic value and not be a success on the market. The responsibility for marketing a variety should be left to the breeder, as it was to the inventor. Mr. Royon felt that if, on the contrary, value was taken to mean certain physiological characteristics such as productivity or the characteristics which Mr. Desprez had justly emphasized, in any event the Convention already recognized not only morphological characteristics but also physiological characteristics. If a variety was morphologically identical with another, to propose the extreme case, but was physiologically different, it should be entitled to protection. Some members of CIOPORA would have wished, but that was not the majority view, that only differences visible to the naked eye should be taken into consideration. That view did not seem very opportune to Mr. Royon personally, since it would lead doubtlessly to refusal, as mentioned by Mr. Desprez, of protection for varieties where one was convinced that they were new and deserved protection.

26. Dr. Troost considered that the question raised by Dr. Böringer was an interesting one but thought that AIPH was not in favour of changing the Convention in such a way that the granting of breeders' rights would only be possible after performance trials.

27. Dr. Mastenbroek remarked that the question of the word "important" was indeed an old one and, of course, it had very much concerned the breeders in ASSINSEL in the past and to some extent did today. In field crops, the yield of seed, the yield of leaves was of utmost importance but all breeders and many users of varieties were acquainted with the phenomenon that the yield differential between two varieties was not the same from one year to another. The same might even apply to resistance to diseases. Complicated properties like yield, disease resistance and several others were not stable enough over the years to be used for distinguishing varieties. That was the view of UPOV, and as a whole breeders had an understanding for and agreed with it. It had also been said in the past that it might be possible to dissect such properties into smaller items which might serve for distinguishing purposes because they

might be much more stable than the combined property. ASSINSEL was still of the opinion that the most important properties for the cultivation and use of the variety were not suitable for distinguishing between varieties but it continued to be in favor of attempts to single out from those complicated properties some elements that might be used for that purpose.

28. Dr. Leenders (FIS) said that the question of minimum distances had been discussed in FIS. It had been studied also from the commercial point of view because some people in the trade felt that it was not always easy to have so many varieties particularly when the extension services recommended certain varieties which one had to have in stock. It was a complicated matter but, nevertheless, it was felt that it was not desirable to introduce the element of agronomic value for plant breeders' rights; it was felt that the present system, whereby a characteristic was important if it was important for distinguishing between varieties, was the only possible system. Dr. Leenders believed that one either had the UPOV system, whereby varieties could be used for further breeding work, which could lead to the creation of varieties distinguished only by small differences, or one had quite a different system, which would be similar to the patent system. He believed that the problem was closely linked with agenda item 6 and that it could be discussed under that item.

29. Mr. Elena wished to draw a conclusion from the statements made on the question of minimum distances between varieties. He had a proposal to make and, if the meeting agreed, would submit it to the Council of the Union. His proposal was that UPOV should request each organization concerned to designate an expert for each species or group of species and, in the event of a meeting of a technical working party devoted to certain species or group of species, to request that those experts should participate.

30. Mr. Fikkert (Netherlands) asked whether the proposal was to invite experts in connection with the questions of "minimum distances" and "important characteristics" to the meetings of the Technical Committee, or to invite them to meetings of the several Technical Working Parties. He believed that it would be more appropriate to invite them to the working parties than to the Technical Committee.

31. Mr. Elena confirmed that his proposal was restricted to an invitation to the Technical Working Parties and perhaps to only a part of the meeting. Perhaps the meeting should be in the open air or in the glasshouse, and not around the table.

32. Dr. Troost believed that if one was going to invite experts then one had to invite them to the whole meeting. The experts would be experts in specific species and would be serious people who could make the time to attend the whole meeting.

33. Mr. Heuver (Netherlands) understood that the Technical Working Parties dealt with several species during a meeting. If the Technical Working Party for Ornamental Plants and Forest Trees had a problem concerning carnations then it could plan to meet at Wageningen, where carnations were centrally tested, at the best time for looking at the carnations being tested. Half a day could be set aside, for example, just to look at minimum distances in carnations, to discuss the difficulties and to come to certain conclusions. The Working Party might then go on to deal with dahlias or some other species and it would be a waste of the carnation expert's time to sit through the rest

of the meeting. Mr. Heuver believed that if an organization had problems with a particular crop then it should ask if an expert could discuss them at some time at a meeting of the relevant working party. He felt that to be a very practical solution and hoped that Dr. Troost would agree with him.

34. Mr. Espenhain (Denmark) felt that it should be mentioned that the Technical Working Parties had already arranged their meetings for 1986 and that for practical reasons it might not be possible to invite experts until 1987.

35. Mr. Fikkert wondered who was going to make a list of priorities with respect to this problem and who would decide which crops needed to be dealt with first.

36. Dr. Böringer felt that there absolutely no problem. Things could be solved practically and indeed such practical solutions had already been adopted in the case of certain species where UPOV experts had been of the opinion that they were faced with problems that they could not resolve alone. If he had correctly understood Mr. Desprez and Mr. Royon, such a system was to be extended to as many species as possible. He saw two advantages in so doing: firstly, the representatives of the breeders and other representatives, with special experience in those species, could actively collaborate in the drafting of the guidelines. Secondly, it was a fact that the contributions received so far from the professional associations with respect to the guidelines had been somewhat meagre and this situation would no doubt improve with the proposals that had been made. If it were truly possible to improve those contributions, that would be a very positive step. He felt that UPOV should take note thereof and discuss the matter in the Technical Committee with the chairmen of the technical working parties. It would surely be possible to find a practical approach for establishing closer contacts with the breeders to ensure that the dialogue led to valid results.

37. Mr. Guiard (France) wished to go along completely with what had been said by Dr. Böringer on the participation of professional organizations within the working parties, particularly the working party on agricultural crops. The members of that working party had regretted at their last meeting that the participation of the professional organizations had not been more active in drawing up the guidelines for examination of species such as rice, soya bean and groundnut. That problem was indeed to be discussed at the next meeting of the Technical Committee. Such participation perhaps represented a means of improving the relationship with the organizations concerned. Nevertheless, Mr. Guiard felt that the size of the working parties should not be overly increased, but that simple non-systematic participation of a small number of representatives of the professional organizations concerned could lead to more fruitful exchanges.

38. Mr. Clucas (ASSINSEL) said that vegetable breeders would very much welcome such a development. He had not quite understood the reason why invitations might have to be deferred until 1987 and would appreciate clarification.

39. Mr. Elena explained that the dates of the 1986 meetings had already been fixed, as had the venues and that it might be that there were no facilities to study the relevant crops at the venues chosen. Mr. Elena thanked all the participants for their valuable contributions and closed the discussion on "minimum distances between varieties."

40. Mr. Rigot thanked Mr. Elena for having presided over the discussions on a very special item of the agenda. He gave the chair to Mr. Heuver, chairman of the Administrative and Legal Committee, for item 4 of the agenda, "international cooperation."

INTERNATIONAL COOPERATION

41. Mr. Heuver (Chairman of the Administrative and Legal Committee) said that the question of "international cooperation" had been on the agendas of the UPOV meetings for a long time and it was certainly a matter of interest to the professional circles. Several aspects had already been discussed in UPOV. One of the points to be discussed under item 5 of the agenda was very important, namely, close cooperation in variety testing. That encompassed not only the development of Test Guidelines but also really closer cooperation in the field of variety testing, partly through central testing, partly by taking over results from another testing station. There was also the question of harmonization of fees for testing. Document IOM/II/4, which had been prepared by the Office of the Union, summarized developments since the 1983 meeting with international organizations. Mr. Heuver then invited the representatives of the organizations to express their views on the question of international cooperation.

42. Dr. Mastenbroek said that the members of ASSINSEL would, on the whole, welcome closer and more intensive international cooperation because they expected that a decrease in the costs of applying for protection would evolve from such cooperation. The ideal would be one examination in one country, the choice of country being made by the applicant, and the granting of a title of protection valid for all UPOV member countries. That would really save money. Dr. Mastenbroek said that breeders realized that the ideal might be a dream that could not be realized because, as had been established, differences in climate and daylight conditions, for example, could influence the expression of morphological and physiological characteristics and therefore the distinguishability of a variety might vary to a certain extent from one region to another. A practical solution might be to choose regions with similar climatic conditions. That would mean, for instance, dividing Europe for the purposes of close cooperation into a northern and a southern region. Breeders realized that there was also the possibility by means of closer international cooperation to enlarge the list of species eligible for protection. There was already, on a rather limited scale, international cooperation between certain countries for certain species. Unfortunately, however, the experiences of some breeders of some crops had not been very favorable and some breeders were not as enthusiastic as others about speedy progress in international cooperation. Dr. Mastenbroek believed that the majority of the breeders favored further development of international cooperation and that if that was to be achieved then further harmonization of the testing procedures and of the interpretation of results was essential.

43. Mr. Desprez wished to speak in respect of paragraph 8 of document IOM/II/4 in which it was said that the Commission of the European Communities had considered the creation of a (European) Community breeders' right. He believed that the paragraph did not exactly reflect the position adopted by the professional organizations of the Communities. They were, in fact, favorable to the principle of a Community right which would consist in issuing a title of protection for all the countries of the European Communities where such title had been issued by one of the Community countries. However, they were not favorable to the creation of a new body that would practically replace UPOV for the Community countries.

44. Mr. Royon referred to the comments made by CIOPORA, which were to be found in Annex II to document IOM/II/6. In his view, the problem of cooperation was closely related to item 5 on the agenda, that was to say "application of the UPOV Convention to botanical genera and species." Although cooperation obviously affected other areas apart from prior examination, it seemed to him that it was in the latter field that international cooperation was both the most needful and the most urgent. CIOPORA had already repeatedly drawn UPOV's attention to the fact that prior examination as currently conceived, as applied in various countries, constituted a constraint on the protection of plant varieties. It was expensive and therefore constituted a considerable obstacle for the small-sized breeders. It was long-winded and therefore led to disadvantages in those countries in which the variety could only be commercially exploited by means of licensing after the grant of a title and, above all, it constituted an obstacle and even sometimes a pretext used by some countries to refuse protection to various species. CIOPORA felt that it was absolutely urgent for such international cooperation to be put into practice. That could happen at various levels. CIOPORA hoped that it would be implemented in the fullest possible way and had considered for some considerable length of time, as in its memorandum of 1974, attached to document IOM/II/6, that once procedures under bilateral agreements between UPOV member countries had already been implemented and put into force, it was not acceptable that certain species were not protectable in certain countries once even one single UPOV country had the facilities for carrying out prior examination of that species. Mr. Royon pointed out that there existed breeders working currently on certain species who were altogether disillusioned when they saw that, because they were few in number and because the species on which they were working were perhaps not yet ready for sufficient economic development, protection was refused to them. CIOPORA held that such was totally in contradiction with the spirit of the UPOV Convention and that it raised a question of essential and fundamental equity that had to be resolved. Mr. Royon apologized for having somewhat anticipated item 5 of the agenda. As far as details were concerned, he felt it would take too long to review all the various proposals that CIOPORA had been making and supporting for many years.

45. Mr. Heuver said that he had noted what had been said by Dr. Mastenbroek about the feelings of some breeders with regard to central testing. If it proved to be impossible, for whatever reason, to achieve central testing then member States' Offices could try to take over test results from the testing station that first carried out tests on given varieties. Mr. Heuver wished to know whether such a practice would be in line with the ideas of the international organizations.

46. Dr. Mastenbroek said that he did not wish to give detailed information about the breeders or about the species concerned but, as he remembered it, the concern related to differences in the reliability of the outcome of the tests to assess distinctness, uniformity and stability. If the best way to make progress was to arrange bilateral agreements between the various countries that were willing to cooperate then he thought that ASSINSEL would have no objection to tackling the legal techniques of cooperation in that way. As far as Dr. Mastenbroek knew, ASSINSEL had no suggestions for a better system.

47. Mr. Rigot said that he had heard the wish expressed by various speakers that the number of examination centers be reduced and that better cooperation be achieved as a result, thus considerably reducing the examination costs. He felt that everyone was aware of that aspect of the problem, even including the government services. However, in practice it proved that the breeders were

often very reticent to have their varieties examined abroad, that was to say in another country, since they frequently had the impression that more severity would be applied to a variety that was foreign to the country in which the examination was carried out.

48. Mr. Heuver recognized that feelings might be in the direction described by Mr. Rigot. Mr. Heuver believed, however, that if a variety was tested in say Germany, France or the Netherlands, under the same conditions, then the conclusions should be the same. Furthermore, he felt that they were, in general, the same. In Mr. Heuver's opinion taking over test results was a good start to learn how other Offices worked. If there were really problems then people who knew how to work together could sit together at the table and try to find solutions.

49. Dr. Böringer pointed out that what was being said in a very polite way in fact referred primarily only to agricultural species and vegetable species. He wished to be somewhat provocative. It was the agricultural breeders and the vegetable breeders in various countries that were currently blocking progress within UPOV to a certain extent. UPOV could have gone a whole lot further in the regional centralization of testing if all breeders had been able to see further than the ends of their noses. He was quite aware that for certain plant species, that he could list, those noses were still very long. And the examining authorities would also have to occasionnally "pull up their socks" to achieve improvements. The alternative of adopting testing results from a neighboring country whilst continuing the tests at home, for instance in the case of wheat or barley, was a new concept that was being tried out in practical application. That concept comprised three advantages for the breeders: firstly, that the procedure became cheaper, that it was accelerated and that differing decisions could not be taken by differing State authorities. On the other hand, one had to be clearly aware of the fact that, for the individual UPOV States that practised the system, there would be no reduction in cost, but that it could lead to considerable complication with a greater workload meaning more expense for the State facilities. That fact was nevertheless accepted for the time being by the offices in order to achieve progress.

50. Dr. Mast said that he wished to refer to Dr. Mastenbroek's statement that one of the absolute necessities for cooperation was to harmonize the testing methods. There was of course some logic in that but, on the other hand Dr. Mast asked himself whether the testing methods would ever be changed and harmonized if there was no cooperation. He thought that it would be very difficult for the Head of an Office to convince his staff to change certain testing methods just because the testing methods used in one or another Office abroad were different. Where cooperation existed, however, that would sooner or later make harmonization necessary. The same difficulties as those mentioned by Dr. Mastenbroek had been encountered in other fields of industrial property where international cooperation was much more progressed. There, also, it had been argued that the examination methods had to be harmonized first. The governments always told the interested circles that the harmonization of the examination methods would become a necessity once an international system existed. Dr. Mastenbroek had said that he had heard from a number of breeders that difficulties had been encountered. Dr. Mast believed that to be normal in any system of international cooperation. He referred, in that context, to the immense difficulties which the European Patent Office, for example, had encountered in the early years of its existence. These had led to the need to find solutions inside that Office, and then common solutions had been found.

51. Dr. Leenders remarked that the discussion so far had been mainly about testing and the costs of testing in the various Offices. In his opinion that was just one side of the matter, because there was another possibility of saving a lot of money, and that was, as had already been said, to have one title of protection for a bigger area. Dr. Leenders believed that such a title need not necessarily be combined with centralized testing. If the authorities believed in the work they did then they could also say that once a variety had been tested in one of the countries of the Union the title, if one was granted, should be valid for a bigger area. That would diminish the amount of testing considerably and it would diminish the costs of the breeder considerably. Dr. Leenders wished to ask the authorities whether they could envisage such a system.

52. Mr. Espenhain said in reply that he believed that the new UPOV Model Administrative Agreement for International Cooperation in the Testing of Varieties met the wishes of Dr. Leenders. Mr. Espenhain thought that only one test should be carried out, which could be utilized in several other countries within UPOV, and that breeders would then certainly save on testing fees. He also wished to underline what Dr. Mast had said about cooperation leading to harmonization of testing and of the criteria for the approval of varieties. Dr. Mastenbroek had mentioned that the ideal situation for the breeders would be one application, one test, one decision and the freedom for the breeders to choose where the test should be carried out. In Article 5 of the new Model Administrative Agreement that he had referred to it was stated that Offices would, unless it was exceptionally decided otherwise, take over test results if an application had already been filed in another country. Denmark was already applying the terms of Article 5 and Mr. Espenhain could see, if he looked at the income of his Office that some breeders must be saving a lot of money. The Office, however, had not saved anything at all. For one species, for example, for which it had received five applications, it had had to "buy" test results for three of the five varieties. It had had to test the remaining two varieties itself because there had been no prior applications and there were ninety-five reference varieties in the reference collection. Mr. Espenhain said that he wished to stress that the new Model Administrative Agreement was designed to motivate cooperation towards centralized testing. He thought, however, that in the long run the authorities could not go on incurring all the cost while at the same time losing a great deal of the income. He believed that the whole question would have to be discussed with the organizations on some future occasion.

53. Mr. Heuver thanked Mr. Espenhain for having made the situation very clear. Mr. Heuver thought that both breeders and government representatives should give further thought as to how the problems could be solved, but he strongly believed that closer cooperation should be the aim and that each side had to trust the other.

54. Dr. Leenders expressed his appreciation for Mr. Espenhain's answer. Dr. Leenders said that what he had really been hinting at, however, was the example of cooperation under the European Patent Convention, which Dr. Mast had already mentioned. In that case, of course, there was a system of centralized "testing." Dr. Leenders wondered whether ultimately UPOV could not envisage something similar, but without centralized testing. If a variety had been tested in one center and granted protection by one country then, as an ultimate goal, it should automatically receive a grant of protection in the other member countries. Such a system would have the advantage for the breeder that he could choose where to have his variety tested. The breeder's choice

would not always be the center at which he thought that the results would be the most favorable. A major factor was that there were sometimes considerable difficulties in contacts, for example because of language. Dr. Leenders believed that such a system could save an enormous amount of testing and an enormous cost but recognized that it could not be achieved in one, two or even ten years. Finally, he was of the opinion that it was not necessary to have testing facilities for all species in all countries; it could be sufficient to have them in a limited number of countries for the main species.

