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THE PROTECTION OF
NEW VARIETIES OF PLANTS

Records
of a
Meeting of Member and Non-Member States
of the
UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

(Geneva, October 21 to 23, 1974)



Geneva
1975

Preface

In October 1974, representatives of States members of the International Union for the Protection of New Varieties of Plants and of other States as well as private organizations interested in the development of the Union met in Geneva.

The purpose of the meeting was twofold: to provide information on the aims and the work of the Union, and to discuss the conditions which might need to be fulfilled to make the Union attractive to States which do not yet belong to it.

It is hoped that, by providing, in this publication, a permanent record of what was said on that occasion, the purpose of the meeting will continue to be served.



Arpad Bogsch
Secretary-General
Office of the International Union
for the Protection of New Varieties of Plants

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REPORT ON THE MEETING OF
MEMBER AND NON-MEMBER STATES
prepared by the Office of the Union

1. A meeting of member and non-member States of UPOV was held in Geneva from October 21 to 23, 1974. The list of participants is reproduced on pages 55 to 59 of these records.

Opening of the Meeting

2. The meeting was opened by Professor Dr. L. Pielen, President of the Council of UPOV, who welcomed the representatives of member and non-member States of UPOV and of international organizations specialized in the field of plant breeding. The full text of the opening speech is reproduced on pages 21 and 22 of these records.

Speeches Delivered

3. During the meeting several speeches were delivered, each of which was followed by a discussion.

4. Mr. W.R. Smith (United Kingdom) spoke about "The Importance of Plant Breeding for the Development of Agriculture." The full text of his speech is reproduced on pages 23 to 26 of these records.

5. Mr. B. Laclavière (France) spoke about "The History and Main Provisions of the Convention." The full text of his speech is reproduced on pages 27 to 34 of these records.

6. Mr. H. Skov (Denmark) spoke about "The Work of UPOV (Past Achievements, Present Tasks, Plans for the Future)." The full text of his speech is reproduced on pages 35 to 37 of these records.

7. Dr. C. Büchting, President of the International Association of Plant Breeders for the Protection of Plant Varieties (ASSINSEL), spoke about "The Value and Benefit of the Convention to Plant Breeders." The full text of his speech is reproduced on pages 39 to 52 of these records.

Discussion Following the Speeches

8. The Chairman, underlining the conclusions of the speech by Mr. Smith (United Kingdom), mentioned two cases as examples of the possibilities open to governments for stimulating and directing plant breeding by creating special incentives. The first was the case of the Government of the Federal Republic of Germany, which offered two awards for wheat varieties of a high baking quality, one for summer wheat and the other one for winter wheat. Although this was a relatively small

investment and the awards could only be gained by two breeders, the measures had a considerable impact on the breeding of wheat varieties in general since most breeders active in this special field tried to win these awards, if only for publicity reasons. This measure in combination with others had resulted in a considerable increase in the quality level of German wheat, and a decrease in the need for importing foreign wheat of a special quality. The second case mentioned by the Chairman was the one in which his Government had supplied funds to a private association in order to do fundamental research on erucic-acid-free rape, research on the basis of which private breeders later developed two rape varieties of a low erucic-acid content; further valuable varieties were to be expected.

9. Mr. Virion (Poland) reported that in Poland great emphasis was placed on plant breeding. To stimulate breeding activities in State enterprises, where 99% of the country's plant breeding work was performed, a system had been introduced according to which the breeders--that is to say, mainly the employees of State-owned breeding stations--received a remuneration in the form of a premium which could amount to as much as 200,000 zlotys for each variety, depending on its economic value. It was not sufficient that a new variety be new, homogeneous and stable from a genetical point of view: it was also necessary that it should have a certain agricultural value under conditions prevailing in Poland. The same requirement was applicable in the case of foreign varieties to be entered in the catalogue of varieties accepted for production and trade in Poland.

10. The Chairman remarked that in the Federal Republic of Germany too the law prescribed that natural persons--especially those in governmental breeding stations--who had created a new variety should participate in the benefits derived from that variety.

11. As far as the value of the new variety was concerned, the Chairman explained that it was also the case in member States of UPOV--under special laws regulating trade in seed and other propagating material--that plant varieties of certain species would have to undergo tests as to their value. The value of the new variety was, however, no longer a condition for its protection under the various plant variety laws of member States of UPOV. It would be difficult to include the requirement of value in an international system and in a system which could be extended to all botanical genera and species, as the value of the same variety might differ depending on the conditions in different countries, and as it was questionable how the value of plants not serving agricultural and industrial purposes--such as ornamental plants, for instance--could be determined.

12. In reply to a question posed by Mr. Butler (Netherlands), Mr. Virion (Poland) said that two different premiums were paid in Poland in connection with new plant varieties. One premium was paid once a new variety had been created and entered in the national catalogue, while another was paid annually for the production of basic reproduction material. The annual premium could attain the amount of 20,000 zlotys per year. The two above-mentioned premiums were only paid, however, to nationals of Poland. For a new variety created outside Poland but protected in Poland, the conditions of payment would depend on the contract with the foreign partner. In that contract either the sale of the basic propagating material or a payment of royalties could be agreed upon.

13. Mr. Sluis (International Federation of the Seed Trade (FIS)) stressed the importance of a fast and efficient distribution of improved varieties on a world-wide level, especially in the case of a variety resistant to certain diseases. The greater the awareness of the danger of chemical residues, the more the value of disease resistance would be acknowledged. Fast replacement of varieties which were not resistant, or had lost their resistance, by newly developed resistant varieties would be necessary and therefore distribution should not be hampered or delayed by formalities.

14. At the request of Mr. Grundler (International Association of Plant Breeders for the Protection of Plant Varieties (ASSINSEL)), in connection with the statement by Mr. Smith that great efforts were made in the United Kingdom for the breeding of fodder plants, Mr. Kelly (United Kingdom) reported that so far it had not been possible to protect such plants in the United Kingdom but that it was intended to include them in the protection scheme in the coming year.