55. Mr. Heuver thanked Dr. Leenders for his remarks. It would certainly take time to put Dr. Leender's ideas into effect. Mr. Heuver remembered the Administrative and Legal Committee had had a preliminary discussion some years earlier on the basis of a far-reaching paper prepared by the Office of the Union. At that time one member of the Committee had stated that the realization of such ideas was light years away and no further consideration had yet been given to that document.

56. Mr. Desprez stated that he had contacted the Delegation of COMASSO during the lunchbreak and wished to make a small correction. He apologized to the President of ASSINSEL. COMASSO had both the desire and the will for full international cooperation, not only Community cooperation, in conducting prior examinations and issuing titles of protection. That stance was firstly a question of doctrine, but also a practical matter. COMASSO was aware that with the large number of varieties that were applied for and the intensive breeding work that went on in all the member countries of UPOV, it would be impossible for a national organization to individually carry out all the work involved in entering varieties in the catalogue and conducting prior examinations for protection. It was an act of faith in the future and COMASSO hoped for the most active and the most rapid international cooperation possible. Mr. Desprez went as far as to say that all the steps taken in respect of bilateral examination, all the harmonization proposals, met with the full agreement of COMASSO, which thanked the member States of UPOV and requested them to continue as rapidly and as far as possible along that path.

57. Mr. Clucas said that he would like to deal with the matters under discussion from the point of view of the vegetable breeders of ASSINSEL, in particular with regard to the extension of protection to additional species. Clearly the situation varied from country to country; in some the coverage was complete or extensive and in others it was fairly limited. Legislation, however, was being rapidly overtaken by new technology. Mr. Clucas wished to refer specifically to the matter of micropropagation, which was already being seen as having an application in respect of many vegetable crops. He understood that it was already possible, for example, to produce cucumber plants by tissue culture methods at a price that was competitive with plants produced under the normal biological seed route. It had to be recognized that such developments were going to create pressures that had not occurred in the past for more schemes to cover more species of vegetables in those countries where schemes did not exist. Mr. Clucas believed that even in those countries where schemes did exist, many breeders, where F_1 hybrids had been the route taken by them, had not applied for protection because it had not been necessary. Now the situation had changed quite radically and could change still more. At the moment, the talk was only of wide-spaced planted crops, particularly expensive ones like cucumber and possibly tomato, but it could eventually move, as the technology developed, into other crops. In Mr. Clucas' view, such developments would bring urgent pressure to bear for more plant breeders' rights schemes for vegetable crops. That would inevitably put financial pressures upon the authorities and he thought it was important to understand that

vegetable breeders were pragmatic people. They were going to need protection. They also recognized that there was a necessity to simplify testing methods and, in that context, Mr. Clucas wished to make it quite clear that the vegetable breeders of ASSINSEL, whilst they recognized that there were problems in testing in many areas, were adopting a very open-minded attitude. Referring to the remarks made by Dr. Böringer, who in a sense had said that they were blocking the system, Mr. Clucas would like to invite Dr. Böringer and his colleagues to make proposals to overcome that problem.

58. Mr. Heuver said that he would like, before discussing new schemes, which would be the subject of item 5 of the agenda, to try to summarize what had been said about item 4. He had the feeling that there was agreement that international cooperation should be pursued. Some were saying that progress should be a little quicker; others referred to understanding that some breeders had had some bad experiences with centralized testing in certain countries, and were therefore saying that time would be needed, that one must learn to walk before one could start running. Mr. Heuver believed that cooperation was, in the end, the only way the system could survive.

59. Mr. Royon commented that CIOPORA had raised the problems under discussion in 1974. It would therefore hope that it would not be necessary to wait for another 10 years and more before starting to walk.

60. Mr. Heuver said in reply that international cooperation needed time and that that was why he kept coming back to Geneva to make a little more progress.

61. Dr. Böringer took up the observation made by Mr. Royon that the breeders had been waiting for solutions since 1974. He saw the time that had elapsed since then with other eyes. Had UPOV not made a start with international cooperation in technical examination at that time, it would not be possible today to protect the varieties of numerous botanical species in a whole number of European UPOV States. Alone in the Federal Republic of Germany, some 40 botanical species had been newly included in the area of vegetatively reproduced ornamentals in which CIOPORA was indeed interested; that had only been possible as a result of such cooperation. That indeed constituted a positive aspect!

62. Mr. Heuver said that, although there was not always agreement in such discussions, he believed that ultimately there was a common interest, and that was to stimulate plant breeding.

63. Mr. Simon (France) was not sure that he had correctly interpreted the statement made by Mr. Clucas and wished to ask whether the new technologies, which were to enable a greater number of cucumber varieties to be developed, constituted a brake to international cooperation or whether, simply, they would cause more work for the national offices. Were the breeders wary of having varieties created by means of new methodologies examined in countries that had not yet been faced with that type of methodology? Mr. Simon admitted that he had not very well understood the links between such new methodology and the problems of cooperation.

64. Mr. Clucas explained that he had been talking about the range of species for which protection currently existed and what he had been suggesting was that, for example, in those countries where the range was limited, breeders had not put any pressure on the authorities to introduce further schemes because they had been able to rely upon the protection of F_1 hybrids. With

micropropagation techniques it appeared probable that the integrity of protection would be breached. Mr. Clucas therefore thought that, in those countries where the full range of vegetables was not covered by schemes, there would be increased demand for further schemes to be established and that, in those countries where the schemes already existed there would be more applications for plant breeders' rights than there had been in the past.

65. Dr. Mast noted that many encouraging words had been pronounced about international cooperation. Mr. Heuver had mentioned that the Office of the Union once presented a draft that was far-reaching. Dr. Mast found himself wondering whether the "light years" mentioned by Mr. Heuver had not now passed and whether the draft should not now be reexamined or at least discussed at a future meeting with the international organizations.

66. Mr. Heuver said that in his opinion there should be a discussion about the results of the current meeting at the next session of the Administrative and Legal Committee. The question raised by Dr. Mast could certainly be reexamined at a further session of that Committee.

APPLICATION OF THE UPOV CONVENTION TO BOTANICAL GENERA AND SPECIES

67. Mr. Heuver then said that he would like to pass on to item 5 of the agenda, "Application of the UPOV Convention to Botanical Genera and Species." Documents had been submitted by ASSINSEL and CIOPORA. There had also been discussions in the Administrative and Legal Committee, which had adopted a draft for a UPOV Council Recommendation on the Harmonization of the Lists of Protected Species. That draft was reproduced in the Annex to document IOM/II/5. Mr. Heuver invited comments from the representatives of the international organizations.

68. Dr. Mastenbroek noted that ASSINSEL had submitted written comments, which were reproduced in Annex I to document IOM/II/6. He could therefore be very brief. He confirmed that ASSINSEL would welcome the extension of the list of plant species eligible for variety protection. It was a fact that differences existed between several countries, in particular in respect of vegetable species and some grass species. ASSINSEL felt that it was in these two groups of crop plants that there was the least harmonization and Dr. Mastenbroek had been pleased to learn that UPOV was trying very hard to harmonize the lists in the shortest possible time.

69. Mr. Royon (France) observed that the note submitted by CIOPORA, reproduced at Annex II to document IOM/II/6, referred to the problem of application of the Convention to a larger number of botanical genera and species and, in order not to slow down the discussions, he would refer participants to the written note. He wished simply to emphasize three points. The first was that the question had truly to be asked whether the system of extension of protection to different species should not itself be fundamentally reviewed. It was indeed contrary to equity, since all those problems were to some extent linked, that some breeders worked on one species and could not obtain protection for the fruit of their work, simply because that species was not shown in an official list. Mr. Royon had difficulty in imagining, for example, that in the field of patents chemical products could be protected one year and that the following year protection could be extended to footwear and subsequently to computers, and so on. Mr. Royon felt it was important within the context of an International Union for the Protection of New Plant Varieties that agreement

be achieved on certain general protection criteria and that, despite the understandable difficulties linked with the subject and nature of plant varieties, an effort should nevertheless be made to find general solutions that were sufficiently flexible.

The second point which Mr. Royon wished to emphasize concerned the implications and links between that matter and not only international cooperation, but also the scope of the right, the contents of the breeder's right. In its written note, CIOPORA had given a brief example, but that example could be multiplied. It had referred to the case of Spain, which was a country developing rapidly as regards European horticulture, and taking for example species such as chrysanthemum and kalanchoë, which were not protected, it could be seen that a number of firms from other countries had set up establishments in Spain in order to produce in that country, thus quite normally and without breeders being able to criticize anything at all, and to plant new varieties and produce them without paying fees. Mr. Royon further noted that the problem of extension of protection of species arose not only in those countries in which there was no protection, but also in the countries that gave protection which was not sufficient, when based solely on the minimum rules under the Convention. That was the case, for example, if cut flowers of chrysanthemum were produced freely in Spain and those cut flowers could enter freely the Netherlands and other countries such as the Federal Republic of Germany, that was to say all those countries that did not protect the finished product as such. As a result, even in those countries that gave protection, the lack of protection in other countries had a direct effect, or at least an indirect one, on the breeders, who were not able to control the commercial exploitation of their varieties, even in those countries in which they enjoyed a title of protection.

The third point that Mr. Royon wished to emphasize was that of the draft UPOV Recommendation on the Harmonization of the Lists of Protected Species. Admittedly, the document illustrated good will on the part of UPOV in attempting to convince the member countries to extend protection to a maximum of genera and species in the plant kingdom. Nevertheless, Mr. Royon wished to make a few criticisms of the recommendations themselves. The text stated that the UPOV Council recommended the member States of the Union:

"(a) to extend protection to every genus or species for which the following conditions are met;"

CIOPORA held that those conditions should not be mentioned, at least not all of them. It was said, for example, that one of the conditions was to be that "there is a real or potential market in the member State of the Union concerned for the reproductive or vegetative propagating material of varieties from that genus or species." CIOPORA felt that it was not for the authorities responsible for protection of plant varieties to decide or to calculate whether a real or potential market existed for a plant species. Frequently, the breeder himself did not know, but according to Mr. Royon it had to be assumed that if plant varieties were protected it was to enable breeders to obtain normal remuneration for their research work. CIOPORA therefore held that such a condition should be deleted. It was also said that one of the conditions had to be that "there are no legal, climatic or other obstacles to such extension." Mr. Royon believed that national laws on public policy were quite adequate from that point of view and failed to see why a UPOV text should also mention such a condition. It was indeed the view of CIOPORA that the Convention itself did not permit such limitations to the extension of protection to other species to be established.

Mr. Royon said that he did not wish to enter too far into detail on the draft recommendations. Those two comments on the recommendations themselves, on the draft recommendations, being intended simply to show the spirit in which CIOPORA approached the matter of extending protection to different genera and species.

70. Dr. Troost said that he did not wish to discuss yet the eventual protection of the marketed product, which should be considered under item 7 of the agenda. He believed that AIPH favored the extension of protection to more species because that would encorage breeders to work on those species and that would be good for horticulture and maybe agriculture. Dr. Troost said that he would like to add that he was optimistic about international cooperation in testing and about accepting the testing results of other countries. International cooperation along those lines could only promote the availability of protection for all species.

71. Dr. Leenders noted that he had seen in a recent publication that UPOV had identified nearly 900 species which were protected in at least one of the UPOV member States. That was, of course, quite a considerable number, but unfortunately the table contained many blank spaces. Many of those 900 species were perhaps protected only in one country. Seventeen countries were members of UPOV and there were other countries in the world that also granted some kind of protection, but not under the UPOV Convention. FIS represented seed traders in just over 50 countries and therefore had much sympathy for the extension of the number of species protected. FIS would be even more pleased if the number of member countries could be extended. It recognized, however, that there were many countries in the world that did not have the necessary infrastructure. FIS wondered whether that situation created some unfair competition, similar to that pointed out by Mr. Royon, because sometimes the producer of the product had to buy seed on which royalties had been paid and his costs were greater than those incurred by someone who bought seed on which royalties had not had to be paid.

Dr. Leenders drew attention to the fact that in the building in which the discussions were taking place there were some other international organizations. He believed that it might be worthwhile for countries where variety protection was not available to examine whether some other means could be found to give at least some protection to breeders. Such countries had laws protecting property. Dr. Leenders wished to refer in particular to trademarks. They were available in some 150 countries, he believed, and the same applied for patents.

72. Mr. Heuver thanked Dr. Leenders for his intervention. The Administrative and Legal Committee had adopted draft recommendations to stimulate, at least for the important species, harmonization of the lists to eliminate false competition. Mr Heuver said that he would appreciate hearing further views on the draft recommendations and on the possibility of breeders working with the authorities to find a solution.

73. Dr. Böringer felt that more should be done by all parties. He wished therefore to make a proposal. He did not know whether it was a good one. All speakers had kept their observations very general. Mr. Royon alone had spoken in a concrete way of the protection of chrysanthemums and kalanchoë in Spain and that was at least a point that could be taken up. He wished, however, to make a general request that the international organizations take the following action: each one should draw up a table for itself, listing the 17 UPOV

member States, and should enter for each State those species which it felt it a priority to include. That would give UPOV a practical basis on which it would perhaps be possible to work together. Of course, things were frequently different in practice. The representatives of the international organizations had to understand that the government representatives were exactly the same people as the UPOV representatives. For instance, if Mr. Heuver and he were to sit down and discuss the extension of cooperation, there would occasionally be grounds for certain proposals not being immediately acceptable. He could well imagine that such a table would be of help in the joint discussions.

74. Mr. Heuver agreed with Dr. Böringer and said that he would appreciate a list of priorities.

75. Mr. Royon said that he wished to make another remark concerning the interrelationship between all the questions under discussion. He had already underlined the relationship between cooperation and the extension of protection to further species. He had also mentioned the relationship between the extension to further species and the scope of protection and now he would also like to relate the extension of protection to the question of protection of biotechnological processes. The species being mentioned were known species, but now, with genetic engineering methods and processes, there were bound to be more and more interspecific varieties. That was also a problem that had to be considered and therefore he would like UPOV to reconsider the basic philosophical question of the protection of plant breeders' rights within the UPOV Convention. Mr. Royon believed that it was a basic problem that had to be coped with. It was a fact that the UPOV Convention had been established for breeders to get protection for their rights. As CIOPORA had said in its paper, even if there were only one breeder in the world working on a particular species, that breeder was entitled to some form of protection.

76. Mr. Heuver said that he could perhaps agree with Mr. Royon, but again if everything was discussed at the same time there would be no progress. Mr. Heuver would therefore like to hear reactions to the proposal just made by Dr. Böringer.

77. Mr. Royon apologized for again taking the floor. He was quite aware that UPOV currently had problems to be resolved. CIOPORA was entirely in agreement with the concrete proposal made by Dr. Böringer and it was a question that could be settled very rapidly. It was enough to take the list of protectable species published by UPOV and, taking into account those countries that needed protection and those species that were currently the most valuable economically, to draw up a list of priorities. CIOPORA could provide such a list. However, Mr. Royon wished once more, even if he was likely to be thought of as someone who made unpleasant remarks, to say that sometimes it was the failure to approach problems for too long a time that led to all the problems arising at once. Mr. Royon believed that it was necessary to have the courage, when one realized that things were going wrong within an organization, to look the problems in the face, even if it would obviously need a great deal of work to resolve all those problems.

78. Mr. Heuver said that he did not agree with M. Royon that UPOV was a badly run organization and that it had collected problems, put them aside and waited. Mr. Heuver still had the feeling that, as Dr. Böringer had mentioned before, there was a possibility of protecting many more species, not only in Germany but also in other countries.

79. Mr. Simon personally felt that progress could be achieved towards extending the lists of species protected in the various countries to achieve improved harmonization. That of course required effective international cooperation and the sharing of tasks between the countries. It was not conceivable for international cooperation to centralize all examinations for all species in a small number of countries only. Mr. Simon appealed to breeders to help in setting up cooperation within the various countries. He referred to a statement that had been made by the President, pointing out that certain breeders did not trust having examinations conducted outside their own national territory. Such reticence could constitute a brake on cooperation and also rebound on the extension of protection to new species.

80. Dr. Mast wondered whether the point made about increasing the number of member States had already been covered. He wished to assure the participants that UPOV did its utmost to increase the number of member States. In his opinion UPOV had not done too badly because, in the last ten years, it had tripled the number of member States. There was, of course, a number of States that it would in particular like to have as members, such as Canada, Australia, Austria and three countries in the European Communities, Luxembourg, Greece and Portugal. Also there were no member States yet in the developing world and a number of important socialist countries were also missing. Dr. Mast realized that UPOV, though an organization with an international vocation, did not yet cover at the present count more than 17 States, but hardly a month passed when he did not receive in the Office of UPOV visitors from non-member States wishing to be informed about UPOV and on the conditions of becoming a member of it. UPOV had established a model law and in his view much was being done by the Office of the Union and by the member States to assist other States in introducing plant breeders' rights, thus qualifying those States for UPOV membership. The offices of the UPOV member States were very willing to receive visitors from non-member countries and if representatives of non-member States came to him saying that they wanted to see how plant breeders' rights worked in practice it was very easy to arrange a meeting for them in an Office of a member State. Dr. Mast concluded by saying that UPOV would, of course, be very grateful to receive the help of the international organizations in that respect.

81. Mr. Heuver thanked Dr. Mast for his intervention and agreed that there were certainly many countries that UPOV would like to see becoming member States. It was the task of the Secretariat of UPOV to encourage States to join the Union. Mr. Heuver closed the discussion on item 5 and handed back the chairmanship to the President of the Council.

82. Mr. Rigot thanked Mr. Heuver for having taken the chair with such mastery and competence. Mr. Rigot reminded the meeting that he had emphasized in his introduction that item 6 of the agenda was an important and particularly preoccupying matter, firstly because there had been a manifest development in biotechnology matters and also because it had to be recognized that those concerned with industrial patents were very ill-informed of agricultural matters and plant variety protection matters. It was doubtlessly a duty for UPOV to provide them with better information and UPOV was quite aware of that fact. UPOV was also aware that the organizations were concerned, that their views were not as yet fully defined or that they seemed to have forgotten the 25 years of the Convention together with all those reasons that had led to a plant breeders' rights certificate that would protect breeders more efficiently than industrial patents were able to do, at least so far. Mr. Rigot noted that UPOV's concern for that problem had led to the creation of a biotechnology

subgroup. Mr. Schlosser of the United States of America had been elected chairman of that subgroup and he was therefore to conduct the discussions on the appropriate protection of the results of biotechnological developments by industrial patents and/or plant breeders' rights. Mr. Rigot gave the chair to Mr. Schlosser who introduced the item.