Discussions on Articles of the Convention

15. Following the speeches, and in the closing session, the main Articles of the Convention were discussed.

Article 2

16. The Chairman started the discussion by pointing out that the first sentence of Article 2(1) of the Convention reflected a very flexible attitude since it permitted member States to protect new plant varieties under a special title of protection, or a patent. So far, all member States of UPOV had chosen the first possibility and protected new plant varieties by the grant of a special title. Italy, one of the non-member signatory States, had declared, when signing the Convention, that it would grant protection to new varieties in the form of a patent.

17. The Secretary-General remarked in this connection that the second sentence of Article 2(1) was rather rigid, stating as it did that "a member State of the Union whose national law admits of protection under both these forms may provide only one of them for one and the same botanical genus or species." He therefore asked whether that sentence presented any problems for any of the countries which contemplated the possibility of accession to the Convention.

18. Mr. Blum (United States of America) informed the meeting of the situation in his country, where two laws governed the protection of plant varieties: the Patent Law for asexually produced plants, and the Plant Variety Protection Act for sexually produced plants. Mr. Rollin (United States of America) added that for at least one botanical species, namely, bluegrass, it was possible to protect varieties under both laws. Therefore, the second sentence of Article 2(1) presented a problem for the United States of America although not a major one. He could see no convincing reason why both laws could not apply to a particular plant species.

19. The Chairman reported that when establishing the text of the Convention the possibility of granting protection to the same species under two different laws in one State had been discussed and rejected for very valid reasons.

20. Dr. Böringer (Federal Republic of Germany) said that in his view the problem was in fact that the protection granted under a plant patent was in substance a different protection from that granted under a title given pursuant to the Plant Variety Protection Act. He asked the representatives of the United States of America why they wished to grant different protection depending on whether a species was vegetatively propagated or generatively propagated. As far as some agricultural crops and especially ornamental plants and forest plants were concerned, there was no clear separation between the two kinds of propagation. He then asked the representatives of Hungary whether the protection granted under the Hungarian Patent Law was different in substance from that envisaged under the UPOV Convention.

21. The Secretary-General pointed out that it should be kept in mind when discussing this problem that the aim of the Convention was to secure protection beyond the borders of the country of the breeder. Therefore, one should proceed with caution to dictate the solutions which each country should adopt. He further questioned whether it really made any difference, for example to a German plant breeder, whether in a given country he received protection under the patent law, or under a special law, or under both.

22. Mr. Rollin (United States of America) said that in his country the possibility had been discussed of reaching an agreement between the Patent Office and the Office administering the Plant Variety Protection Act concerning competence for certain species, but it had been feared that applicants might insist on their statutory rights and that such an agreement would not hold in court.

23. Answering the Chairman's question whether one of the two systems would be more attractive than the other for the breeder and could influence his choice,

the representatives of the United States of America replied that except for very limited cases--at the moment only for bluegrass--plant breeders in the United States of America had no choice as to the form of protection they could apply for: asexually reproduced plant varieties could only be protected by a patent, and sexually reproduced plant varieties by a plant variety certificate.

24. The Chairman doubted whether the situation in the United States of America was incompatible with the principle laid down in Article 2(1), second sentence, of the Convention since in that country the same species could normally be protected under only one of the two systems. He therefore could not fully understand why the United States of America was insisting so strongly on the need to change the said provision, which in general embodied a sound principle.

25. Mr. Rollin (United States of America) replied that this problem was not unsurmountable, but that it was nevertheless a problem. It could, if necessary, be solved by the United States of America, but it might be more easily solved by a small change in the Convention.

26. Answering a question by Dr. Böringer (Federal Republic of Germany), Mr. Pálos (Hungary) explained that under the Hungarian Patent Law two kinds of patents were granted, the industrial patent and the biological patent. The biological patent was in reality a plant variety right fully corresponding to the provisions of the UPOV Convention: the criteria for its patentability were novelty, homogeneity, and stability; it assured the exclusive right to produce propagating material as such; and an official examination was required.

27. As far as the examination was concerned, a very liberal practice had been adopted: if an applicant submitted a certificate showing that the criteria of novelty, homogeneity and stability were proven by an organ recognized by the Hungarian Patent Office, no further examination would be conducted by that Office, which was a great advantage for foreign applicants. The Hungarian law applied to all botanical genera and species. The period of protection was 20 years. Hungary was very interested in the work and development of UPOV, and the competent authorities were studying the question whether it was useful and feasible that Hungary should accede to the UPOV Convention.

28. At the Chairman's request, Mr. Pálos (Hungary) explained that in Hungary new plant varieties could be used as a step towards the creation of another plant variety and that contrary to the rules governing the industrial patent no dependencies existed. In this respect too, the Hungarian Patent Law was in conformity with the UPOV Convention, as far as biological patents were concerned.

29. Mr. Kämpf (Switzerland) said that for many States it was not possible to grant a patent of invention for a new plant variety as the basic principle in the patent laws of those States was that an invention had to be described in a manner sufficiently clear and complete to be carried out--or reproduced--by a person skilled in the art. The possibility of reproducing the invention was not provided in the field of new plant varieties, at least not for sexually reproduced plants. The European Patent Convention signed in Munich in 1973 therefore excluded the grant of a European patent for new plant varieties, and it could be assumed that all 16 European States having signed that Convention would not protect a plant variety in the form of a traditional patent.

30. Dr. Büchting (International Association of Plant Breeders for the Protection of Plant Varieties (ASSINSEL)) pointed out that it mattered little to a plant breeder whether new plant varieties were protected by a patent or by a special title. The plant breeder had only a great and definite interest in ensuring that the possibilities of Article 2 were fully used. He supported the proposal of the Secretary-General to apply the Convention with greater flexibility as plant breeders were interested in worldwide protection of the results of their breeding activities. For some countries, it might be easier to adapt their patent laws than to create a special title for the protection of plant varieties.