APPROPRIATE PROTECTION OF THE RESULTS OF BIOTECHNOLOGICAL DEVELOPMENTS BY INDUSTRIAL PATENTS AND/OR PLANT BREEDER'S RIGHTS

83. Mr. Schlosser (Chairman of the Biotechnology Subgroup), noting that UPOV had already held two symposia on the subject, in 1982 and in 1984, remarked that it was nonetheless only one of a number of intergovernmental and non-governmental organizations studying the matter. The World Intellectual Property Organization had begun its study of the matter. It had held one meeting already and was planning another one shortly. It had also benefitted from a report prepared by Dr. Straus of the Max Planck Institute for Foreign and International Patent, Copyright, and Competition Law on biotechnology and its legal protection. Mr. Schlosser said that he had been asked to take the chair because he was the Chairman of the Biotechnology Subgroup of UPOV's Administrative and Legal Committee. That Subgroup, in the few meetings held so far, had begun to identify overlaps and conflicts between patent laws and plant breeders' rights. There was much more to do in that field and the progress that the Subgroup would make in the future frankly depended on receiving views and cooperation from the professional organizations. Mr. Schlosser believed that as the discussion developed there would be many who would criticize the UPOV Convention and few who would praise it. He therefore asked participants to keep in mind the value of the Convention to plant breeders and to the public.

Mr. Schlosser then invited the representatives of the organizations to speak on the comments they had submitted in writing. He asked the representatives of ASSINSEL to begin.

84. Dr. Mastenbroek confirmed that ASSINSEL and its breeder members were very much aware of the potential value of genetic engineering. Several techniques were covered by that term. It was possible, although there was very little hard evidence yet, that genetic engineering would have some value for plant breeding and for plant production. ASSINSEL had been studying the matter for several years already but had only been able to arrive at a common view in respect of a few points. Agreement had been reached that breeding processes, which were not protectable by plant breeders' rights should be eligible for patent protection if they satisfied the requirements for that protection. Dr. Mastenbroek said that that view led, however, to the question how to interpret the term "immediate product" of a protected process. The question for him was whether it could or could not be a plant, whether it could only be the protoplast or the single cell that had been altered in a genetical sense. It was neccessary to make use of a lot of essentially biological processes to regenerate a plant from a fused cell or protoplast. ASSINSEL also realized that an artificial gene was not protectable by plant breeders' rights. Genes were currently considered to be rather complicated chemical compounds and some researchers believed, and maybe there was already evidence, that it was possible to construct a very complicated protein which behaved as a gene when it was and after it had been incorporated into a living creature, such as a plant. The question, however, was at what point such a chemical compound was new. Dr. Mastenbroek had heard some people say that it was questionable

whether it would be possible to construct a new gene because the number of genes that occurred in nature was so enormous that all possibilities had already been realized by nature and in nature. But if the chemical compound was eligible for patent protection, if it satisfied all the requirements, then the question was to what extent would the patent provide protection, would it provide protection for the plant in which the gene was incorporated, would it provide protection for the variety derived from that first plant, and so on. ASSINSEL had no clear view yet on all those questions. Dr. Mastenbroek believed that it was, however, the general feeling that plant variety protection was of vital importance to plant breeders and consequently the ASSINSEL breeders did not want to jeopardize the UPOV system of plant variety protection. Considering recent developments in plant breeding, especially in plant breeding methods, ASSINSEL, however, did not want for the time being, to exclude patenting as an additional means to provide legal protection if that seemed suitable and appropriate.

85. Mr. Schlosser thanked Dr. Mastenbroek for his very comprehensive and thought-provoking statement, in which he had identified the very issues that concerned the meeting. Dr. Mastenbroek had mentioned the definition of a direct product, which was, of course, a problem under Article 53(b) of the European Patent Convention, the transferability of genes and the legal implications of that, and the desirability of keeping protection available under the UPOV Convention.

Mr. Schlosser then invited the representative of CIOPORA to speak on the document it had submitted, which was reproduced in Annex II to document IOM/II/6.

86. Mr. Royon pointed out that CIOPORA had approached the question with great modesty and great humility. Indeed, as far as he was aware, there were but very few, assuming that there were any at all, of its members who were directly involved in biotechnological techniques applied to ornamentals and fruit plants. It had not been possible for CIOPORA to adopt a sufficiently clear and precise attitude on that question. It had therefore done no more in its document than to repeat a certain number of general principles, which were nevertheless reliable basic principles. Mr. Royon wished to speak only of item 5 in the document, concerning practical problems. He wished to refer to a comment made by Mr. Bustarret who had said that UPOV's field applied to the whole plant kingdom, including bacteria, which were plant-like in nature, and who had therefore an extremely generalized view of the possibilities of applying the UPOV Convention. Mr. Royon felt that even if there was some overlap between what belonged to the patent field and what belonged to the plant varieties field, it seemed to him that at present the inventors and researchers working on new genes, problems of cell fusion and other biotechnology matters, nevertheless tended to turn in preference towards patent protection. The discussions at the current meeting on prior examination, cooperation and the definitions of protectable species had shown how difficult it would be as things stood to give such research workers protection within the UPOV context. CIOPORA was attempting above all to reflect on the practical and concrete implications of what could happen if a "manipulated" gene were incorporated into a plant or, beyond the plant, into a variety. At that juncture, the question arose, since there was no principle of dependence between the various varieties within the UPOV framework, whether the varieties could therefore be used for subsequent research work. At the present point in its reflections, it seemed to CIOPORA that research work should not be handicapped by the existence of a patent in respect of the gene concerned, but only where the

work remained within the field of research and experimentation. Once there was direct or indirect commercial exploitation of the patented gene it was sure that, rather like in respect of plant mutation, the positions of principle were likely to be very different, or even diametrically opposed, depending on the side on which the person stood. Mr. Royon felt that one would have to be both prudent and reasonable and that it ought to be possible to reach arrangements between the owners of the gene patent and the breeders who wished to use the gene in varieties they were able to create on the basis of the initial variety in which the gene had been incorporated. It remained to be seen, of course, whether such arrangements should be laid down in private licensing agreements or, on the contrary, in view of the extremely serious nature of the matter, whether use should be made of institutions such as compulsory licensing or ex officio licensing as already existed in certain other fields. CIOPORA had studied the matter, but had not for the moment reached a conclusion. It was endeavoring to assume the position of an observer with sufficient intelligence to follow developments. Its members nevertheless thought that if they put themselves in the place of a company that had invested for years in research work and had obtained a patent, then it was reasonable that the company should claim remuneration for its invention. Mr. Royon apologized for not going beyond such generalities, but CIOPORA was not as yet in a position to reach more concrete conclusions.

87. Mr. Schlosser thanked Mr. Royon for his intervention. Mr. Schlosser then called on Dr. von Pechmann to present the position which had been submitted by AIPPI and which was reproduced in document IOM/II/7.

88. Dr. Freiherr von Pechmann referred to the paper that had been submitted on behalf of AIPPI. It had in fact also been distributed in the meantime. He wished to apologize for the fact that it had been submitted somewhat late, although it had indeed already been produced in May. The paper was a resolution that had been adopted by the Executive Committee of AIPPI in the matter of biotechnological inventions. AIPPI held a worldwide congress in the field of industrial property every three years. In the interval between congresses, that was to say some 18 months after each congress, the Executive Committee met for a week to discuss current problems of industrial property. The resolution referred to was the outcome of a committee dealing with developments in the biotechnological field. He wished to emphasize a number of points and perhaps also add a few explanatory words. The committee had noted in its discussions that the principle adopted so far in various States of a living organism not constituting the subject matter of a patent was no longer compatible with the current state of science, since a level of development had been reached at which it was possible to produce new living organisms by means of biotechnological measures, particularly genetic engineering, that were altogether reproducible. The lack of reproducibility, however, had been one of the main arguments used against the patentability of new plant varieties. Since it was not possible as a rule for breeding processes to be reproducibly disclosed, an entirely new system was then created in order to provide at least some sort of protection to plants. In view of developments in genetic engineering, AIPPI was of the opinion that the situation as described no longer existed since the envisageable methods were likely to be reproducible. In any event, it had been noted that genetic engineering methods in the field of microorganisms had already obtained considerable economic success and that therefore the prospect existed of genetic engineering also playing a part in future in the breeding of new plants. AIPPI had therefore put forward the view that biotechnological inventions should be protected by applying the existing principles of patent law and, in view of that, it was no longer

necessary to maintain a specific right for that sector. Thus, all subject matters in the field of biotechnology should be patentable where they satisfied the usual patentability criteria, and that should also apply to new plants and to animals. The committee expressed itself specifically on that topic on page 3 of its resolution: "Although protection of plant varieties under laws conforming to the UPOV Convention presents a valuable system of protection and should continue, it is essential that techniques newly applied and products obtained thereby in the field of the development of new plants, and capable of meeting the patentability requirements, should become generally eligible for patent protection, and therefore, prohibition of double protection should not be maintained or provided for." A further point also mentioned there was that of double protection. The basic ruling in UPOV was that a State might only afford plant variety protection or only patent protection for a species. The Committee was of the opinion that the prohibition of double protection should no longer be maintained since it was possible under certain circumstances that two differing possibilities for the further development of a species might exist. There existed traditional crossing, which was the only method practised previously. The drafting of the UPOV Convention was based on that fact. However, if developments were to progress still further, one would be faced in future by inventions which possibly concerned the same species, but which could be realized by means of reproducible, describable processes for which patent protection should then be available. That meant that such inventions and the creation of new plants of the species concerned based on such inventions should be able to obtain protection by means of patents in addition to protection as plant varieties. The prohibition of double protection had indeed already been undermined by the new provision introduced in the Geneva Act of the UPOV Convention. He was referring to Article 37. The committee had taken the attitude that the prohibition of double protection had to be done away with completely. Of course, those were all thoughts for the future in a certain way, that were being considered by AIPPI, but the President had already stated that we had to think of the future and the developments that could already now be perceived had to be taken into account in the reflections that were being conducted at the meeting.

89. Mr. Schlosser thanked Dr. von Pechmann and noted that he had raised the question of Article 2(1) of the UPOV Convention which was very complicated and very controversial. Mr. Schlosser asked Dr. von Pechmann whether, when he spoke of double protection, he had in mind alternative protection or duplicative protection. For Mr. Schlosser, consequences were associated with either.

90. Dr. Freiherr von Pechmann observed that the question had been raised of what was meant by the term double protection in the AIPPI Resolution, that was to say what was meant by the demand that the prohibition of double protection be lifted. To begin with, that meant actually that Article 2 of the UPOV Convention, stipulating that for one and the same botanical genus or species either a special title of protection, i.e. plant breeders' rights, or a patent, should be afforded, had to be deleted. The view that the prohibition of double protection had to be lifted had been advocated for the following reasons: since plant variety protection had been set up for traditional breeding methods, it should also continue in future for those varieties that had been bred by means of such non-reproducible conventional processes. Thus, plant variety protection should still be granted for a new rose developed by conventional methods. However, for roses produced by means of genetic engineering, where it could be assumed that the breeding process was reproducible, patent protection should be possible, but was not permitted by the current provision of Article 2, where roses had been included in the list of species

for which plant variety protection was available in the State concerned. That was the concept that had been expressed in the Resolution. Of course, the reflections went further than that, and the question had been raised whether it should not in fact be left for the breeder to decide in cases in which he had created a new plant variety by means of genetic engineering whether he should have his new variety protected by plant breeders' rights and thereby obtain protection for the propagating material. That obviously raised the question whether it was possible for two differing protection rights to be afforded or applied for in respect of one and the same new variety at the same time. He was aware that considerable objections existed and that there was a justifiable fear that such dual protection for varieties of the same species could jeopardize the whole UPOV system. However, he would like to point out that parallel protection systems existed in the field of technical inventions and that they were possible for one and the same invention. For instance, in the Federal Republic of Germany, it was possible to obtain, for a technical invention that constituted a specific shape, utility model protection lasting for six years at the same time as protection under a patent granted for 20 years. So far, no serious problems had ever arisen under German law due to the simultaneous existence of two differing titles of protection. Obviously, in infringement proceedings, an owner of protection who possessed two different titles in respect of the same invention had to decide which one he was going to utilize. A stepwise prohibition of legal action would be one possibility of preventing unauthorized application of both simultaneous titles in the same case. That had not led to any problems at all so far in the Federal Republic of Germany. He therefore believed that the fears he occasionally heard in discussions that protection by means of two simultaneous titles for one and the same variety would lead to impossible situations were not justified. The considerations on the basis of which the AIPPI committee had pronounced in favor of the idea of patent protection for new plant varieties developed in the biotechnological, or rather genetic engineering, field were primarily based on the fact that the protective effect of plant breeders'rights was too limited as the result of the right of free exploitation of a variety for subsequent breeding work. He had spoken with the breeders and they were indeed concerned that plant breeders' rights opened up the possibility, due to the fact that the new variety concerned was freely available to develop further varieties, that infringers would, so as to say, occupy an important variety with enormous prospects of economic success without the breeder, who had possibly had to invest hundreds of millions, being able to obtain compensation for that use of the initial variety. That had appeared clear to all those who had dealt with the matter within AIPPI. Those fears were possibly justified and the AIPPI Executive Committee had therefore spoken in favor of patent protection being afforded in that field, whereby the problem would be solved by dependency. Mr. Royon had indeed already mentioned that it would be conceivable in such a case for the effect of the patent to be limited in some way in respect of improvements and further developments, whether by means of a compulsory license or in some other way. Those were things that had not of course as yet been discussed within the AIPPI Executive Committee and he therefore did not wish to say anything on the subject.

91. Dr. Mast said that he wished to express his concern about the Resolution adopted by the Executive Committee of AIPPI in Rio de Janeiro. He was very much concerned about it not because he was speaking for UPOV but because he was one of the persons who participated in the establishment of the European Patent Convention, in which the protection of a plant variety by a patent was excluded in order to avoid double protection. The reason for avoiding such double protection was that it was thought that to allow it would have placed a

great burden on the general public and would have endangered and jeopardized legal security. Dr. Mast recalled that, when granting a patent or a plant variety protection certificate, States were granting an exclusive right, sometimes called a monopoly. There were other cases in law where States granted exclusive rights. Dr. Mast cited as an example the fact that in most UPOV member States there were authorities which registered the transfer of title in real property or registered mortgages. He could not imagine that a State would maintain two offices, completely unconnected with each other, which were given the function of registering a transfer of title in real property or for example a mortgage, and that it would simply leave it to the interested persons to choose which office they wished to go to. Similarly, Dr. Mast did not see how it could be possible in the field of intellectual property that, for plant varieties of the same species, that was for plant varieties that competed in the market place, two rights of practically the same type could be registered by two different offices. It had been the intention of the European Patent Convention, when plant varieties were excluded from patenting, to prevent the legal insecurity that would derive from such a situation, and it was not only the European Patent Convention that excluded plant varieties from patenting. There were also some 15 to 20 national laws, adopted by national parliaments, that so excluded them.

Dr. Mast declared that he could not see any justification for the request that such double protection should no longer be excluded. Plant varieties, however created, could be protected under the UPOV Convention. He simply could not see any reason why there should be two different offices following two different laws, two different legal procedures and having two different states of the art to consider, offices that applied different testing methods for the grant of legal titles that would have a different scope of protection. Dr. Mast wondered how a licensee, be he seedsman or grower, would know what to do if confronted with two different types of rights in the same field. Such a situation seemed to Dr. Mast to be unacceptable, and he could not understand how AIPPI and also other circles could hold the view that such double protection should now be admissible. He knew that, as Dr. von Pechmann had said, under some laws different types of intellectual property protection were granted side by side for the same subject matter. The German utility model and the German industrial patent were often cited as examples. Dr. Mast remembered well, however, that that legal situation in the Federal Republic of Germany had never been considered to be a very happy one and that efforts had been made to improve the situation. He therefore thought that it would not be possible to go to fifteen or more parliaments and ask them to replace the present clear rules on the demarcation of the two fields with a rather loose provision with unclear consequences.

Dr. Mast referred to the frequent assertions that there were a number of open questions that had to be solved. He wished to make it clear that all those open questions were questions of patent law. He was not aware of any open question under plant breeders' rights law. Although the plant breeders' rights system was a simple system it fulfilled its purpose perfectly, without leaving open questions. When comparing the situation existing under the plant breeders' rights system with the situation under the patent system, as had been done in UPOV, and in particular in the Subgroup chaired by Mr. Schlosser, very clear answers had always been found in relation to the plant breeders' rights system while, as far as the patent system was concerned, there had been a number of open questions. The document prepared for WIPO by Dr. Straus of the Max Planck Institute for Foreign and International Patent, Copyright, and Competition Law, which had been mentioned by Mr. Schlosser earlier, listed a

number of those problems. That study contained about 40 paragraphs of problems but again they were all problems of patent law and not of plant variety protection law. UPOV, of course, had reasons to be concerned about those open questions in the patent system. For UPOV it was like living in a house when the neighbouring house was endangered by fire.