31. Mr. Royon (International Community of Breeders of Asexually Reproduced Ornamentals (CIOPORA)) shared Dr. Büchting's view that breeders were mainly interested in having a great number of species protected in many States. To achieve that, the possibilities of cooperation in the testing of varieties should be largely met.

32. The Chairman remarked that the problem mentioned by Mr. Royon (International Community of Breeders of Asexually Reproduced Ornamentals (CIOPORA)) would be discussed later.

Article 4

33. The Chairman stated that the list of genera and species annexed to the Convention, and the requirement of Article 4 that the Convention should be applied within fixed periods to the genera and species listed therein, had been adopted because of the fear that otherwise member States would each apply the Convention independently to different genera and species. This fear had proved to be unjustified since all the present member States had included in their systems of protection more genera and species than they were obliged to under the Convention, and there was a hard core of the same species and genera eligible for protection in all member States. He therefore thought that member States would be ready to accept changes. One possibility would be to enlarge the number of genera and species listed and to oblige member States to apply the Convention to a fixed number but not all of those genera and species within certain periods. Another possibility would be to omit the list completely and merely oblige member States to apply the Convention to a certain number of genera and species of their choice at the time of the entry into force of the Convention in their territories, and to a number of further genera and species within certain periods fixed in the Convention.

34. Mr. Rochaix (Switzerland) pointed out that the number of genera and species for which a State--especially a small State--could provide protection depended to a large extent on its facilities for carrying out the required examination. He emphasized his country's interest in the efforts of UPOV to establish a system of cooperation in the examination of new varieties.

35. The Chairman underlined the importance of distributing tasks among the plant variety rights offices in the member States in order to extend the protection to as many botanical genera and species as possible.

36. Mr. Palmer (New Zealand) said by way of an example that white clover would be of special concern to his country if it were to become a member of UPOV. As it was only red clover that was mentioned in the Annex to the Convention, New Zealand wanted to know within what period of time the Annex could be extended to comprise white clover, and to what extent New Zealand would be able to submit to the Council suggestions for new species to be included in the Annex if it became a member of UPOV.

37. The Secretary-General replied that the Annex could not be modified by the Council but only in the course of a future revision of the Convention. He added that, as already stated by the Chairman, it would even be possible within such revision to abandon the Annex completely, and to provide that only a minimum number of species had to be protected, without mentioning which ones.

38. Mr. Royon (International Community of Breeders of Asexually Reproduced Ornamentals (CIOPORA)) said that, according to paragraph (1) of Article 4, the UPOV Convention might be applied to all botanical genera and species. That could lead to the conclusion that it also referred to microorganisms. As there was no clear border line between plants and animals, he asked whether in some countries difficulties had already arisen in that connection, for example, in cases of protection of antibiotics under the patent law. He added that the problem of the list in the Annex could only be considered in the light of the requirement of examination, and reminded the participants of the proposal of CIOPORA that an examination performed in one member State of UPOV should also be recognized in the other member States.

39. Mr. Pálos (Hungary) noted in this context that the biological patent in his country also covered animal species; however, so far, no applications for such species had been received. In the case of microbiological subject matter, the applicant could obtain protection through an industrial patent or a biological patent, and it was for him to decide which kind of protection he desired. If he preferred protection in the form of a biological patent, he also had to prove that the subject matter was new, homogeneous and stable.

40. Mr. Bagwill (United States of America) said that the same problem existed in the United States of America, where it was possible to obtain, on the one hand, patent protection on an industrial basis for a strain of fungus in a carrier--but not a patent for the fungus itself--and, on the other hand, a plant patent for the strain of fungus without claiming it in the carrier. He added that, at the moment, patents were already granted for viruses even without the carrier, and he suspected that it might be possible to obtain a patent in respect of new animals as animals were not excluded from the patent law.

41. Mr. Butler (Netherlands) added that the protection of mushrooms was provided for in the Netherlands.

Article 5

42. Opening the discussion on Article 5, the Chairman recalled that paragraph (4) of that Article enabled member States to extend protection for certain botanical genera and species to the marketed product, and that when the Convention had been established that paragraph had mainly been introduced for the purpose of roses or carnations. In the meantime, breeders in the Federal Republic of Germany were in favor of the extension of protection to the marketed product for other crops as well, such as strawberries.

43. Mr. Royon (International Community of Breeders of Asexually Reproduced Ornamentals (CLOPORA)) stated that breeders had been asking for a long time for an extension of protection to the marketed product for vegetatively reproduced plants. The problem was becoming increasingly important in Western Europe as cut flowers were produced to a great extent in climatically favored States which were not members of UPOV. When such flowers were imported into member States of UPOV, the producers from those non-member States did not have to pay royalties to the breeders for the use of protected varieties. He added that the problem might become less burdensome if those States were to become members of UPOV.

44. Mr. Royon added that breeders were not simply asking for government intervention but wished to have their private rights recognized and protected. It should therefore be left to the breeder himself to defend his rights in cases of infringement. By extending protection to the marketed product, the situation would be the same as in the field of industrial patents. At present, France was the only UPOV State where protection was extended to the marketed product, namely, in the case of roses and carnations.

45. Mr. Schlosser (United States of America) remarked that for asexually reproduced plants the breeder must be protected against any unauthorized reproduction, whether it be commercial or non-commercial. It was an impossible burden for the owner of rights to determine exactly whether reproduction was commercial or non-commercial.

46. The Chairman said that as far as he had understood Mr. Royon (International Community of Breeders of Asexually Reproduced Ornamentals (CLOPORA)) the breeders, especially of ornamental plants, were asking for the legal possibility of instituting proceedings against persons selling plants produced abroad by using reproductive material of protected varieties. The meeting had only heard the views of the breeders on this problem but there were also other circles which might object to such extension of protection to the marketed product, not only because they intended to violate rights but because they feared the restrictions and obstacles of the controls which the breeders or their organizations might impose on them. On the basis of discussions in the Federal Republic of Germany, he doubted whether at the moment it would be possible to extend protection to the marketed product in his

country. He also did not share the view that the problem would be solved if the number of member States of UPOV were to be increased. He concluded by stating that the problem was not restricted to ornamental plants but would also arise in his country in the case of strawberries, as it was particularly easy to produce reproduction material from strawberries. But even if the law provided for protection for the end product in practice great problems would arise in such cases.

47. Mr. Royon (International Community of Breeders of Asexually Reproduced Ornamentals (CIOPORA)), continuing the discussion, gave the following example. Cut roses produced in heated glasshouses in a country like the Federal Republic of Germany could not, as a result of the increase in the price of oil or the necessary manpower, stand the competition of roses produced in the open field in countries like Algeria or Israel. In such a case, it could well be imagined that German producers of roses of protected varieties might discontinue the production of cut flowers of those varieties, and that, though a variety was protected in Germany, it would no longer be cultivated in that country. Cut flowers of that variety would, however, still be sold there, but they would be produced in a foreign country, where the breeder would not receive royalties for his variety.

48. Dr. Böringer (Federal Republic of Germany) said that there were actually two problems under discussion. One was the problem mentioned by Mr. Royon, and the example given by him showed clearly the economic difficulties which breeders were faced with. When the discussion on the revision of the Convention started, this problem would have to be dealt with. However, the decision would mainly be of a political character. It would have consequences also on the national laws on restrictive business practices, and would touch on the law on competition, also in respect of possible resale price fixing. The second problem raised by the representative of the United States of America was whether the protection in respect of vegetatively reproduced species should be limited to commercial reproduction and commercial marketing, or whether the word "commercial" could be deleted. Looking at the situation in the Federal Republic of Germany, the actual form of protection for species of fruit crops or ornamental plants was in some cases inefficient because it was limited to commercial reproduction and commercial marketing.

49. In reply to a question by the Secretary-General, the representative of the United States of America reported that a similar problem existed in his country since hundreds of thousands of blooms of protected varieties were shipped from South America with absolutely no royalties paid.

50. Mr. Pálos (Hungary) reported that in Hungary, which had an economic system where commercial production and commercial marketing could be carried out only by the State enterprises and cooperatives, the problem under discussion did not arise.

51. Mr. Bustarret (France) said that in France protection was extended to cut roses and carnations because there was a great disproportion between the profit a breeder could obtain through the sale of plants and the profit the producer of cut flowers would obtain from the sale of cut flowers. The situation was different, however, with respect to other crops, for example, fruit crops. In France, a policy of consumer protection was followed for strawberries as it was a food-producing crop. As strawberries had many virus diseases, a system of certification had been established. Nowadays the producers of strawberries would buy those certified plants, and by such means the breeder had some assurance that his rights were respected. The example given showed that no general decision could be taken for all vegetatively reproduced plants but that it was necessary to study each case separately and find solutions adapted to individual cases.

52. Mr. Butler (Netherlands) asked what the practical consequences of an extension of the protection to the marketed product would be, and especially whether in the case of cut flowers the producers had to label the flowers, and who had to bear the costs for the labelling. He also wanted to know whether royalties had to be paid for both the production and sale of reproductive material and the cut flowers.

53. Mr. Royon (International Community of Breeders of Asexually Reproduced Ornamentals (CIOFORA)) said he had mainly four remarks to make. First, he did not share the opinion that the decision to extend the protection to the marketed product was a political one as the same problems existed in the case of patents. What the breeders were actually asking for was only an extension of the protection up to the marketed product in as many member States as possible. Secondly, he did not intend to ask for an amendment of the Convention--since it enabled each member State to extend the protection to the marketed product--but, in view of the presence in the meeting of a great number of representatives of many States, he thought it was necessary to underline the importance to the breeder of the protection of the marketed product. As a third point, he wanted to underline the necessity of closer cooperation inside UPOV. He referred to the recent Convention for the establishment of a European patent, and proposed the establishment of a European Plant Patent. The fourth remark he wished to make referred to the practical implications of the extension of protection to the marketed product. In his opinion, it was important for a breeder to attach the trademark and the variety denomination to the plant. That could be done in the form of plastic or metal labels for plants, or plastic or self-adhesive labels for cut flowers. The use of labels would have the additional advantage that the breeder could control the sale of flowers and easily detect any unlawful sale of flowers of his variety. He added that he was not opposed to the importation of cut flowers but only to the importation of unlawfully produced flowers.

54. Mr. Troost (International Association of Horticultural Producers (AIPH)) agreed that it was necessary for a breeder to have special protection for roses and carnations. He added, however, that one should also think of the producers of cut flowers. It was not reasonable to ask the producer to attach a label to every flower. An attempt would have to be made to look for something that was practical to apply.

Article 6

55. Mr. Schlosser (United States of America) declared that he did not believe that a universal or worldwide standard of novelty was practical or particularly useful. He proposed that the standard should be: public knowledge, use or sale in the State where protection was applied for. In addition, he proposed that the breeder should be given a period of grace during which commercialization in the member States would not affect the obtaining of a breeder's right. In the United States of America, the duration of the period of grace was one year.

56. The Chairman explained that the present rule did not mean that the Offices had to maintain a world reference collection. If in future the testing work were to be distributed between the Offices of member States, it would also facilitate the establishing of reference collections, which would then not necessarily have to be established separately in each member State.

57. Mr. Sluis (International Federation of the Seed Trade (FIS)), recalling a statement made by Mr. Skov (Denmark) in his speech on the interpretation of the term "important characteristics" in Article 6(1)(a) of the Convention, took the view that it would endanger the rights of the breeder if non-functional characteristics were considered to be sufficient for establishing distinctness. Even in varieties which sufficiently fulfill the requirement of stability it would, in the majority of cases, be possible to find single lines showing some differences of a non-functional character. Such non-functional differences should not be allowed to be considered as constituting distinctness. He thought that this problem ought to be carefully considered.