92. Mr. Skov (Denmark) said that he fully agreed with the reference by Mr. Schlosser, in his opening speech, to the fact that there were many good qualities in the UPOV Convention. Mr. Skov wished firstly to mention Article 5(1) which allowed the farmer to save his own seed and to use that seed to produce animal fodder or material for human consumption, for milling, for baking, for other industrial purposes. Those were all important economic activities. He also wished to mention Article 5(3), which allowed the use of a protected variety for further breeding. He wished to underline that in those cases the breeder had no say and the ordinary farmer, the ordinary grower, could do just what he liked. Mr. Skov also wished to say that he thought that it was a good thing that the UPOV Convention was a matter for the Ministries of Agriculture, which were responsible for agricultural and horticultural policies. During the summer the Governing Board of the Nordic Gene Bank had discussed the question of the patenting of plants produced by means of biotechnology. That Board had transmitted a statement to the five Ministries of Agriculture of the Nordic countries. Mr. Skov said that he did not wish to bother participants with the whole text but that he would just read out the conclusion:

> "Not being able to deny that it might be reasonable to ensure to an enterprise which has created a valuable new gene by means of biotechnology an adequate remuneration, the Governing Board of the Nordic Gene Bank recommends that the problems be subject to a study in depth, preferably if possible on an international basis of the possibilities to ensure to other persons than the patentee the right to use plants created by genetic engineering for the purposes of further breeding and other activities which the UPOV Convention allows and at the same time ensure to the enterprise having performed the genetic engineering an adequate remuneration."

93. Mr. Fikkert said that he would like to underline what had been said by Dr. Mast. In Mr. Fikkert's opinion, Article 2(1) of the UPOV Convention did not say anything as to whether an industrial patent could be applicable to a plant variety or not. Article 2(1) simply said that protection granted under the UPOV Convention could be granted in the form of plant breeders' rights or of what was called in the United States of America a plant patent, and that both forms should not be available for any one species since that might cause confusion for the public. Mr. Fikkert noted that it had been said during the discussion that the UPOV Convention had been designed and established for classical breeding methods and that other breeding methods were now becoming available. He did not agree with that statement and believed that the UPOV Convention had been designed for plant breeders regardless of the methods they used. For Mr. Fikkert the essential question was whether there was any reason to grant some breeders a right according to the UPOV Convention and others a right according to patent legislation. He did not see why breeders should be granted a different scope of protection just because the breeding method was different.

94. Mr. Denton thought that one must first look at what was protected and not at who was protected. What was protected under the UPOV Convention was quite simply a variety and that was basically what a farmer bought. For Mr. Denton the question whether in certain circumstances it was possible to protect a variety by some other system or in some other way was immaterial. He believed that breeders as a whole were happy with the existing protection system for varieties. Biotechnology, however, did not necessarily in a work sense, in an investment sense, end up with a variety. It ended up with something new which could be utilized in the production of a variety, perhaps directly, perhaps indirectly, perhaps by the utilization of the new technology, perhaps by the taking of the product of the new technology and by applying classical breeding methods to that product. It therefore seemed to Mr. Denton that there were two systems that could generally run quite happily in parallel but could not necessarily run in parallel in an equity sense at the present time unless something was created as a bridge to join the two operations together. Mr. Denton believed that he could go along exactly with what Mr. Skov had said. It was quite unrealistic to expect commercial money to be invested in research which would cost many millions, in whatever currency being used, to produce something which could be taken and utilized freely by everybody else, and perhaps not by the actual inventor himself because he did not happen to have the particular skills to transfer his invention into a variety. Unless appropriate mechanisms were found, one was bound in fact to get under those circumstances a closed shop. The question that then arose was what the bridge should be. Mr. Denton was sure that breeders as a whole in the international organizations would be exactly in accord with what Mr. Skov had said, namely, that when there was a patentable process or a patentable gene that could be utilized, whether it was a new gene or a new expression of genes, then they would want access and they would be prepared to pay for that access. Mr. Denton said that he had been convinced by an extremely interesting paper that had been distributed by Dr. Straus that whatever breeders might think the processes and the products of biotechnology were going to be patented. Mr. Denton therefore believed that efforts had to be directed to working out what the bridge should be and how it was to be constructed. He thought that that was primarily a legal question and he was not particularly conversant with legal problems. As a representative of a breeder, however, he could say that it was essential that the problems were overcome because if one was going to keep anything of the essence of the UPOV Convention and the freedom of access that breeders wanted, and at the same time ensure a sufficient return for any new inventor, then that bridge had to be created.

95. Dr. Freiherr von Pechmann wished simply to make two observations. Dr. Mast had interpreted the concept of double protection altogether in the meaning of parallel protection. However, the AIPPI paper referred only to what was stipulated in Article 2 of the UPOV Convention and had already been undermined by the new Article 37. That latter Article constituted, at least for new States, an exception in favor of protection under two types of rights. That was already clear from the title of the Article. The AIPPI committee had therefore followed the lines of Article 37 in demanding that the prohibition of double protection should no longer be maintained. What had emerged from the discussion on the concept of "double protection" went further, however, than what had been said in the paper. He wished to make a second observation in respect of what had been said by Mr. Skov. The opinion of Mr. Skov had at least changed somewhat from the opinion he had presented two years earlier. He had said at that time, he seemed to remember, that Article 5(3) constituted the heart of the UPOV Convention. Today, however, Mr. Skov had said that it had been clear to him, together with the other gentlemen participating in the

discussion, that compensation for the use of plants produced by genetic engineering for new breeding work could be considered. He believed that if emphasis had not been laid so heavily and repeatedly on the provision of Article 5(3) as the heart of the UPOV Convention, the demand for patent protection might not have arisen to the same extent as was now obviously the case. He wished simply to recall the discussions that had taken place both in WIPO and in the literature. Articles on the subject had repeatedly pointed to the fact that a variety could simply be used without problem or further improvements, which had therefore reduced the attractiveness of plant breeders' rights for genetic engineering breeders. If it were possible to find a solution, by a change in the provision as hinted at by Mr. Skov, that would possibly go a long way to allaying the fears obviously felt by the genetic engineering breeders.

96. Mr. Royon said that he would like to fully support the intervention of the representative of COMASSO and would like at the same opportunity to take up parts of two previous interventions, namely, those of Dr. Mast and Mr. Skov. Dr. Mast had said that in the Munich Convention new plant varieties had been excluded from patent protection on the grounds of so-called legal security, maybe because it had been thought patents would give too strong a protection. Mr. Royon thought that the main reason why they had been excluded in the Munich Convention was that the UPOV Convention had been at a very early stage of development. Exactly what was going to happen in the various member States of UPOV had not been known. Also, one should not forget that two States that participated in the establishment of the Munich Convention, namely, France and the Federal Republic of Germany, had not followed Article 53 of the Munich Convention but had, on the contrary, accepted the principle of patentability of new plant varieties when such plant varieties belonged to species not yet covered by plant breeders' rights legislation.

Mr. Royon said that, in the context of the scope of protection, he would like to refer to WIPO document BioT/CE/I/3, which he had found very interesting. He had been surprised to read in paragraph 15, in a declaration made by UPOV, that plant varieties had been protected under the UPOV Convention rather than by patents because in the UPOV Convention there was "a more limited protection than that given to patents because of the special nature of plants and the use made of them in agriculture and horticulture." It seemed, when one read that paragraph, that one should think that the scope of protection for plants should be more limited. Further on, in paragraph 48, when it had been shown, probably after some discussion, that some people were perhaps even in favor of protecting plant varieties by patents, it was stated: "In this connection, the view was expressed that, if the extent of protection available under the UPOV Convention was found to be insufficient to encourage the necessary investment in biotechnological research and development in relation to plant varieties, then, rather than seeking to correct the situation by the patent route, consideration should be given to using the opportunities that exist under Article 5(4) of the UPOV Convention to grant a more extensive right." There seemed to Mr. Royon to be a very large discrepancy between those two paragraphs. On the one hand it was said that plants should not be protected by patents because patents gave too strong a protection; on the other hand, when breeders turned to patents precisely because they wanted stronger protection then they were told that they did not need to do that because UPOV could also give them stronger protection under the Convention.

Mr. Royon then said that he had noted from Mr. Skov's intervention that it was stated in the conclusion of the study group in Denmark that a patented gene should be free for breeders for further breeding. CIOPORA fully agreed with that and had said so before in its interventions. Then Mr. Skov had added "and for other activities that the UPOV Convention allows." Mr. Royon did not fully understand what Mr. Skov had meant by those words. When one saw the kind of loopholes that existed in the protection available under the UPOV Convention, one could understand that people working in the field of biotechnology did not accept that their patented genes should be freely utilized for such other activities that the UPOV Convention allowed. In the opinion of CIOPORA the UPOV Convention allowed too many things which the breeder could not control.

97. Mr. Skov thought that he had said quite clearly at the outset that the UPOV Convention allowed the farmer to use his own seed and to produce animal feed, foodstuffs for human consumption and products for industry. That was what he had meant. Those activities must be allowed and he believed that the UPOV Convention was quite clear in that respect. Article 5(1) said that the scope of the Convention extended to the production of propagating material, and the offering for sale or sale of propagating material as such.

98. Dr. Gunary (ASSINSEL) said that when the ASSINSEL presentation was made it had been stated that there was not a consensus view within ASSINSEL. Dr. Gunary stressed that although he was speaking as an ASSINSEL delegate he was perhaps speaking more from the United Kingdom point of view.

The UPOV Convention was an instrument to protect plant breeders' rights. Plant breeders should recognize that in seeking to protect their intellectual property they should, at the same time, appreciate that people who invented new genes should have an equal right to protect their property. It also seemed to Dr. Gunary that it was perhaps unreasonable to ask for the free use of a variety containing a new gene without allowing for some sort of compensation to the individual or the company that had invented or identified that gene. It therefore seemed to him that one should be looking for a system of legislation that was somewhat different both from the existing patent legislation and from the existing plant breeders' rights legislation. Dr. Gunary said that he had been very pleased to hear that discussions were taking place between WIPO and UPOV because it seemed that one should perhaps recognize that one was dealing with very new technology and one should therefore think carefully and plan a system of protection that took into account the needs of all inventors to get an appropriate reward for their inventions. The U.K. group felt that protected processes and protected genes should perhaps be available to breeders under licence and that, in order to allow the original inventor a reasonable return, there should perhaps be a period of monopoly. A further point, which was a very technical point but which Dr. Gunary thought just had to be considered, was what was a gene. Molecular biologists considered genes in terms of base sequences. It was perhaps possible to consider patenting a sequence but only inasmuch as it only was possible to patent something if it was useful. In practical reality a sequence might or might not express itself in the plant and some consideration would have to be given in the legislation to thinking through that somewhat complicated sequence of events.

99. Dr. Mast again pointed out that double protection had been prohibited for the reason that protection within the same genus and species by means of plant breeders' rights and patent law would jeopardize legal security and constitute too heavy a burden for the overall economy. He considered that the

situation had changed and that the example of legislation in France and Germany, under which patent protection was still admitted where plant breeders' rights had not yet entered into force, proved the intentions of the European legislator and of the legislators in individual European and other States. He observed that he had in fact wished to raise a different question. Since the discussions were turning towards the question of the alleged difference in scope of protection, he would like to hear from Dr. von Pechmann whether it was indeed true that the scope of protection under a patent was greater in that respect than under plant breeders' rights. If an industrial patent was granted for a wheat variety and the patentee sold the wheat variety to a farmer, could the farmer then no longer use that wheat variety for producing further seed for himself for the following crop year? He also had a further question. It was frequently said that Article 5(3) constituted a particularity of the UPOV Convention. It would perhaps be a good thing for UPOV if such were the case. However, he was not so sure that the legal situation under patent law was any different. He wished to take the hypothesis of a wheat variety having been produced with the use of a highly valuable patented gene. Subsequently, a bag of seed of that wheat variety was sold. Was it not the case that, as of that moment, the rights under a patent were exhausted in respect of further utilization of the quantity of seed involved? If the purchaser then used the wheat variety to produce a further wheat variety which continued to possess the advantages achieved by means of that valuable gene, but otherwise constituted an altogether different, morphologically distinct variety, would that new variety come within the scope of protection of the initial wheat variety after all? He wondered whether all the participants had not so far based themselves on erroneous assumptions as regards the differing scope of protection under plant breeders' rights and patents.

100. Dr. Freiherr von Pechmann commented that Dr. Mast had raised a most difficult question. He believed, and that was indeed the most general view, that plant breeders' rights, contrary to patents, involved no dependency. Patents on the other hand afforded protection for the industrial exploitation of an invention and also for further development if such development was itself patentable. However, where the new development still comprised the features of the original invention, with the addition of new features, such a patent remained dependent on the initial patent. He wished to give a quite simple example. The first inventor who made a winter tyre with a knobbly tread obtained a patent worded as follows: "Pneumatic tyre characterized by the fact that the tread comprises knobs." A second inventor then arrived and inventively added metal studs. He then obtained patent protection for his studded tyre. As long as he equipped the patent knobbly tyre with his studs, he remained dependent on the consent of the knobbly-tyre patentee and could only exploit his invention commercially if the owner of the knobbly-tyre patent gave him a license. That was a ruling that, as far as he was aware, was to be found in patent law throughout the world. Under Article 5(3) of the UPOV Convention, however, he would be free to act since he would have created a new tyre that comprised the additional feature of studs. That principle meant that he would not be dependent on the dominating earlier title of protection. Those were the problems that had been mentioned by the breeders with whom he had discussed the question and in respect of which they had expressed some concern.

101. Dr. Mast held the comparison to be somewhat lame since the manufacturer of the tyre equipped with studs had first to manufacture the other tyre, that was to say the knobbly tyre, which he then fitted with studs. He had thus to reproduce the first invention. The comparison dealt with the field of non-

living material, that was to say material that did not reproduce itself, whereas the ruling in Article 5(3) of the UPOV Convention had been established in respect of living material. Special principles had to apply to living, self-reproducing material since the whole basis was a different one. In that field there existed absolutely no generally recognized patent doctrine. All questions were as yet unanswered. It was perhaps useful for those matters to be regulated. So far neither the courts nor the legal writers had done so. He in no way wished to deny that Dr. von Pechmann could well be right in his legal views: he simply wished to note that the question of how far the principle of exhaustion extended in the case of self-reproducing material was as yet completely open. A fundamental examination had yet to be carried out.

102. Dr. Freiherr von Pechmann wished to add one point: it had been said that the protection of a manufacturing process by means of a patent raised no problems. However, as a result of the fact that protection for a process also afforded protection to the product of the process, questions arose that were indeed very problematic. The question had to be posed whether the owner of a process patent could not already claim protection for the final product, thus indirectly constituting protection for the product. Experience had already shown in the case of chemical compounds that the product of the process had obtained product protection, or even the chemical compounds involved, where they had been manufactured in accordance with the process in a foreign country where there was no patent protection. Importation into a country in which process protection existed therefore constituted an infringement of the process patent despite the fact that the compound itself had been manufactured abroad.

103. Mr. Royon wished firstly to point out that CIOPORA was still in the dark as far as its stance on that problem was concerned, but that nevertheless he wished to add a general comment to the debate in respect of the example quoted by Dr. Mast. It seemed to Mr. Royon that a researcher who had isolated a gene, for example a resistance gene to certain wheat diseases, and the gene was patented, should receive remuneration and should be able to commercially exploit his patent where the gene was incorporated in plants that were not protected, plants in the public domain, and contributed an economic gain to those plants. Where a gene was incorporated into a variety that was subsequently improved by a further breeder and such variety was possibly covered by either a patent or by plant breeders' rights, it seemed to him that there was a need to permit some remuneration to the person who had isolated and patented the gene. The question for Mr. Royon was the extent to which initial access to the gene was authorized and therefore whether compulsory licenses had to be provided for or not. Likewise, the question of dependence referred to by Dr. von Pechmann also arose since that represented exactly the case of patents of improvement. Mr. Royon believed that the concept of patent of improvement had to be taken as a basis and that certain specific solutions had to be looked for.

104. Dr. Leenders noted that Dr. Mast had referred to the theory of exhaustion. At the last session on the subject within the framework of UPOV Dr. Leenders had objected to applying that theory because in his view it was not applicable. That theory meant that someone who sold a protected product, for instance to another country, could not, after he had received his royalty in the first country, ask for a further royalty on that sold product. The theory did not mean that someone who acquired that product had a free ticket to produce the protected product.

105. Mr. Fikkert remarked that it had been suggested by some speakers that a genetic engineer should be able to get his proper protection and, of course, he agreed with that. If one believed in the instrument of intellectual property rights as an incentive for the creation of inventions or varieties then one could not do anything else but agree with such a statement. Mr. Fikkert was not very worried about an invention of say a chemical compound being protected in the way the inventor liked best. The problem would arise when his invention was a plant variety, either as the result of a technique or because his product had been incorporated in that variety. Mr. Fikkert believed that from that moment on the inventor was a plant breeder. He had raised the question before why such a person should enjoy a different right, a different protection from the breeder living next door to him who was what was called a classical plant breeder. He had not yet heard why such a discrimination would be justified. Mr. Fikkert also thought that one should bear in mind that the protection provided for in the UPOV Convention was the best feasible protection at the time and he believed that it still was. The so-called loopholes in the protection provided for by the UPOV Convention were there for social or political reasons. Even if one could find a justification for discrimination between plant breeders because the one bred according to the classical methods and the other followed a new method, one would have to take into account the resistance from the political side against the scope of protection offered by patents. Mr. Fikkert said that he wished to recall the discussions regarding patents for pharmaceutical products, for medicines. They were something to be kept in mind.

106. Dr. Lange (ASSINSEL) first observed that he did not wish to take a stance on the individual legal questions that had been discussed. He had, indeed, already once had the opportunity in that forum of explaining his views on drawing the line reasonably between patent law and plant breeders' rights law. He wished in fact to comment that the whole discussion seemed to him rather odd since what were being discussed with UPOV were problems that did not in fact concern UPOV but in reality patent law alone. He wished to give a number of examples. The meeting had spoken of the prohibition of patent protection for plant varieties. That was a ruling to be found in the European Patent Convention, in Article 53(b), and not in the UPOV Convention. There had been discussions on questions of scope of protection. That was not a matter for the UPOV Convention, but concerned the scope of protection under a patent. Likewise, matters of exhaustion were not questions concerning plant breeders' rights, but also in fact matters of patent law. He had gained the impression that the difficulties that repeatedly arose in connection with biological material were being transferred to a field in which those particular difficulties did not exist, since UPOV possessed a well-adapted, tailored system of protection for biological material. The conclusions he drew from the debates were that some of the things that were being demanded would in fact require statutory amendment essentially of concern to patent law. In that respect, he wished to point out again that the plant variety protection law had achieved a very reasonable balance in view of the overall background of agricultural policy. And even if there were a wish to remove Article 53(b) from patent law or to consider other amendments to the law which would perhaps be necessary to introduce that which had been advocated at the meeting, he nevertheless wished to remind the meeting that all those concerned would be exposed to the criticism that had in fact already been levelled against monopoly rights in the area of foodstuffs and in relation to genetic resources. It was certainly no service to the whole of industrial property for extended rights to be demanded and thus give cause for all those criticisms. He wished again to support Mr. Fikkert in his view that there was in fact no argument in

favor of calling for the alleged stronger protection since the argument of much higher investments that was frequently heard merely represented an argument of degree. Of course, great expense was involved in genetic engineering. But there was no fundamental difference with traditional plant breeding. Breeders likewise invested considerable funds in traditional agricultural plant breeding and also had to accept the fact that a plant variety that had cost perhaps 10 or 15 million marks could be further utilized in breeding. His personal conclusion could only be that the solution was not to be found in the legal area but in fact in the practical area. Practical solutions should be sought. Plant breeders should sit down together with firms involved in genetic engineering and work out reasonable private settlements. He believed that to be the best way of solving the problem.

107. Mr. Schlosser said that he was going to exercise the Chairman's prerogative of attempting to sum up what had been discussed so far. In so doing, he did not mean to end the debate but simply to give it as much focus as possible. He thought that a general conclusion had been reached that plant breeders' rights had a very definite role to play in the protection of new varieties. Those who had spoken about concerns under Article 2(1) and the possibilities for patent protection had nevertheless acknowledged the role of the UPOV Convention in the protection of plant varieties. In some cases, however, breeders had pointed out the fact that patent laws authorized or could be modified to authorize protection for plants and that created the problem under Article 2(1). The breeders, as Mr. Schlosser had understood their position, had not suggested that there should be duplicate protection, i.e. that any particular variety should be protectable both under breeders' rights and under the patent system. Rather, they had suggested that there should be an alternative or a choice. In some cases, patent rights seemed more amenable to their needs, in other cases breeders' rights seemed preferable. Mr. Schlosser believed that breeders were asking the member States to allow them to make the choice.

Mr. Skov, among others, had pointed out that there was a risk if patents became the predominant form of protection for plants that some of the public interest safeguards incorporated in the UPOV Convention might not be applied by patent administrations or be applicable under the patent law.

Mr. Fikkert, among others, had pointed out a seeming discrepancy in the case of genetically engineered plants. If a plant was bred by traditional breeding methods, that was cross breeding over many years and many plant generations, it was very hard to describe what had happened when you applied for a patent. In fact, even a very accurate, a very detailed explanation as to how that plant had been bred would not necessarily enable the plant to be produced again and for that reason it might be impossible, for traditionally bred plants, to satisfy the patent disclosure requirements. It was far easier to describe the breeding of a genetically engineered plant and that produced what Mr. Fikkert was concerned about, namely, the possibility that both forms of protection could be available for genetically engineered plants but only breeders' rights would be available for traditionally bred plants. Mr. Fikkert had asked if that was fair.

Finally, the discussions had touched on the inevitable gene question. Patent laws seemed to permit the patenting of genes as chemical compounds. Since they were patentable as chemical compounds, they followed the rules of patent protection. Therefore, if someone developed a gene that introduced drought resistance into a variety, there was a very good chance that that gene

would have applicability not only in that variety, e.g. a wheat variety, but in corn, barley, oats and rye as well. It could have a wide applicability and a wide applicability meant bigger royalties for the patent owner, and that was what patent attorneys thought he should be entitled to. Breeders' rights offices on the other hand questioned whether there should really be that expansive a "monopoly". They questioned whether that drought resistance gene and the royalties for it should not be limited to the species or the variety for which it was bred. Mr. Schlosser saw another question about genes and that was the applicability of the patent law doctrine of first sale. Under all patent laws once a patented object was sold, control over it was lost. It belonged to the person who had bought it. That doctrine, however, had always been applied to inanimate objects. It applied to lasers, to bicycle gears, to chemical compounds, to lots of things, but it had never been applied to patented items that reproduced themselves. As the item reproduced itself the question arose whether the first sale doctrine applied or whether each successive reproduction of that patented material gave rise to further royalties for the patent owner. That seemed to be an unanswered question that concerned Mr. Royon and Dr. Mast, among others.

Mr. Schlosser then invited Dr. Kley to take the floor.

108. Dr. Kley (ASSINSEL) wished basically to state the position on certain items from the point of view of the practical breeder. The first point was that of the argument, repeatedly put forward, that the investment and cost of genetic engineering measures were so high that allegedly more extensive patent protection had to be introduced. It had been said on the previous day that patents were needed for varieties that had been created by genetic engineering and then it had been literally said that there were parties that had invested hundreds of millions and it was feared that those investments would not be amortized. He wished to go along with what was said by Dr. Lange on the previous day. He agreed with Dr. Lange that the injection of capital and the costs that were incurred constituted a matter of degree in relation to the legal problem dealt with and not an essential problem. His view was that costs could change and the question then arose whether it was wished to amend the UPOV Convention and amend the Patent Convention simply because genetic engineering happened to cost a relatively large amount of money for the time. When he was still a young man, it had been said that a firm was obliged to grow in order to afford the large-scale computers. Today, however, everyone had a personal computer on his desk and small firms were flourishing. Ten years ago, it had been said--he was speaking from personal experience--that rape breeding could only be undertaken by large-size firms in the future, since the apparatus needed to equip a laboratory and the analysis technique were so expensive that small breeders could no longer afford them. However, today, small people, of which he was one, were still rape breeders and were producing good varieties, since analysis techniques and methods had been so simplified that the costs could be borne by small firms as well. He was not pretending to forecast that genetic engineering would become so cheap and so inexpensive that it could be applied by the smaller firms. However, it was well known that, for instance, tissue culture had been very expensive some ten years previously, and that today, small firms could already apply cell culture and were indeed able to bear the costs. He considered that costs were a relative matter and in no way justified changing the whole proven legal system.

He then wished to ask further questions of those who had said that they wanted their patent to pay for itself. What was the genetic engineer paying to the conventional breeder who had produced a variety using conventional

methods? What was he paying for the permission to insert the gene he had found into an existing variety for which plant breeders' rights existed? To be quite frank, he was paying nothing. Logically, that situation had therefore to be altered. Indeed, without the utilization of the existing variety, the effect of the genetic engineers' work was reduced to nought.

He still had a third problem: what would in fact happen when a breeder using conventional methods achieved the same results as a breeder using genetic engineering methods? Perhaps he should give a practical example: ten years ago a breeder had begun to produce a variety by means of interspecific crossing and to create a new genome. So far that aim had not been achieved. Then along came a genetic engineer who said that the aim could be achieved in four years perhaps. Four years later, the breeder working with conventional methods and the genetic engineer achieved the same result. He wished to ask the experts whether they would give one breeder a patent and thus permit the breeder to amortize his work by means of the patent, and also give him the possibility of preventing others from using the variety, without his license, for the breeding of further varieties? Was the other breeder, who had worked by conventional methods, to be protected under the UPOV Convention? Was his breeding work to be used by other breeders, including the genetic engineer, who inserted his gene into it, and was the plant breeder not to receive any license payment in return? As could be seen, it was meaningless to make a methodological difference between conventional methods and genetic engineering processes. Indeed, in ten years' time, genetic engineering processes would also constitute conventional breeding methods. That had always been the case, ever since plant breeding had been undertaken. However, some people were still rather new in the business and had not become aware of that fact yet. He finally, therefore, wished to put the following question: was it intended to change everything--the whole tried-and-trusted arrangement--without necessity, was it intended to demand patents for varieties bred by means of conventional methods? He believed that it was all an illusion and the question was whether in fact it was wished to change all that. He believed that the UPOV Convention currently contained the optimum compromise between the protection of private intellectual property derived from plant breeding and public interests. In that context, he wished to remind the meeting of a further fact. Did anyone genuinely believe that in today's political world he had even the slightest chance of achieving an amendment? The securing of genetic resources had been mentioned and he recommended all of those who wished to initiate an amendment of the UPOV Convention and an amendment of the European Patent Convention to urgently study in detail the political stances adopted by the various States in respect of access to plant resources, as expressed within the FAO. If one studied those public declarations of the political intentions of the States, one was obliged to conclude that there was no point at present in wanting to change anything whatsoever. His advice was to keep what already existed, an optimum compromise, and to endeavor to use it in an optimum way.

109. Dr. Troost said that he agreed with the speaker who had stated that the UPOV Convention and national legislation based on it had been very useful for agriculture, for horticulture and for the breeders of new varieties. Dr. Troost did not think that the UPOV Convention was an antique that should be sold off at some auction. A lot of experience had been gained in the 25 years since the UPOV Convention had been adopted and it provided a certain equilibrium between the interests of agriculture and horticulture on the one hand and the interests of breeders on the other. Dr. Troost did not wish to say that revision or amendment of the national laws and of the UPOV Convention would

not be useful. For instance, when one spoke about the scope of protection, which he recognized was another point on the agenda, and the problems of the influence of gene technology, he was of the opinion that it would be useful and also good for the breeders if, in a way, their rights could be extended, for example in the case of tissue culture. If the results of modern gene technology were going to influence the work of the breeder then the UPOV Convention and the national laws would have to be changed. Dr. Troost believed that the inventor of a gene also had a right to get enough payment for the work he did. That did not mean that the patent law had to be extended to the variety as such. There should be a limitation of the protection for a man-made gene and a variety as such, in so far as it was used for the production of agricultural and horticultural crops. Crop production did not constitute a remaking of a protected gene, but rather the reproduction of a variety of which a gene was a part. Dr. Troost believed that it had been very wise at the time the UPOV Convention had been prepared that the freedom to use protected varieties for further research had been provided for. That was something that was very profitable for the users of varieties as well. AIPH really preferred breeders' rights and saw no fundamental difference between the results of classical breeding methods and the results of genetic engineering.

110. Dr. Mast said that he wished to refer to the point made earlier by the Chairman in his summary of the discussions. Mr. Schlosser had said that the breeders seemed to prefer a solution under which they would have an opportunity to choose either patent protection or breeders' rights protection for their varieties. Dr. Mast said that he had already expressed his views. He believed that such a solution was not possible. Dr. Kley had dealt with the question quite clearly and had mentioned one case that showed that, in the interest of legal security, it was not possible to have two systems side by side.

Dr. Mast also thought that Dr. Troost was right to say that the scope of protection of patented genes was still a question of great importance. It was still an open question how far the scope of protection went, whether it extended only to the plants into which the gene was introduced, to the first generation of plants developed from those plants by means of multiplication or also to the next and following generations. Dr. Mast was aware of certain rules developed by the patent law jurisprudence, but that concerned in general inanimate matter. Dr. Mast noted that another point that Dr. Kley had mentioned was the connection with the discussion on genetic resources. Dr. Kley had also asked what the genetic researcher paid to the owner of the variety from which he took the material. The question was asked in other circles, what was paid when genetic material was taken from developing countries and used. In Dr. Mast's opinion those were questions that should not be overlooked.

111. Dr. Hüni (ICC) stated that he was at the meeting as the observer from the International Chamber of Commerce. Having heard the discussions, it seemed to him that the question of the very considerable capital investment in present-day research made increased protection necessary. However, he did not wish to make the question of capital investment a function of whether developments were achieved by means of genetic engineering or by traditional methods. It was simply a fact that research in those fields had to be intensified and that was indeed only possible if increased protection were afforded. Such protection could be achieved, in his view, by measures such as those proposed by AIPPI, i.e. giving the possibility of choosing between patent protection and plant breeders' rights. A further possibility was possibly to reflect again on Article 5(3) of the UPOV Convention. He then wished to add a word in

respect of free research, i.e. the use of existing material for research purposes. He believed that that was also altogether legitimate under patent law. Anyone could conduct research on the basis of existing results whether they were protected by a patent or not. It was of course a different matter if the results of such research were subsequently to be exploited commercially. The question then arose, as had already been heard in the meeting, whether certain kinds of license, licenses of right or compulsory licenses, should be provided for in such cases. Finally, he wished to make one more comment on why genetic engineering methods deserved preference over conventional methods. He believed that to be a matter of mistaken terminology. It was not a matter of conventional or non-conventional methods but simply whether something was reproducible, whether the teaching that the breeder could give was reproducible or not. In the case of genetic engineering, the results were such that teaching could be given as to how a specific gene could be repeatedly inserted into a unit of plants, or a family, or perhaps also a genus. That could be done repeatedly, whereas in the case of what was known as conventional breeding methods, there existed simply an isolated result that could not be further varied. In that way, genetic engineering processes were to some extent more valuable since they were reproducible.

112. Mr. Fikkert said that he wished to make just one small remark. The discussion was not about protection of methods or processes but about protection for a product or a plant variety. The UPOV Convention was designed to provide for protection of plant varieties. In Mr. Fikkert's view a plant variety that had been created by what was currently called classical methods was just as reproducible as the genotype created by biotechnological means. He saw no difference in that respect.

113. Dr. Leenders said that he wished to refer to the intervention of the representative from the ICC, which he had found very interesting. If one studied historically why special legislation existed in many countries one had to go back to the situation in the countries in which plant breeders' rights legislation had first been established. The main factor had not been the public interest but that the reproducibility of plants could not be guaranteed. Industry did not at all like the thought of having plants protected by patents because that would have provided a precedent for industrial inventions where everything had to be 100% and not just 99.5% reproducible. It was a matter of fact that industry itself at that time did not want sexually reproduced plant varieties to come under the patent system.

114. Mr. Winter (COMASSO) wished to make a few comments on the points mentioned by the preceding two speakers in respect of reproducibility. Dr. von Pechmann had on the preceding day quite dogmatically stated that that point was settled. He had said that it had become possible by means of genetic engineering to achieve reproducible plant breeding and results of plant breeding. He was not so sure whether that was true, for it seemed to him that at most a product could be reproducible, that was to say the gene, which indeed could be patentable if certain conditions were fulfilled. Whether the fact of inserting a gene into a plant meant that a variety would immediately occur, was open to question. That fact had been briefly mentioned on the previous day and had to be emphasized once more. If it were assumed that a variety had indeed arisen, then it did not seem to him altogether sure that the result would be reproducible in all cases. He therefore wished to recommend prudence in using hypotheses as a basis for concrete demands. He would have preferred to go the opposite way by examining and discussing the problems that had been mentioned in the discussions by both practical breeders and

those with more of a patent law background and then to decide once that had been done on a solution. He in fact referred to what the President had said in his introduction.

115. Mr. Clucas said that it seemed to him that some of the discussion was perhaps avoidable. The agenda item being discussed was: "Appropriate protection of the results of biotechnological developments by industrial patents and/or plant breeders' rights." The results of biotechnological developments could be of two types; one was a gene and the other was a plant variety and therefore the item did not just concern plant varieties but also genes. Dr. Mast had suggested that it was not appropriate to take out two mortgages on one property. Mr. Clucas would be inclined to agree with him. Maybe it was appropriate to take out a mortgage on a property and to have at the same time a separate lease on air conditioning within that property. In some respects, when one considered protecting a gene one was only considering protecting something that helped breeders to create varieties. It seemed to Mr. Clucas that speakers had failed to recognize that there were two complete steps and that the steps had to be taken together rather than being seen as confronting issues. A plant happened to consist of a whole string of genes. It might be possible for man to create genes and to make genes behave in a certain way and it did not seem unreasonable to Mr. Clucas to consider that a gene producing industry might develop. Breeders might buy genes and incorporate them into varieties. Mr. Clucas believed that the aim of the discussion should be to understand the best way in which a protected structure could be built around that new type of industry.

116. Mr. Schlosser said that if he had understood Mr. Clucas' intervention, he had raised the question of the patentability of genes. Mr. Clucas had said that as far as the selling of genes to whoever might wish to use them was concerned, for example to plant breeders, it was the patent law doctrine that would apply and that it was up to UPOV to develop a protection system consistent with that economic reality.

117. Dr. Freiherr von Pechmann wished to make a number of observations simply on the question that had been advanced, that was to say whether genes were patentable. Patents already existed in relation to genes, that was to say the claims described the exact sequence of the individual components. Those claims sometimes covered a whole page. That had already been accepted. Such applications had already been filed with the European Patent Office. The discussion had in fact come to an end: a gene as such could be patentable. However, if the gene was then inserted into a plant, the question naturally arose as to how far the patent protection extended, whether it extended as far as the plant or whether the latter was no longer covered by the protection for the gene as isolated or combined, meaning that protection was no longer operative. That was of course a matter of patent exercise and therefore constituted completely new territory. No one knew how the courts might one day decide in such cases. However, the whole discussion at the meeting seemed to focus on the problem of Article 5(3) of the UPOV Convention. A number of the previous speakers had already referred to it. He wished simply to draw a parallel between that and the protection for microorganisms. The Supreme Court of the USA had granted patent protection in the Chakrabarty case since the claimed microorganism had been obtained by manipulation, that was to say, had been created by human activity exercised on the microorganism; however, it had granted patent protection in that case since the application did not concern microorganisms that could be found in nature. Such microorganisms still remained without protection. One had, however, to be aware that the problem

appeared to exist--his information had only been obtained through talks with clients and with the breeders concerned, since he himself was of course not a breeder--in the breeders' fears that Article 5(3) of the UPOV Convention made a distinction between conventional methods and genetic engineering. In his view, the same legal thinking could be applied in the field of plant breeding as had been done in the case of microorganisms to obtain the same differential ruling by holding that under conventional processes a gene complex was utilized that nature had made available--in nature, crossing was basically only possible within the species--whereas in the case of genetic engineering human manipulation had taken place. There existed the possibility that genes could be taken not only out of plants but also out of animals in order to insert them in plant cells, as had already happened on a large scale with microorganisms. It was known that genes from human cells could be inserted into bacteria to undertake those tasks that they normally carried out within the human cell in order to produce hormones and the like. If that were to be possible with plants, then the breeders' work would take on an altogether different aspect. He therefore believed that it could be said in favor of amending Article 5(3) of the UPOV Convention that the grant of more extensive protection was justified for plants that had been artificially engineered by man, since they involved not natural genetic material but artificially modified material. That argument could also constitute grounds for introducing a licensing obligation for subsequent breeding. That would more or less resolve the whole problem that was being debated so fiercely at the meeting.