58. Mr. Bustarret (France) explained that during the discussion on the establishment of the Convention the words "important characteristics" were adopted as it was not possible to find clearer terms. The intended meaning was that the difference between a protected variety and another variety should be clearly recognizable. The word "important" should not be connected with the value in regard to the utilization of the variety. The Technical Steering Committee of UPOV, of which he was the Chairman, had also discussed this problem and had reached general agreement on the question but had likewise experienced difficulty in finding a concise formula in which to express their agreement.

59. Mr. Sluis (International Federation of the Seed Trade (FIS)) added that the text of the Convention clearly said "un ou plusieurs caractères importants" and not "caractères d'une certaine importance". It could therefore not be interpreted in the sense that each characteristic could be used for establishing distinctness, even if it was not functional.

60. Having been asked by the Chairman whether his organization had knowledge of any practical difficulty that had arisen out of the interpretation of the word "important," Mr. Sluis (International Federation of the Seed Trade (FIS)) replied that there were in fact some difficulties at present in the Netherlands. He asked again why the word "important" was used in the Convention if any different characteristic could justify the grant of plant breeders' rights for a new variety.

61. Dr. Böringer (Federal Republic of Germany) added that the Technical Steering Committee had agreed after long discussions to interpret the word "important" in the sense of "important for distinguishing one variety from another." He also expressed the opinion that it would be desirable if the international breeders' organizations could formulate their wishes as regards this question since some of Mr. Sluis's colleagues might have different opinions. After the breeders had formulated their wishes, there could be a discussion on whether those wishes could be met by interpreting the Convention according to the sense of such wishes or whether the Convention would have to be changed.

62. Mr. Bøgh (International Federation of the Seed Trade (FIS)) brought up a special problem of Danish plant breeders with respect to grasses. He claimed that it was extremely difficult to describe the distinguishing characteristics of grasses, and a great number of new varieties were rejected because of the lack of distinctness as compared with existing varieties, though the breeder knew they were different and differences could be seen in the field. He pleaded for the acceptance of such varieties if there were differences in, for example, three characteristics, even if those differences were not significant.

63. Mr. Sluis (International Federation of the Seed Trade (FIS)) admitted that there might be difficulties in the case of grasses which could make special studies desirable. He took the view, however, that, under the express wording of the Convention, a combination of a number of non-significant characteristics could never be considered sufficient to establish distinctness.

64. Mr. Bustarret (France) wondered whether in the majority of cases mentioned the grant of a title was not rejected because the variety was not distinguishable from other varieties but rather because the variety lacked homogeneity. He referred to the fundamental principle of the Convention, that a variety can be protected only if it actually is a variety. A heterogeneous population could not be protected whatever system might be applied.

65. The Chairman, in underlining the statements made by Mr. Bustarret (France), added that the requirement of homogeneity could, of course, not be applied as rigidly to cross-fertilized crops as to self-fertilized crops. He also pointed out that in judging distinctness, physiological as well as morphological characteristics had to be considered; a great difference in yield could for instance establish distinctness. He admitted that the situation with respect to grasses was difficult.

66. Another question which might be discussed in connection with the same Article was the denomination of the variety as a pre-requisite for the granting of protection. He asked how this problem was handled in the United States of America, where protection was also granted in the form of a patent.

67. The representatives of the United States of America said that under the patent system a name was not required but the breeder was allowed to mention a name in his specification. However, he received no protection for it. The Patent Office could demand that confusing or inaccurate names mentioned in the specification be changed by the applicant. Under the Plant Variety Protection Act, too, no name would be required. The naming of varieties was controlled by

the Federal Seed Act, which governed all labelling and advertising of seeds in the United States of America. Under the Plant Variety Protection Act, the breeder was allowed to give a name which must not be misleading within the meaning of the Federal Seed Act. The Plant Variety Office notified the applicant after checking with the Federal Seed Act authorities as to whether the name might possibly be misleading and therefore in violation of the Federal Seed Act, but it had no legal possibility of opposing the name.

68. Mr. Grundler (International Association of Plant Breeders for the Protection of Plant Varieties (ASSINSEL)) asked for the maintenance of the period of four years provided in Article 6(b), second subparagraph, for filing applications in other member States. The adoption of a shorter period--especially a period of one year, as in the United States of America--would create great difficulties for the breeder, who would be forced to file applications in every member State where he wanted protection within one year counted from the date of the first application. That would mean an unnecessary waste of work, effort and money if the breeder had to withdraw the application because of unexpected difficulties concerning novelty, distinctness or homogeneity during the first year of testing. In addition, during the first year the breeder might not have sufficient seeds to supply all Offices with samples.

69. The Chairman took the view that the problem under discussion was connected with the question of prior examination since the period of four years would be rather long in a system without prior examination. He added that in the member States, too, the four-year period had been criticized.

70. The representatives of the United States of America explained that public use or sale inside the United States of the new variety for more than one year prior to applying for a plant patent would be a bar to receiving that patent, while public use or sale outside the United States--like experimental use--would not have that effect. Publication of the variety abroad would not be a bar either.

71. Mr. Virion (Poland) remarked in connection with Article 6(1)(b) that a variety protected under the Convention in any of the present member States could no longer receive protection in a country which signed the Convention more than four years later since in such cases the variety would, in general, have been sold or commercialized already for more than four years in the territory of another State. To solve that difficulty and also a number of other problems, he proposed the establishment of a UPOV list of protected varieties, and the provision for the protection of a variety which had been entered once in that list for the same period in all UPOV member States. Acceptance of his proposal would not, however, mean that such a variety would at the same time have to be entered in the national list of recommended varieties or varieties submitted to trade. Such a solution would make the Convention more attractive to non-member States. The system would require that a division of labor be envisaged under which the establishment of the list of protected varieties would for certain species be assigned to certain States.