118. Mr. Schlosser said that he had a question about the distinction made by Dr. von Pechmann in his intervention. Take the reference to a naturally occurring gene. Mr. Schlosser had understood him to say that such a gene might quite possibly evolve as a result of very long and involved cross breeding, going back over many plant generations and many years. Mr. Schlosser believed that many patent laws would regard such a gene as just as man-made as a gene created artificially in the laboratory. Therefore he did not think that he could subscribe to the distinction drawn. Secondly, Dr. von Pechmann had asked whether a patent on a gene, when that gene was incorporated in a plant, covered only the gene or the plant. Mr. Schlosser was not sure that it made any difference. If the patent law doctrine was applied, then every time that someone reproduced the gene he owed the patent owner a royalty. Once the gene was protected, it might not matter whether the plant was protected or not.

119. Dr. Freiherr von Pechmann said that he could not give an answer to that question. Developments would show. He simply wished to suggest that a compromise could possibly be found to respond to those wishes. But that was only a first personal reflection.

120. Dr. Hüni wished to go back to what had been said by the previous speaker from ASSINSEL. That speaker had distinguished between two stages in the whole procedure, firstly the creation of the gene and secondly the creation of a variety. Assuming that the person who produced a gene in the genetic engineering field could protect it by means of a patent and assuming further, together with Dr. Mast, that the protection did not extend to the whole plant, then the inventor of the gene would have no option than to join up with a breeder in order to obtain a commercially exploitable result. In such case the inventor would receive from the breeder license royalties or some other remuneration in return for the right to use the gene. However, that amount depended on the position enjoyed by the breeder himself after he had developed a variety and Article 5(3) of the UPOV Convention meant that the position subsequently enjoyed by the breeder was not particularly strong. Thus here again what the

inventor of the gene received was relatively slight. The question once more arose whether commercial success for genetic engineering was still adequate in the existing system.

121. Dr. Lange had a number of additional comments to make on the points mentioned in the discussions. He referred to the comment made by Dr. von Pechmann that applications had been filed with the European Patent Office for the protection of genes. That was perhaps the case. However, as far as he was aware, no gene as such had so far been patented by the European Patent Office. Obviously, he knew that such patents did exist in the United States of America. However, one had to be familiar with the differences in the system. In talks two weeks earlier with those who had to take such decisions at the European Patent Office, he had heard that a fierce dispute had broken out on the question of whether genes should be protected at all. The question raised there was whether the requirement of novelty demanded that a gene should in fact be entirely new and whether it was detrimental to novelty for a gene to already exist in nature. Admittedly, another point of view was also expressed at that office according to which it was sufficient for a gene to have been simply isolated for the first time and for its essential features to have been described. That discussion was still going on and it was not possible, he believed, to say at all so far whether the European Patent Office would in fact protect a gene. That fact should be taken into account in the discussions: they had indeed become very theoretical. He would like to comment, however, that he personally would have no objection to patent protection--assuming that the general conditions for obtaining such protection were satisfied. However, the question then arose of how far such protection extended. There, however, he advocated the view that it should not be possible to claim variety material.

He then wished to speak a little of the developments that had led to the UPOV Convention. He believed it to be a great simplification when describing the background to the UPOV Convention to claim that the requirement of reproducibility, that was difficult to realize in such a case, had led to a special system of protection having been set up. Breeders had from the very onset endeavored to find a suitable form of protection. Some had used trademarks. Some had then tried patents, since indeed no other system of protection existed, but very rapidly realized that patent law was not sufficiently adapted to the biological material that was to be protected. He was repeatedly aware of that problem also in the microorganism discussions between patent law specialists. In that case also, certain requirements of patent law could not be satisfied and a remedy had been sought in deposit practices which, in his opinion, already constituted a breach in the patent system. Thus, there were many problems with biological material in the patent system and a system had thus been set up which, he felt, ensured appropriate protection. The main reason had in fact been that the situation was a completely different one and that reason had led to the UPOV Convention. He wished also to emphasize that the underlying reason for the UPOV Convention had indeed been to create a balance between public and private interests. He wished simply to remind the meeting that a whole number of earlier patent laws had generally excluded foodstuffs from patent protection. That had also been one of the reasons to set up protection that, in some ways, was reduced, but, in other ways, also extended, that was to say protection that was adapted. To be true, it could not always be said that the UPOV Convention provided less protection. The definition of propagating material, for example, demonstrated a certain amount of adaptation in its subjectively tinted character, since it avoided the problems related to the theory of exhaustion. He therefore saw no objective necessity of departing from the balance that had been achieved.

122. Mr. Schlosser remarked that he was not sure that he completely understood the European Patent Convention's concern about novelty. It seemed to him to be a question of burden of proof. If the applicant had to prove that the gene did not exist in nature in order to get a patent then he would never get one. If the patent office had to prove that it did exist in nature then he would always get a patent.

123. Dr. Mast likewise returned to the comments made by Dr. von Pechmann concerning the patentability of genes and supported what had been said by Dr. Lange. As far as he was aware, no patent had been granted for genes. A number of patent applications had simply been filed. The question of the patentability of genes was therefore still completely unanswered. He in fact wondered whether the European Patent Office would not reflect whether exclusion of plant varieties from patent law should not be interpreted as meaning that genes as such should also be excluded, since what was a plant variety if not a combination of genes. However, even if there were to be no doubts as to the patentability of genes, it still remained necessary to carry out an in-depth study into the question whether such patent protection was not too extensive and might have to be reduced by the lawmaker. He was not saying that because he already had an established opinion on that matter. He had participated, however, in the initial meeting of the recently established Commission on Plant Genetic Resources at the FAO in Rome, at which the question of protection of genes in general had been raised, and he remembered well the representative of France, a specialist in plant varieties, who had stated, with general approval, that genes must never be patentable, for which he had earned a round of applause. It was therefore not so easy to answer the question whether genes should enjoy patent protection.

124. Dr. Hüni confirmed that a patent had in fact already been granted in Europe in that field, namely the patent for the genetic sequence of interferon granted to the firm Biogen. Opposition procedures had been instituted. However, they did not concern the patentability of a gene but referred to other matters. Thus there was indeed a granted patent in Europe for a genetic sequence.

125. Mr. Schlosser asked Dr. Hüni to explain the points on which the inteferon patent had been challenged.

126. Dr. Hüni said that he believed that the inteferon patent had first been challenged on the point of inventiveness with regard to prior publications regarding that field of inteferon. In the second place, it had been challenged because the applicant had claimed not only the specific genetic sequence but also all kinds of similar sequences which, in the minds of the opponents, had not been adequately disclosed.

127. Mr. Denton considered that the meeting was getting itself into a blind alley by discussing whether or not genes would be protected. What breeders should be looking at was what was going to happen if they were protected. Breeders were still going to be breeding varieties which in many cases, if not in all, would probably be protected under the UPOV Convention. Mr. Denton thought that to spend time debating the protectability of genes would not take the meeting very far. Mr. Denton proposed, therefore, that one should try to decide how the situation should be handled in the event that genes were protected under patent law.

128. Mr. Schlosser thought that Mr. Denton had made a very valuable point. Mr. Schlosser agreed that the meeting should consider what should be done in the event that genes were patentable.

129. Dr. Mast said that Mr. Hüni's remark brought up another question. The gene referred to by Mr. Hüni related to a microorganism. Dr. Mast wondered how far, under the European Patent Convention, the counterexemption for micro-organisms from the exclusion of plant varieties from patentability went. It was another question that was related to the question whether genes were protectable.

130. Dr. Leenders said that he fully agreed with what Mr. Denton had said. The practical question that was in the minds of all the breeders was the extent to which material would continue to be available for breeding work. It was essential to discuss whether a patent on a gene would prevent breeders from using a variety into which that gene had been inserted and, if it did, what working arrangements could be foreseen. Some people had said that a similar question arose in the production of hybrids of small grain cereals. That might serve as an example but in that case there was clearly a patented chemical product and, because one was talking about the production of hybrids, it did not become part of the variety. Dr. Leenders thought that in the case being discussed the patented product would become part of the variety, but it was not known how such an artificial gene would behave in the entire composition, whether it would, for instance, still be the same gene after a second crossing. The answer would depend on the kind of product that the chemical companies furnished, but it was perhaps imaginable that there could be varieties in which an artificial gene expressed itself even after subsequent crossings had been made. Some people took the view that the material, if it was in a variety, was freely available to breeders. The representative of the ICC had said that if that were so then the investment made by the chemical companies would not be adequately remunerated. Others had said that they would recognize such a patent, that they thought that the patent system was a good and fair system and that it stimulated research, but that they would not like to risk that all varieties became monopolized. Still others had said that they would want to use such varieties and were prepared to pay for them, but nobody knew what the system should be, whether it should be left to the partners to reach agreement or whether obligatory compulsory licences should be available. Dr. Leenders would appreciate it if those problems could be discussed.

131. Dr. Freiherr von Pechmann remarked that the meeting was lucky to have a chairman from a country in which plant patents had existed for a generation already. Perhaps the Chairman could say whether the fears expressed by the European breeders were justified in the view of someone who had possibly himself already issued plant patents. He did not know whether Mr. Schlosser had been an examiner or whether he was still working in the Patent Office. Perhaps he had already himself granted plant patents bearing his signature.

132. Mr. Schlosser said in reply that he had, of course, as Chairman of the Biotechnology Subgroup to remain impartial but, as far as the details of his country's plant patent examining system were concerned, it was unique in the world and certainly somewhat different from the ordinary plant breeders' rights systems in force in the European and other member States of UPOV. The American system basically applied the patent law criteria of novelty but it made an exception to the patent law in the case of disclosure. Mr. Schlosser thought that he could summarize matters by simply saying that, whatever the

theoretical praise or criticism of that system, it worked very well. It had been in existence since 1930, for 55 years. Breeders were happy with it. It had not been the subject of a lot of litigation and he believed that to be a compliment. It would be presumptious of him to say that other countries should adopt it and he could only tell this meeting that the United States of America was happy with it. Mr. Schlosser stressed that his answer had been given as a Delegate of the United States of America and in no other capacity.

133. Dr. Mast noted that Dr. von Pechmann had referred to Article 37 of the UPOV Convention and had mentioned already that it had given States, under certain conditions, the possibility to make a reservation and to maintain under their national law the system of double protection. With the adoption of that Article, UPOV had not given up its general concern about double protection. Article 37 had been more or less tailor-made for the situation in the United States of America where, in the field of vegetatively propagated species, plant patents were granted while, in the field of sexually reproduced species, plant variety protection certificates were granted. That was the situation that the 1978 Diplomatic Conference had been confronted with. The Diplomatic Conference had felt that that system as it had historically developed in the United States of America, even if it gave rise to a possibility of occasional overlapping, would not carry with it the dangers that Article 2(1) of the Convention had been designed to avoid. That, at least had been the conviction of the Diplomatic Conference. The Diplomatic Conference had in no way wanted to give up the general interdiction of double protection provided for in Article 2 of the Convention.

134. Mr. Skov, confirming what Dr. Mast had said, recalled that as President of the 1978 Diplomatic Conference his understanding had been that there were a few rare cases where normally sexually reproduced plants might also be propagated vegetatively, and that it had been in order to meet such very special cases that Article 37 had been introduced into the text of the UPOV Convention.

135. Mr. Schlosser thanked participants for their very perceptive questions and for their interest in what was a very important matter. He confirmed that the views expressed would be given the fullest consideration and invited the organizations to inform UPOV of any additional matters that they considered it should take into account.

136. Mr. Rigot thanked Mr. Schlosser for having chaired a most interesting and most instructive debate.

SCOPE OF PROTECTION

137. Mr. Rigot noted that the final agenda item had been reached, "Scope of Protection," of more particular interest to ASSINSEL, CIOPORA and FIS, who had indeed submitted documents. Mr. Rigot gave the floor to Mr. Heuver, Chairman of the Administrative and Legal Committee, to chair the discussions on that item.

138. Mr. Heuver noted that the documents received from ASSINSEL, CIOPORA and FIS were reproduced in Annexes I, II and III, respectively, to document IOM/II/6. Mr. Heuver invited the representative of ASSINSEL to introduce that organization's document.

139. Dr. Mastenbroek said that Mr. Clucas would speak on behalf of ASSINSEL because the item referred to vegetable crops and Mr. Clucas was currently the Chairman of the Vegetable Section within ASSINSEL. Dr. Mastenbroek said that he would like to add, for the information of the meeting, that Mr. Clucas would become President of ASSINSEL during 1986.

140. Mr. Clucas said that he believed that five years earlier any attempt to discuss the impact of micropropagation would have been like sailing in uncharted waters. Today, however, it was becoming clearer where the rocks might lie and where the channel was. In his earlier comments, on items 4 and 5 of the agenda, he had highlighted the impact of micropropagation on the existing range of species which were eligible for plant variety protection in the different countries. Mr. Clucas said that ASSINSEL was suggesting that in those countries where the full range of vegetables was not eligible for protection more schemes should be introduced. ASSINSEL also believed that there would be an escalation in applications for protection where it was available. It was apparent that micropropagation technology had the potential to have an impact on both legal and biological protection because it offered viable alternatives to the current systems of biological reproduction. The effect of micropropagation biotechnology was that parts of plants not previously held to be viable as reproductive material had become so. Mr. Clucas had already referred to cucumber as an example where the facility already existed. He would now like to let his imagination range a little and illustrate the point further with a reference to cauliflower. If one could imagine a cellular soup being created, sprayed upon agar and perhaps, with the use of computerized robotics, causing cell division in an automated system, one could foresee in the not too distant future very low cost plant production. Thus it was possible that a breeder who introduced a new variety would see his variety being propagated in a perfectly legitimate manner, outside current legislation, and there would be very little that he would be able to do about it.

Mr. Clucas considered that another factor that had to be taken into account was the pace and magnitude of change in the structure of the farming industry. That structure, of course, varied from one country to another but the trend was very much away from the broad, balanced spectrum of professional growers and was tending to polarize. Certainly, there were small family units at one end but, at the other, there were financially resourceful businessmen operating in the farming context and farmers groups. That fact was having a very considerable impact because many of those organizations were perfectly capable of funding their own micropropagation facilities. Mr. Clucas believed that the need to extend the range of protection where it was inadequate had already been established. He wished to suggest further that, because the inbuilt protection of F_1 hybrids was in effect very nearly a historical curiosity now that micropropagation was making available material that could not previously be used for propagation, it was necessary to extend the scope of protection, within the context of the Convention, to cover F_1 hybrids where that was not currently the case, and also to cover plants or any part of a plant that had the potential to be used for reproduction for commercial exploitation in any way. Mr. Clucas said that he had tried to pick his words carefully and they were probably inadequate and incomplete, but he had wished to circumvent that sensitive phrase "final product." Nevertheless, he thought that, in certain areas, protection of the final product might be the only way to adequately secure the interests of the plant breeder. He had also perhaps tiptoed around that other sensitive area of the "farmers' privilege." The farming businessman who was growing a substantial area of a crop might also specialize in large scale plant propagation. Such a grower would have the

resources to set up his own micropropagation unit and could, in the current circumstances, in most countries produce as much plantable or saleable material as he wished. Clearly that was not a very satisfactory situation from the plant breeders' point of view and it seemed clear that wherever material could be propagated for use on the farm in a commercial environment, or indeed for sale to others, then it was important that the breeder be protected from what could be seen as inequitable exploitation. Mr. Clucas considered that breeders had shied away from the term "farmers' privilege" because of the undesirable image of overexploitation by breeders that it possibly implied. He believed, however, that the day was rapidly approaching in horticultural plant breeding when the danger of farmers exploiting their privilege could seriously damage the breeding industry. It would be wrong to pretend that the danger was imminent for all species of vegetables. It depended really on the various ways in which the crops were grown, but there was no question that arrangements had to be made to protect the breeder in a more comprehensive and watertight manner in the developing and emerging situation.

141. Mr. Heuver thought FIS probably had similar ideas on the item under discussion and he therefore asked Dr. Leenders to present that organization's document.

142. Dr. Leenders remarked that FIS would perhaps place some accents in different places. One read of police catching people with a thousand or so counterfeit watches. The use of a variety without payment did not seem to have the same impact yet it was exactly the same. The reasons why FIS was so interested in this matter had already been partly explained by Mr. Clucas. In many countries, there were systems for seed certification, there were variety lists and so on, and seed companies had to meet standards, have their seeds officially tested and have them officially sealed. The costs that a seed company incurred before it could put seed on the market were considerable. Also, of course, the seed company had to pay taxes. All the things he had listed did not apply to the farmer when he used his own seed. Dr. Leenders said that seedsmen had lived with the situation for a long time but the subject of black-market seed was back on FIS agendas because in all sectors it had been seen that the practice was on the increase. One of the problems confronting seedsmen was that mobile seed-cleaning units were moving around, selling a service to farmers. That was a commercial activity and FIS thought that it should be one of the tasks of UPOV, and also of the national Offices, to investigate whether that activity should not constitute an infringement.

Dr. Leenders noted that Mr. Clucas had already mentioned the possibility of multiplication by tissue culture. In some countries, courses were offered where one could learn how to do it. There were kits on the market that were not very much more complicated than the chemistry kits played with years ago by young boys. As pointed out by Mr. Clucas, the degree to which that development would have an impact depended on the species. Dr. Leenders remarked that FIS was an organization that grouped together the breeding and seed-trading interests of 52 countries. Its members unanimously held the opinion that, under certain circumstances, the development could be very damaging to the whole seed trade. A single seed would be sufficient to grow one plant and from that one plant a grower could produce his entire material. The same situation had been discussed at the 1978 Conference on the Revision of the Convention, in the fruit sector, and Dr. Leenders believed that at that time there had been an absolute consensus of opinion that in such cases the individual States should try to give the breeders more protection than they actually had. That was why FIS had referred in its document to the recommendation

adopted at the 1978 Conference and it hoped that as many member States as possible would take adequate measures. When one talked about giving more rights to the breeders one sometimes heard that there were perhaps political undercurrents that would not favor that. Dr. Leenders said that he had much understanding for that, but the fact that a country had a government of one or another kind should, in his opinion, be irrelevant in UPOV. If it was considered that a certain measure should be taken then efforts had to be made to convince the politicians in that respect.

143. Mr. Heuver then invited Mr. Royon to present CIOPORA's document.

144. Mr. Royon noted that CIOPORA had stated in its document that it did not have much to add to what it had been saying for so many years. Mr. Royon thought that what had been said about tissue culture was not in fact anything new although it did make worse the problem concerning the definition of the scope of the breeders' rights in Article 5(1) of the UPOV Convention. What he would like to underline concerning the interventions of ASSINSEL and FIS was that again it could be seen that it was wrong to wait for technical developments to pose a problem and then to try to solve that problem. Legislation should take care from the start of any possible case that might appear in the future and it was in that respect that CIOPORA considered that the patent legislation was much broader, not going into as much detail as the UPOV Convention.

CIOPORA believed that UPOV and its member States should really look again at the basic article of the Convention, namely Article 5, and admit that it contained basic flaws and inadequacies that needed urgent amendment. Mr. Royon realized that such amendments could easily have been introduced in 1978 but, for reasons that he still could not understand, were refused despite the interventions of CIOPORA and others. He thought that such amendments could at least be made in many national legislations by common recognition of the problems. The basic problem with regard to the scope of protection was not only a problem of extension of protection but also, for some species, of giving protection. In that context Mr. Royon wished to recall again the example of fruit tree varieties. When a fruit tree breeder created a new variety the purpose of that variety was to produce fruit, and it was the fruit that was important. If, on the basis of the wording of the Convention, a country granted the so-called minimum protection to a fruit tree breeder, then the breeder would get no protection at all. In particular, with tissue propagation techniques any grower would be able to buy a few trees or some material of a variety and then propagate thousands or hundreds of thousands of trees. There was no limit. Then the grower would sell only the fruit. According to the Convention the grower did not have to pay any remuneration to the breeder and the title of protection obtained by the breeder was worth absolutely nothing. Mr. Royon considered that the problem had first been ignored, perhaps not in 1961, when people were perhaps confused and could not realize all the problems that might appear in the future, but definitely in 1978. He thought that it was about time that countries, at least at the national level, did something about that enormous gap. France had amended its legislation two years earlier. France had probably one of the best laws in Europe for plant breeders' rights because it gave a very extensive protection. Other countries should offer the same.

Mr. Royon noted that another problem raised by his colleagues was the farmers' privilege. He wished to mention a particular problem that ornamental breeders had in Spain. Spain had introduced legislation in 1975 and that

legislation was practically a replica of the Convention. Therefore, normally, anyone using plants or parts of plants of protected ornamental varieties for the purpose of producing other plants or cut flowers should be committing an infringement. Article 5 of the Spanish law, however, said that "the breeder's right shall not be infringed by the use made by a farmer, on his own farm, of seeds or any other vegetative material produced by him." It seemed that some cut flower producers in the Canary Islands interpreted that Article as permitting them to propagate a cut flower variety, for example a carnation or a rose, in their own establishment and then to sell the flowers. CIOPORA believed that in that case Spain should envisage modifying its legislation. If no amendment was contemplated in the near future then CIOPORA would ask that the term "utilización", which was used in Article 5 should be explained in an article or publication in which it should be made clear that "use" referred to private but not commercial use.

In concluding his intervention, Mr. Royon said that he wished to draw attention to a way whereby all the problems concerning extension or non extension of protection to the finished product could be solved. Instead of speaking of extension of protection to the finished product, one should speak of the control of the commercial exploitation of the variety. Plant variety protection had no purpose if it did not give the breeder a means to protect his invention and to exploit that by a monopoly right. The breeder must be able to exclude others from using his variety commercially or to licence the commercial use of his variety. In that way there would have been no need to discuss tissue culture, for example, because its use would be covered by such a wording.

145. Dr. Troost said that AIPH had always been of the opinion that the protection of the breeders had to be effective. AIPH supported the position of ASSINSEL and FIS concerning the consequences of the use of tissue culture methods. That did not mean that AIPH was thinking in terms of protection of the final product. Dr. Troost was of the opinion that the UPOV Convention was really ahead of time. In Article 5 of the Convention it was stated that the effect of the right of the breeder was that his prior authorization was required for the production and--at least--marketing of the reproductive or vegetative propagating material of the variety. In his view Article 5 of the Convention already covered that new reproductive material.

146. Dr. Freiherr von Pechmann observed that he had in fact been first confronted with that problem by the comments of ASSINSEL and by what had been said at the meeting. The problem seemed to be the extension of protection to tissue cultures, i.e. it was hoped to extend to vegetables the formulation in Article 5(1) of the UPOV Convention that was restricted to ornamentals, but that in so doing the problem arose that the farmers' right to subsequently utilize seeds they had themselves produced commercially on their own farm could be impaired. That right should not now be called into question. Additionally, the whole situation comprised an altogether complicated contradiction. It was truly a question whether the restriction to ornamentals in that Article 5(1) of the UPOV Convention should not be deleted. The wording could read quite generally that parts of plants would be subject to the rights where they were used commercially as propagating material in the production of plants. This would in any event cover micropropagation since it would be parts of plants that were used as propagating material for the production of plants. That was where he saw a problem when it was said, on the one hand, that such protection was desirable, but that on the other hand no protection was wanted for propagation of the type that had been usual so far. That showed that the limits of plant breeders' rights had in fact been reached. However, those were only his initial reflections.

147. Mr. Skov, noting that Mr. Royon was surprised that Article 5 had not been changed at the Diplomatic Conference in 1978, said that he remembered quite clearly that it had been explained to the Conference that it was feared that if it was changed then the revised text would not be ratified by some of the member States. That, in Mr. Skov's opinion was the reason why Article 5 could not be changed.

Mr. Skov said that he wished to refer to the preamble to the Convention. The preamble was written and adopted in 1961 and the principles of the preamble were reaffirmed in 1978. Mr. Skov drew attention to points (a) and (b) of that reaffirmation. It was said in (a) that the Contracting Parties were "convinced of the importance attaching to the protection of new varieties of plants not only for the development of agriculture in their territory but also for safeguarding the interests of breeders." In other words, plant breeders' rights were introduced in order to promote the development of agriculture in general. Secondly, it was said in (b) that the Contracting Parties were "conscious of the special problems arising from the recognition and protection of the rights of breeders and particularly of the limitations that the requirements of the public interest may impose on the free exercise of such a right." Mr. Skov considered that it was very important not to forget those words in the preamble. What had been said during the discussions would impose on UPOV and its member States the duty to think about the problems raised, especially by ASSINSEL and FIS, and to consider whether new legislation was needed or not. Mr. Skov said that he could personally see that there were problems but time was needed to consider them. Finally, Mr. Skov informed Mr. Royon, with reference to fruit trees, that Denmark had made provisions to ensure that the breeder had a right to remuneration for propagation in a commercial orchard.

148. Mr. Winter did not wish the debate to come to an end without pointing out that not only vegetables, ornamentals and trees were concerned by that problem, but that the rapid propagation technique was also used in practice, for instance, in the case of potatoes, and that the same problem could arise there. Dr. von Pechmann had expressed a number of ideas on the problems of translating the required solutions into law. He would therefore like to observe that the Diplomatic Conference of 1978 had indeed discussed the problem and he would like to remind the meeting that the danger inherent in the scope of protection described in the Convention had been acknowledged. That danger derived from the statement that only propagating material produced for commercial marketing was to be subject to the rights. A proposal had been made in the discussions at that time that propagating material used for commercial distribution or with "commercial motives" also be included. That proposal had been rejected for the reasons described by Mr. Skov. He nevertheless felt that it was well worth reflecting whether action should be taken again, possibly in the distant future, towards a solution of that kind.

149. Mr. Urselmann (ASSINSEL) said that he was afraid that Dr. Troost, in his explanation of Article 5 of the Convention, had taken the wrong position. The Convention said that the breeder's prior authorization was required for production for the purposes of commercial marketing. The kind of production referred to by Mr. Royon was not for commercial marketing but for use by the producer on his own premises.

150. Dr. Böringer pointed out that a misunderstanding had occurred. Article 5(1) of the UPOV Convention contained two matters, firstly--anticipating the second one--"reproductive or vegetative propagating material, as such, of the variety." He believed that that was what Dr. Troost had been speaking

of; he had wished to say that the definition had been formulated in a very clever way at that time and he, Böringer, agreed with that. In his view, nothing needed changing in respect of that point. The question, however, was how that definition was to be converted into domestic law. Differences existed. He believed that the discussions at the meeting would oblige some of the member States, or indeed every single State, to have another look at what was contained in its national law. The second point was that of the "production for purposes of commercial marketing." That was the other point that did not comprise what had been said at the meeting by various organizations, the question of the use of propagating material on the farmer's own holding with a view to commercial production. That had to be thought about. Perhaps he could make a further observation. The new tissue culture techniques had not created that problem in his view. They had simply pinpointed a new dimension of the problem. The breeders of plant species that had so far been sexually reproduced in the usual way were now beginning to suffer from the disadvantage from which breeders of vegetatively propagated species had always had to suffer. That was the problem. The pressure was becoming greater.

151. Mr. Clucas said that he had read recently in the "Grower," a magazine published in the United Kingdom, an advertisement for a course, costing 200 pounds sterling, in the art of tissue culture. That illustrated very briefly the extent to which the technology was getting out into the public arena. Secondly, he had recently visited a grower who produced 250 acres of cauliflower and who was looking at the potential of setting up his own tissue culture unit. Mr. Clucas thought that such facts showed the trend of thinking and helped to support what he and others had been saying. It was good to hear that such matters were going to be considered. He wished to stress the urgency of the situation because, although one was not on the threshold of millions of cauliflower plants produced by tissue culture suddenly descending on the market place, the technology was advancing so rapidly that that might happen at any moment.

152. Mr. Lopez de Haro (Spain) said that he would like to go back to the intervention of Mr. Royon. In the opinion of the Spanish Delegation, the part of Article 5 of the UPOV Convention mentioned by Mr. Royon really did concern the farmers' privilege. Although it was not a matter to be discussed immediately, Mr. Lopez de Haro wished to point out that in his Delegation's opinion the Spanish plant breeders' rights legislation was in conformity with the UPOV Convention. Nevertheless, he had understanding for the problems mentioned by Mr. Royon in relation to the protection of the final product and could say that efforts were being made to modify the legislation in order to give the breeders the possibility to protect the final product.

153. Dr. Mast drew attention to the use of the term "farmers' privilege." He believed that in earlier times the term "farmers' privilege" had been used for something else, something different from the right of the farmer to save his own seed for the next season. The notion had been used for the right granted in some countries to the farmer to take his own seed and give it to his farmer neighbour, in other words "sales over the fence." The right of the farmer to save seed grown in his own fields and to sow it in the next season on his own fields should be referred to as the "farmers' exemption."

154. Mr. Heuver said that he had learned that new developments, for example in meristem culture, made it necessary for UPOV and its member States to look at legislation to see if there was a need and a possibility to change it. At the next session of the Administrative and Legal Committee there would be a

discussion about what had been said during the present meeting. Also, Mr. Clucas had asked that consideration be given to the possibility of protecting hybrids, which were not eligible for protection in all UPOV member States. That was another item that had to be discussed. CIOPORA's request for a wider scope of protection also had to be discussed but progress on that subject could only come if there were new and convincing reasons, perhaps arising from some of the new developments that had been mentioned.

155. Mr. Royon expressed his appreciation of the words spoken by Mr. Heuver. He thought that if the new developments that had been mentioned in the technical field could serve as a springboard, could serve as arguments for those in charge of protection, both at national and international levels, to introduce the amendments required by the breeders, then all the organizations would be altogether satisfied. He nevertheless wished to underscore two remarks made by CIOPORA, that was to say if one-off technical developments were used as a basis for examining whether the law was acceptable or not, the time would be spent in patching up damage whereas in fact what was required was a complete overhaul. Mr. Royon wished therefore to repeat the idea he had thrown into the debate previously, that of the commercial exploitation of a variety, since that was what was involved in the final count, both for the breeders and for the users.

156. Dr. Leenders remarked that Mr. Heuver, in his summary of the wishes expressed by ASSINSEL and FIS, had concentrated on new techniques. Dr. Leenders recalled that he had also spoken about the black market in seed and about mobile seed-cleaners. Converting the material harvested by a farmer himself into seed might ultimately well be for purposes of commercial marketing. The use of mobile seed-cleaners was on the increase and FIS would like that subject to be included in UPOV's study.

Dr. Leenders said that the point that he wished to raise was that at the time of the revision conference the Secretariat of UPOV had prepared a document, based on the comments of the various associations on Article 5 of the UPOV Convention. It might be useful to resurrect that document because he believed that all the possible solutions were very well presented in that one document.

Dr. Leenders said that the third point that he wished to raise was a very difficult and delicate one. Strictly, it had to do with the policing of breeders' rights and the role that a seed certification authority might play. The task of a seed certification authority was, of course, to certify seed and not to police plant breeders' rights. Sometimes, however, by adding their official tag such authorities might help the committing of infringements and FIS would like UPOV to look into that situation.

157. Mr. Heuver said that he was not sure that it was UPOV that should be asked to tackle the problem raised by Dr. Leenders.

158. Mr. Denton said that he would like to suggest, although he did not know how valid his suggestion would be, that there was a precedent, one that he agreed was not very popular among breeders, that held that, in the case of nomenclature, certain things were permitted if they were traditional. If the farmers' privilege was regarded as a barrier that could not be removed in total then nevertheless it might be restricted to what was the traditional practice of farmers. Mr. Denton believed that would be a possible approach that could help to contain the problem.

159. Mr. Rigot closed the meeting with the following words:

"We have now reached the end of our meeting. I trust that those of you who wished to speak have been able to do so quite freely. I believe this is the time for the first conclusions. I say the first conclusions because it is obviously not possible to talk of substance without having first looked again at one's notes, having reflected and having worked them over.

"I am pleased, in any event, on behalf of UPOV, that our debates have taken place in a relaxed, pleasant and cordial atmosphere marked, I believe, by the obvious will on both sides to enter into a dialogue, to give and to receive information. Although some of the statements made have been forceful, the reactions to them were equally forceful. However, the prime aim of this meeting has been achieved. I am not sure that we can claim that genuinely new elements have been contributed to the debates, but the truly interesting observations and suggestions you have made will be taken into consideration and, doubtlessly, analyzed very attentively on our part.

"The exchange of views on the implications of progress in biotechnology has been particularly useful for UPOV and indeed many of the ideas put forward were marked by a great degree of wisdom, a large amount of good sense and will probably open new pathways since UPOV has yet, in some fields, to define its strategy and objectives, objectives that must indeed in any event coincide with the interests of the breeders.

"This meeting has thrown light on the problems and on the approaches that differ from our own. Your ideas will indisputably ease the search for solutions, and even new solutions, that will satisfy all concerned.

"I thank you for your collaboration and for your active contributions to the meeting, which has proved constructive and positive. Indeed, I believe that many more things unite us than separate us. It is perhaps the way of looking at things and approaching them that often constitutes the difference.

"In the light of this second experience with your organizations, the Council will have the task of examining the possible need to ensure that such meetings are held with your organizations at regular intervals, since I believe that they are most useful. The experience of these first two meetings will enable future arangements to be even more efficient and even more useful from a material point of view. That, in any event, is my personal conclusion and I am sure that we shall talk of it again.

"I would like to finish with this thought, of which I am not the author: although things never go as well as hoped, they also never go as badly as feared.

"I hope to meet many of you again in December 1986 in Paris. As you will know, the UPOV Council is to meet in Paris to mark the 25th anniversary of the Paris Convention. This session in Paris will be of a solemn nature and is intended to provide a convincing proof of UPOV's vitality and also of its efficiency which, with your assistance, can no doubt be improved still further. I take this opportunity to express my thanks to the French breeders' associations that have given, in addition to Mr. Simon and his team, their precious help which has been considerable and which has no doubt saved UPOV from the very thorny problems that arise when finances are mentioned. The symposium

will open in Paris on December 2, at 3 p.m., and indeed Mr. Mastenbroek, who is present here, will participate. I would like to already thank him for having given his consent, as also Mr. Cauderon.

"That was what I wished to say to you to conclude this meeting which, for my part, has been in any event satisfactory. We shall surely speak of these matters again. You have given us a lot of work. Mr. Heuver is indeed well aware of that fact and I believe also that the staff of the UPOV Office now know that they are unlikely to be out of work. I thank you again and wish you a good trip home."