72. The Chairman remarked that the system envisaged by Mr. Virion would lead to a UPOV plant variety right such as that indicated by Mr. Skov in his lecture as being the final aim. It certainly could not be realized in the near future. The other question, namely, whether a breeder could obtain protection in a new member State for a variety already commercialized for more than four years in the other member State, deserved examination.

Article 7

73. The Chairman opened the discussion on the question whether Article 7 was to be interpreted in the sense that the compulsory examination had to comprise field tests.

74. Mr. Rollin (United States of America) remarked that his country had no objection to the present wording of Article 7. The only problem was the interpretation of the word "examination." According to the experience of the United States under the plant patent system and the Plant Variety Protection Act, there would be no need for official field tests. The authorities in the United States would receive

sufficient information from the breeder, or had adequate authority to require it. They had done pioneering work in automating information for new varieties and believed that they could handle applications in an expeditious manner without sacrificing thoroughness in carrying out the activity. Therefore, he would propose that the word "examination" be given a more liberal interpretation.

75. At the Chairman's request, Mr. Rollin (United States of America) gave a short explanation of the way in which applications were handled in his Office. The system was based on the publication of descriptions in the literature. The examiners searched the literature, entered all information obtained from their search in a special form and transferred it from that form to computer cards and computer tapes. The applicant had to fill out--for his variety--a descriptive form of the same type as that used in putting information into the computer. The applicant also had to give the breeding history and botanical description in "prose" form and clearly state his claim for novelty and also prove that he is the owner. The claim was then put into the computer, which was asked to give information on similar varieties. The examiner compared the description given by the applicant with those of the similar varieties. In case of doubt, the examiner could ask the breeder for additional information. Since applicants knew that they would receive protection only for what they had described, the descriptions were fairly accurate. Mr. Rollin concluded by stating that in his view the breeder who had worked on the development of the variety for 10 or 20 years was in the best position to describe it.

76. Mr. Pálos (Hungary) pointed out that the most difficult and most important question in the field of plant varieties was examination. In his opinion there were two possibilities. One was that member States would accept and recognize examinations done in other States. The other possibility was a distribution of the work of examination among the member States, thereby avoiding simultaneous testing of a variety in several member States. He added that the possibility of distributing work or relying on tests done in other member States already existed as the UPOV Council had worked out several guidelines for examination purposes. He also referred to the Patent Cooperation Treaty, which attempted something similar in the patent field. In the Hungarian Law, it was provided that every application concerning plant variety protection had to be examined. However, the Law did not state that the examination had to be done in Hungary. Therefore, already test reports were accepted which had been published, for example, by the Institut national de la recherche agronomique in Versailles (France), by the Bundessortenamt in Hannover-Bemerode (Federal Republic of Germany), or by the National Institute of Agricultural Botany in Cambridge (United Kingdom). The tests performed in those three Offices were, of course, different but those differences did not cause any damage either to the Hungarian State or to the foreign applicants.

77. Mr. Bustarret (France) said that the Convention was based mainly on the following two pillars. One was the principle that the variety for which protection was sought had to be new, homogeneous and stable, and the other was the requirement that such novelty, homogeneity and stability had to be specially tested. As past experience had shown, those tests were absolutely necessary. Several years ago a large number of varieties had been found on the market in France which were a mixture of varieties. It also happened that the same variety was sold under different names, and that different varieties were sold under the same name. He mentioned in this connection a case where a breeder had applied after an interval of 15 years for protection of the same variety under two different names. The application had been made in good faith and the mistake was only detected by the examining authority. If the breeder had only to fill in a form as required in the United States of America, such an error would probably not have been detected. In addition, practice had shown that, if it was left entirely to the breeder to prepare the description of the variety, very often protection would be granted to a variety which did not fulfill the requirement of homogeneity. In France it often happened that when an American breeder asked for a variety to be entered in the national (French) catalogue (not for protection) it appeared that despite the precautions taken by the competent authorities of the United States of America that variety did not fulfill the conditions of homogeneity and therefore could not be entered in the catalogue. For the same reason, it could not have been protected if the breeder had had the possibility of applying for protection in France. This example showed that a

national field examination was necessary. As stated by the representative of Hungary, there were still differences of opinion between the UPOV member States, and tests performed in the different member States also differed from one other. In addition, the member States did not all attach the same importance to the different characteristics. The process would be long before opinions and standards could be harmonized. He added that another important problem was the granting of reciprocity and that inside UPOV a common approach should be reached on the granting of reciprocity in relation to non-member States.

78. Mr. Matsunobu (Japan) stated that there were two different views in his country: according to the opinion of one group, the examination should be solely based on the breeder's description; according to the view of the majority of breeders, a field examination would be necessary. He therefore asked whether Article 7 could not be interpreted in such a way that it would be left to each member State to choose the method which it considered suitable.

79. Dr. Fajersson (International Association of Plant Breeders for the Protection of Plant Varieties (ASSINSEL)) said that normally a good breeder had other things to do than to examine his varieties in order to establish a description. He was more interested in studying and judging the economic value and quality of his varieties. Therefore, in Sweden breeders always appreciated the help they obtained from the State's field control experts. It did not seem advisable, at present, to give up the prior examination, at least as far as cereals and fodder plants in Europe were concerned. However, the national authorities should also make use of the breeder's knowledge and achieve some type of cooperation between breeder and Office, especially in establishing the test guidelines. The distinction between self-fertilized and cross-fertilized plants was too rigid. Actually there was no self-fertilized crop which was 100% self-fertilized. Therefore, in respect of wheat, for example, a more liberal criterion should be used when examining homogeneity. A pure line of a wheat variety would exist for only one year.