[Annexes follow]

ANNEX I/ANNEXE I/ANLAGE I

LIST OF PARTICIPANTS/LISTE DES PARTICIPANTS/TEILNEHMERLISTE

I. MEMBER STATES/ETATS MEMBRES/VERBANDSSTAATEN

BELGIUM/BELGIQUE/BELGIEN

M. J. RIGOT, Ingénieur en chef, Directeur au Ministère de l'agriculture, Manhattan Center, 21, Avenue du Boulevard, 1210 Bruxelles

M. R. D'HOOGH, Ingénieur principal, Chef de service, "Protection des obtentions végétales," Ministère de l'agriculture, Manhattan Center, 21, Avenue du Boulevard, 1210 Bruxelles

DENMARK/DANEMARK/DAENEMARK

Mr. H. SKOV, Chief of Administration, Office of the State Plant Research Service, Virumgaard, Kongevejen 83, 2800 Lyngby

Mr. F. ESPENHAIN, Head of Office, Board for Plant Novelties, Tystofte, 4230 Skaelskor

FRANCE/FRANKREICH

M. M. SIMON, Secrétaire général, Comité de la protection des obtentions végétales, 17, avenue de Tourville, 75007 Paris

Mlle N. BUSTIN, Secrétaire général adjoint, Comité de la protection des obtentions végétales, 17, avenue de Tourville, 75007 Paris

M. J. GUIARD, Ingénieur, INRA/GEVES, La Minière, 78280 Guyancourt

GERMANY (FED. REP. OF)/ALLEMAGNE (REP. FED. D')/DEUTSCHLAND (BUNDESREPUBLIK)

Dr. D. BOERINGER, Präsident, Bundessortenamt, Postfach 61 04 40, 3000 Hannover 61

Mr. W. BURR, Regierungsdirektor, Bundesministerium für Ernährung, Landwirtschaft und Forsten, Rochusstrasse 1, 5300 Bonn

Mr. H. KUNHARDT, Leitender Regierungsdirektor, Bundessortenamt, Postfach 61 04 40, 3000 Hannover 61

HUNGARY/HONGRIE/UNGARN

Dr. B. SZALOCZY, Director General, Institute for Plant Cultivation and Qualification, Ministry of Agriculture and Food, P.O. Box 93, 1525 Budapest 114

Mr. I. IVA'NYI, Vice-President, National Office of Inventions, P.O. Box 552, 1370 Budapest 5

Dr. J. BOBROVSZKY, Head of Legal and International Department, National Office of Inventions, P.O. Box 552, 1370 Budapest 5

IRELAND/IRLANDE/IRLAND

Mr. P.J. O'LEARY, Controller of Plant Breeders' Rights, Agriculture House, Kildare Street, Dublin 2

ITALY/ITALIE/ITALIEN

Dr. B. PALESTINI, Chief Inspector, Ministry of Agriculture and Forestry, D.G. Produzione Agricola, 20, Via XX Settembre, 00187 Rome

Dr. G.L. CUROTTI, Vice-directeur général, Istituto Agronomico per l'Oltremare, rue Cocchi 4, Florence

JAPAN/JAPON/JAPAN

Mr. H. MIZOTA, Chief Examiner, Seeds and Seedlings Division, Agricultural Production Bureau, Ministry of Agriculture, Forestry and Fisheries, 1-2-1, Kasumigaseki, Chiyoda-ku, Tokyo

Mr. N. INOUE, First Secretary, Permanent Mission of Japan, 10, avenue de Budé, 1202 Geneva, Switzerland

NETHERLANDS/PAYS-BAS/NIEDERLANDE

Mr. W.F.S. DUFFHUES, Director, Arable Crops and Horticulture, Ministry of Agriculture and Fisheries, Bezuidenhoutseweg 73, The Hague

Mr. M. HEUVER, Chairman, Board for Plant Breeders' Rights, Nudestraat 11, 6700 AC Wageningen

Mr. K.A. FIKKERT, Legal Adviser, Ministry of Agriculture and Fisheries, Bezuidenhoutseweg 73, The Hague

NEW ZEALAND/NOUVELLE-ZELANDE/NEUSEELAND

Mr. F.W. WHITMORE, Registrar of Plant Varieties, Plant Varieties Office, P.O. Box 24, Lincoln, Canterbury

SOUTH AFRICA/AFRIQUE DU SUD/SUEDAFRIKA

Dr. A.D. NIEUWOUDT, Director, Directorate of Plant and Seed Control, Department of Agricultural Economics and Marketing, Private Bag X179, 0001 Pretoria

Dr. J.H. GROBLER, Agricultural Counsellor, South African Embassy, Trafalgar Square, London, WC2N 5DP, United Kingdom

SPAIN/ESPAGNE/SPANIEN

M. R. LOPEZ DE HARO Y WOOD, Subdirector Técnico de Laboratorios y Registro de Variedades, Instituto Nacional de Semillas y Plantas de Vivero, José Abascal 56, 28003 Madrid

M. J.-M. ELENA ROSSELLO, Jefe del Registro de Variedades, Instituto Nacional de Semillas y Plantas de Vivero, José Abascal 56, 28003 Madrid

SWEDEN/SUEDE/SCHWEDEN

Mr. S. MEJEGAARD, President of Division of the Court of Appeal, Armfeltsgatan 4, 115 34 Stockholm

Prof. L. KAAHRE, Vice-Chairman, Department of Plant Husbandry, Swedish University of Agricultural Sciences, Box 7042, 75007 Uppsala

SWITZERLAND/SUISSE/SCHWEIZ

Dr. W. GFELLER, Leiter des Büros für Sortenschutz, Bundesamt für Landwirtschaft, Mattenhofstrasse 5, 3003 Bern

Mrs. M. JENNI, Sachbearbeiterin, Büro für Sortenschutz, Mattenhofstrasse 5, 3003 Bern

UNITED KINGDOM/ROYAUME-UNI/VEREINIGTES KOENIGREICH

Mr. F.H. GOODWIN, Controller of Plant Variety Rights, Plant Variety Rights Office, White House Lane, Huntingdon Road, Cambridge CB3 0LF

Mr. J. ROBERTS, Senior Executive Officer, Plant Variety Rights Office, White House Lane, Huntingdon Road, Cambridge CB3 0LF

UNITED STATES OF AMERICA/ETATS-UNIS D'AMERIQUE/VEREINIGTE STAATEN VON AMERIKA

Mr. S.D. SCHLOSSER, Attorney, Office of Legislation and International Affairs, Patent and Trademark Office, Department of Commerce, Washington, D.C. 20231

II. INTERNATIONAL NON-GOVERNMENTAL ORGANIZATIONS/ ORGANISATIONS INTERNATIONALES NON GOUVERNEMENTALES/ INTERNATIONALE NICHTSTAATLICHE ORGANISATIONEN

ASSOCIATION OF PLANT BREEDERS OF THE EUROPEAN ECONOMIC COMMUNITY (COMASSO)/ASSOCIATION DES OBTENTEURS DE VARIETES VEGETALES DE LA COMMUNAUTE ECONOMIQUE EUROPEENNE (COMASSO)/VEREINIGUNG DER PFLANZENZUECHTER DER EUROPAEISCHEN WIRTSCHAFTSGEMEINSCHAFT (COMASSO)

M. V. DESPREZ, Président, Cappelle en Pèvele, 59242 Templeuve, France

Mr. J.S. DENTON, Vice President, The Plant Royalty Bureau Ltd., Woolpack Chambers, Market Street, Ely, Cambridge CB7 4ND, United Kingdom

Mr. J. WINTER, Generalsekretär, Kaufmannstrasse 71, 5300 Bonn 1, Bundesrepublik Deutschland

Dr. R. MEYER, Geschäftsführer, Bundesverband Deutscher Pflanzenzüchter e.V., Kaufmannstrasse 71, 5300 Bonn, Bundesrepublik Deutschland

M. R. PETIT-PIGEARD, Directeur général, Caisse de Gestion des Licences végétales, SICASOV, 7, rue du Coq Héron, 75001 Paris, France

Mr. J. JOERGENSEN, J. Asmussens EFTF A/S, Sankt Anna Plads 20, 1250 Copenhagen, Denmark

INTERNATIONAL ASSOCIATION FOR THE PROTECTION OF INDUSTRIAL PROPERTY (AIPPI)/ ASSOCIATION INTERNATIONALE POUR LA PROTECTION DE LA PROPRIETE INDUSTRIELLE (AIPPI)/ INTERNATIONALE VEREINIGUNG FUER GEWERBLILCHEN RECHTSSCHUTZ (AIPPI)

Dr. E. FREIHERR VON PECHMANN, Patentanwalt, Mitglied des Geschäftsführenden Ausschusses der AIPPI, Schweigerstrasse 2, 8000 München 90, Bundesrepublik Deutschland

INTERNATIONAL ASSOCIATION OF HORTICULTURAL PRODUCERS (AIPH)/ASSOCIATION INTERNATIONALE DES PRODUCTEURS DE L'HORTICULTURE (AIPH)/INTERNATIONALER VERBAND DES ERWERBSGARTENBAUS (AIPH)

Dr. R. TROOST, Président, Commission pour la protection des nouvelles variétés, Jan van Nassaustraat 50, 2596 BV La Haye, Pays-Bas

Mr. O. BARTHOLOMAE, Stellvertretender Generalsekretär, Zentralverband Gartenbau, Godesberger Allee 142-148, 5300 Bonn 2, Bundesrepublik Deutschland

M. A. GROOT, Secrétaire général du Conseil néerlandais de l'horticulture, Schiefbaanstraat 29, 2596 RC La Haye, Pays-Bas

Mr. A.E. LYCK, Head of Political Department, Danish Horticultural Producers' Association, P.O. Box 3073, 1508 Copenhagen, Denmark

0329

INTERNATIONAL ASSOCIATION OF PLANT BREEDERS FOR THE PROTECTION OF PLANT VARIETIES (ASSINSEL)/ASSOCIATION INTERNATIONALE DES SELECTIONNEURS POUR LA PROTECTION DES OBTENTIONS VEGETALES (ASSINSEL)/INTERNATIONALER VERBAND DER PFLANZENZUECHTER FUER DEN SCHUTZ VON PFLANZENZUECHTUNGEN (ASSINSEL)

Dr. C. MASTENBROEK, President of ASSINSEL, de Terminator 8, 8251 AD Dronten, Netherlands

Mr. T.M. CLUCAS, Deputy President of ASSINSEL, Asmer Seeds Ltd., Asmer House, Ash Street, Leicester LE5 ODD, United Kingdom

Prof. Dr. F.G. FAJERSSON, Vice President, Scientific Advisor, Weibullsholm, Box 520, 26124 Landskrona, Sweden

Dr. H.H. LEENDERS, Secretary General of ASSINSEL, Chemin du Reposoir 5-7, 1260 Nyon, Switzerland

Mr. M. BESSON, Secretary General Designate of ASSINSEL, Chemin du Reposoir 5-7, 1260 Nyon, Switzerland

M. M. BARON, Selectionneur, Limagrain, B.P. 115, 63201 Riom, France

Dr. C.-E. BUECHTING, Vorsitzender des Aufsichtsrats, Kleinwanzlebener Saatzucht AG, Postfach 146, 3352 Einbeck, Bundesrepublik Deutschland

Dr. D.L. CURTIS, DeKalb-Pfizer Genetics, 3100 Sycamore Road, DeKalb, IL 60135, United States of America

M. J. DONNENWIRTH, Représentant de Pioneer, Gie Pioneer France, Epuiseau, 41290 Oucques, France

Dr. J.A.J.M. GEERTMAN, Secrétaire général, N.T.Z., Jan van Nassaustraat 109, 2596 BS The Hague, Netherlands

Dr. M. GOHN-MAUTHNER (Mrs.), Probstdorfer Saatzucht, Parkring 12, 1011 Wien, Oesterreich

Dr. D. GUNARY, Nickerson Seed Company, Rothwell, Lincoln LN7 6DT, United Kingdom

Mr. M. KAMPS, President, Dutch Plant Breeders' Association, NKB, Stadsring 63, 3911 NH Amersfoort, Netherlands

M. C. KISS, Président de section maïs, 18, Avenue Gallieni, 49130 Les Ponts-de-Cé, France

Dr. G. KLEY, Vorsitzender der Sektion Futterpflanzen, Postfach 1407, 4780 Lippstadt, Bundesrepublik Deutschland

Dr. P. LANGE, Syndikus, Kleinwanzlebener Saatzucht AG, Postfach 146, 3352 Einbeck, Bundesrepublik Deutschland

Mme M. MARCHAND, Secrétaire du syndicat des Etablissements français de semences de maïs, SEPROMA, 3, Avenue Marceau, 75116 Paris, France

Mr. D.G. McNEIL, General Manager, Plant Royalty Bureau Ltd., Woolpack Chambers Market Street, Ely, Cambridgeshire CB7 4ND, United Kingdom

Mr. C.P. PEDERSEN, Research Manager, Association of Danish Plant Breeders, 4, Daehnfeldt, Box 185, 5100 Odense, Denmark

M. P. PERROTIN, Limagrain, B.P. 51, 63360 Gerzat, France

Dr. B.M. ROTH, Ciba-Geigy GMBH, Postfach, 7867 Wehr, Bundesrepublik Deutschland

M. S.J. SLUIS, Royal Sluis, P.O. Box 22, 1600 AA Enkhuizen, Pays-Bas

Mr. G.J. URSELMANN, Sluis & Groot Research, Zaadunie BV, P.O. Box 26, 1600 AA Enkhuizen, Netherlands

Mr. J. VAN DE LINDE, Secretary General, Dutch Breeders Organisation, NBK, Stadsring 63, 3811 HN Amersfoort, Netherlands

Mr. M. VON WUTHENAU, Ciba-Geigy GMBH, Postfach, 7876 Wehr, Bundesrepublik Deutschland

Mr. P.C.G. WEIBULL, Director, Weibullsholm Plant Breeding Institute, Box 520, 26124 Landskrona, Sweden

Mr. J.H.W. ZWINKELS, Director, Nickerson Zwaan b.v., P.O. Box 19, 2990 AA Barendrecht, Netherlands

INTERNATIONAL COMMUNITY OF BREEDERS OF ASEXUALLY REPRODUCED ORNAMENTAL AND FRUIT TREE VARIETIES (CIOPORA)/COMMUNAUTE INTERNATIONALE DES OBTENTEURS DE PLANTES ORNEMENTALES ET FRUITIERES DE REPRODUCTION ASEXUEE (CIOPORA)/INTERNATIONALE GEMEINSCHAFT DER ZUECHTER VEGETATIV VERMEHRBARER ZIER- BZW. OBSTPFLANZEN (CIOPORA)

M. J. VAN ANDEL, Président, Postbus 265, 1430 AG Aalsmeer, Pays-Bas

Mr. R. KORDES, Member of the Board, W. Kordes & Söhne, 2206 Sparrieshoop bei Elmshorn, Bundesrepublik Deutschland

M. R. ROYON, Secrétaire général, 128, Les Bois de Font Merle, 06250 Mougins, France

M. W.E.C. DELFORGE, Rosieriste et journaliste horticole, Rozenlaan 24, 9180 Belsele, Belgique

INTERNATIONAL FEDERATION OF THE SEED TRADE (FIS)/FEDERATION INTERNATIONALE DU COMMERCE DES SEMENCES (FIS)/INTERNATIONALE VEREINIGUNG DES SAATENHANDELS (FIS)

Dr. J.W. CHANEY, President of FIS, Chemin du Reposoir 5-7, 1260 Nyon, Switzerland

Dr. H.H. LEENDERS, Secretary General of FIS, Chemin du Reposoir 5-7, 1260 Nyon, Switzerland

INTERNATIONAL CHAMBER OF COMMERCE (ICC)/CHAMBRE DE COMMERCE INTERNATIONALE (CCI)/ INTERNATIONALE HANDELSKAMMER (IHK)

Dr. A. HUENI, Gempenstrasse 7, 4106 Therwil, Switzerland

III. OFFICERS/BUREAU/VORSITZ

Mr. J. RIGOT, Chairman
Mr. J.-M. ELENA ROSSELLO, Co-Chairman for technical questions
Mr. M. HEUVER, Co-Chairman for administrative and legal questions
Mr. S.D. SCHLOSSER, Co-Chairman for biotechnology questions

IV. OFFICE OF UPOV/BUREAU DE L'UPOV/BUERO DER UPOV

Dr. A. BOGSCH, Secretary-General
Dr. H. MAST, Vice Secretary-General
Dr. M.-H. THIELE-WITTIG, Senior Counsellor
Mr. A. HEITZ, Senior Officer
Mr. A. WHEELER, Senior Officer
Mr. M. TABATA, Associate Officer

[Annex II follows]

IOM/II/8

ANNEX II

[Original: French]

Document CIOP/IOM/2
(16.09.1985)

Subject: Minimum distances between varieties

This question was raised fairly recently by UPOV itself and CIOPORA is surprised to note that UPOV already envisages abandoning the study.

Even if it is difficult, this question is of interest and is important at several levels.

Under present circumstances, CIOPORA can only reaffirm its position stated in a letter to UPOV on October 21, 1983.

Contrary to what is stated in paragraph 10 of the UPOV document IOM/II/2 of April 30, 1985, the problem of mutants could be considerably reduced (for those species where the problem is most critical) if the minimum distances between varieties were enlarged. The requirement of greater minimum distances should be applied to all varieties of a particular species and it would not then be necessary to know, or to be able to verify, if a particular variety is or is not a mutant or the result of cross-breeding.

CIOPORA reiterates that the problem is not the same for all species and that, consequently, each species should be the subject of a specific examination. Characteristics of the same type (for example, the coloring of leaves) can be insignificant for one species and important for another. This is why CIOPORA considers that UPOV must necessarily consult professional experts so as to determine, species by species, the minimum distances.

Nevertheless, a certain number of general principles applicable to all species must be taken into account; the enlargement of minimum distances must be seen not only from the point of view of prior examination, but also from that of controlling the protected variety and the risks of infringement.

Up to the present, infringement has primarily been considered as consisting of the propagation, offer for sale, sale, etc. of THE protected variety as such, without the authorization of the breeder. In view of current work in the field of mutation breeding or genetic engineering, the concept of infringement should also be extended to the above-mentioned acts when they apply not only to THE variety, but also to any "mini-variation" of it, that is to say to any other variety falling within the said minimum distances.

In all industrial property fields, slavish reproduction is relatively rare; infringers generally try to imitate, with a few minimal differences, the protected object or process.

With the development of the protection of new varieties of plants, this form of infringement could develop.

CIOPORA therefore considers that UPOV should not abandon the question of minimum distances so hastily for the simple reason that it is a difficult problem to solve.

[End of Annex II and of document]