80. The Chairman said that the question of homogeneity needed further discussion. With respect to closer cooperation, he remarked that there was general agreement that UPOV would seek closer contacts with the professional organizations.

81. Mr. Bustarret (France) pointed out that contacts with breeders on the national level, as well as on the UPOV level, were at present very close. With regard to homogeneity, he added that the breeder was always free to produce and multiply varieties which were not homogeneous--and those might be valuable varieties--but, if he claimed protection under the Convention and the Government had to guarantee the protection, the variety must be distinguishable from other varieties, which was not the case with a heterogeneous variety.

Article 13

82. Mr. Royon (International Community of Breeders of Asexually Reproduced Ornamentals (CIOPORA)) referred to the remarks and proposals made by CIOPORA to UPOV on several occasions and mentioned in particular the problem of the relation between variety denominations and trademarks. The requirement in the Guidelines for Variety Denominations established by UPOV that variety denominations would have to be not only easy to pronounce but also easy to remember would make it difficult for a breeder to obtain another term suitable for trademark protection. He regretted that none of the proposals and remarks made by CIOPORA had been taken into account by UPOV. He added that UPOV should discuss all of those proposals again to prevent breeders of ornamental plants from looking for other possibilities of having their rights protected and no longer applying for the grant of plant breeders' rights.

83. Dr. Büchting (International Association of Plant Breeders for the Protection of Plant Varieties (ASSINSEL)) stated that the situation had changed since the time when the Convention was drafted because in the meantime breeders had learned to work with variety denominations as provided for in the Convention and were accustomed to add trademarks to such denominations, if necessary. He underlined the basic principle of the Convention whereby variety denominations as generic names were excluded from trademark protection but proposed that the restrictive

rules included in the Guidelines for Variety Denominations should be abandoned. He observed that the Convention had been drafted in a very flexible manner in order to create a basis for worldwide protection in plant breeders' rights. To achieve that aim, it would be necessary to consider conditions in other parts of the world and to abstain from regulating details of minor importance.

84. Mr. Sluis (International Federation of the Seed Trade (FIS)) said that he would like to add to the statement of Dr. Büchting that a special problem existed in the vegetable sector, where at the moment protection was granted to a large number of species by only some of the member States of UPOV and to a very small number by the other member States. Before the Convention was established, the breeders of new varieties were able to obtain protection under the trademark law, which was not prohibited. As a result, vegetable breeders, since the establishment of the Convention, had lost many of the possibilities of protecting their rights. The situation had become even worse in the EEC in cases where a variety had been entered in the EEC variety list. He therefore proposed permitting the use of a code of letters and figures for the variety denomination. Such a system would be preferable to having one name for a variety denomination and another name for the trademark.

85. Mr. Rollin (United States of America) added that his country agreed with UPOV that a trademark could not be a variety denomination. The question was covered by the United States Trademark Law, which considered a variety denomination to be a generic name, as well as by the Federal Seed Act. He was happy to see that there was no disagreement between the opinion of UPOV and that of the United States of America in this matter.

86. The Chairman concluded the discussion on Article 13 by stating that the aim of the meeting was to exchange views and to discuss all possibilities. He added that the guidelines established by UPOV were not to be considered as something which could not be changed in the future.

87. Mr. Kelly (United Kingdom), referring to the fact that he was also a member of the International Commission of Nomenclature of Cultivated Plants, proposed that UPOV should in the future cooperate more closely with the Commission in order to avoid conflicts with the code established by it. That code, revised in 1969, was known throughout the world and had recently been translated also into the Russian language. The Vice Secretary-General remarked that the Office of UPOV had already written to the Commission and asked for an exchange of views and closer cooperation. So far the Office of the Union had not received any reply.

88. Mr. Desprez (International Association of Plant Breeders for the Protection of Plant Varieties (ASSINSEL)) said that the new legislation in France was an exact copy of the UPOV Guidelines on Variety Denominations.

General Discussion

89. In the general discussion, the representative of Japan reported that at present the legal instrument governing plant variety protection in Japan was the Seed and Seedling Act of 1948. The Japanese Ministry of Agriculture and Forestry had set up a study group in 1972 consisting of leading technical experts to work out a new variety protection scheme. In addition, a private organization called "Japan Campaign for the Promotion of a Plant Patent Law" had been formed for the purpose of achieving the same aim. At present, there was disagreement on the conditions for the grant of plant breeders' rights. One obstacle to accession to the UPOV Convention would be that it did not permit examination of the usefulness of a new variety as a requirement for protection. The study group established in Japan held the opinion that such a requirement was necessary to protect farmers. In any case, the opinion prevailed in Japan that cereals like rice, wheat and rye did not need to be protected as they were under a severe seed inspection program and, in addition, were mainly grown in national stations. The list of species annexed to the Convention contained mainly species grown in Europe. In his opinion, the selection of species should be left to the national laws. Article 13 should be deleted as it was a further obstacle to Japan's accession to the Convention. Japan was nevertheless anxious to become a member of UPOV and he therefore asked whether the discussion of the problems mentioned could be given priority within UPOV with a view to facilitating Japan's accession.

90. The Chairman observed that the problem of the list of species was already under discussion. With respect to the requirement of value or usefulness, it would be impossible to require examination of value on a worldwide level as opinions on what was valuable or useful might differ from State to State. Moreover, in several States, for instance in the Federal Republic of Germany, there existed a law other than the law protecting new varieties; that other law provided for a value test to be conducted for a number of important crops before allowing a new variety to be commercialized. In regard to the Guidelines for Variety Denominations, he added that those Guidelines were only recommendations so that Japan could limit itself to respecting only the requirements of the Convention: the only denomination prohibited under the Convention was a denomination consisting of a combination of figures.

91. Mr. Skov (Denmark) stated that when the Convention had been established Denmark had requested that agricultural value be one of the requirements for protection under the Convention but had been convinced that it was impossible to ask for a value test on a worldwide level. Therefore, in Denmark, as well as in Germany, parallel legislation had been introduced making the commercialization of the seed or propagating material of certain species dependent on the conduct of a prior value test.

92. As to the period of protection, the Chairman recalled that at the time when the Convention was established views had differed widely. The provision in the Convention was a compromise.

93. Mr. Rollin (United States of America) referred to the concern of the United States about the absence of any limitation of the compulsory licensing which Article 9 apparently authorized. As to Article 10, the United States of America was not convinced that it was necessary to maintain asexually reproductive material throughout the lifetime of a plant patent. With respect to Article 12, he wondered whether it should be possible to defer the examination of applications for protection for more than four years as a consequence of paragraph (3).

94. The Chairman explained that Article 9 had not been applied so far.

95. Mr. Rollin (United States of America) added that member States should be free to annul plant breeders' rights for reasons other than those provided for in Article 10, which would make it necessary to delete or change Article 10(4).

96. Mr. van Wyk (South Africa) asked for information on the kind of agreement possible under Article 29 and also on the procedure applicable under Article 32(3) in the case of an application for accession to the UPOV Convention by a non-signatory State.

97. The Secretary-General pointed out that the important provision in Article 29 was the one which stipulated that no special agreement may contravene the provisions of the Convention. Another requirement of Article 29 was that any special agreement must be open to all States members of UPOV.

98. Miss Thornton (United Kingdom) mentioned as an example of such special agreements the plan to agree with other member States on cooperation in the use of testing facilities in such a way that the Office of one State would undertake the testing also on behalf of the other State and submit reports to the Office of that other State, which on that basis could take the necessary decisions.

99. As to the question how the Council of UPOV acted in the case of applications for accession to the Convention (Article 32(3)), the Chairman reported on the measures taken when Sweden had filed its application a few years ago. First, the Council had checked whether the Swedish Law fulfilled the basic requirements of the Convention, and since most representatives in the Council were already familiar with the technical facilities in Sweden no need had been felt for an official inspection. In cases where such information was less complete, the Council might ask the State to supply additional details, for example, on the question whether a special authority to undertake the tasks envisaged under the Convention had been instituted or already existed.

100. Mr. Forbes (New Zealand) circulated copies of New Zealand's recent Act and the proposed draft Regulations. He said that it was intended to apply the Act for roses as from May 1, 1975, and to extend it to further species in due course. New Zealand would be most interested to have an opportunity to use the testing facilities of other countries. He thanked all the States which had helped during the drafting of the new law and its regulations.

Closing of the Meeting

101. Summing up, the Chairman stated that, in his opinion, the meeting had been most useful. Each participant had had the opportunity to ask questions and make proposals. The participants from member States of UPOV had received many suggestions for further discussion, and the participants from non-member States and professional organizations had had the opportunity to obtain first-hand information about the opinions and views held within UPOV. He expressed his appreciation of the many valuable suggestions made and confirmed that the Council would deal with the results of the meeting during the subsequent days. He expressed the hope that all participants had received the impression that UPOV was open to reasonable suggestions and he assured them that all such suggestions would be taken into consideration in the future. He thanked all participants, especially those who had come from a distance, and closed the meeting.

OPENING ADDRESS

by

Ludwig Pielen

Ladies and Gentlemen,

On behalf of the UPOV Council I should like to welcome you to the first of our meetings that goes beyond the circle of member States. I think I can take your presence here, as representatives of countries well known for their successes in plant breeding, to be proof that it was right to introduce you to the still young International Union for the Protection of New Varieties of Plants in this way and to familiarize you with its tasks. I am particularly pleased to welcome the representatives of the international organization ISTA, and of the international associations working in the field of plant breeding and seed trading, AIPH, ASSINSEL, CIOPORA and FIS. You, Gentlemen, or your members, are directly concerned with the activity of UPOV, and this explains your special interest in its work and continued development.

In the course of the visits by the President of the Council and the Vice-Secretary General to some of these associations, it has been possible to engage in frank talks with them, to explain the aims of UPOV and to discuss means of bringing about constructive cooperation in a climate of mutual trust.

As some of you will be aware, it was originally planned, as a result of an invitation by the British Government, that a symposium lasting several days would be held last year in the United Kingdom. Unfortunately the invitation could not be confirmed owing to the structural changes made necessary by the United Kingdom's accession to the Common Market, and we decided at short notice to hold this discussion meeting, which allows even more time for exchanges of views. This should not, however, rule out the possibility of UPOV holding a symposium, as originally, planned, in a few years' time.

As you know, in relation to the worldwide activities of plant breeding as a whole, our Union is really quite small: it still has only six members. The purpose of the Union is to afford universal legal protection to the breeders of new varieties of plants. This presupposes a multitude of measures such as the harmonization of characteristics and methods for testing in individual countries, but above all the mutual recognition of the variety protection afforded, as has long been customary in the industrial property field. While it is true that we have already achieved valuable results in propagating the concept of worldwide protection, we are well aware that success can only be achieved by increasing the number of countries which cooperate within the Union.

We have invited you to today's meeting not only in order to familiarize you with the Union's tasks and objectives: these are subjects which will be dealt with thoroughly in the various substantive reports. We should also like to hear from you what the points in the UPOV Convention are on which contrary opinions exist and which may be preventing one country or another from acceding to the Convention.

The Convention will obviously have to be improved in certain respects in order to enable interested countries to adapt themselves to its special requirements. We consider it to be right, however, in terms of fundamental principles: this has been shown by experience in past years. It has stood the test of time and served its original purpose.

When I refer to revision of the Convention I am thinking, among other things, of its application to important botanical genera and species. When the original

text was drafted, about fifteen years ago, we confined ourselves, in accordance with the dictates of experience, to a binding list of important species that were of particular significance in the European context. It now seems appropriate to devise a more adaptable list, as certain species are of lesser interest to countries outside Europe. It would be possible to revise the Convention by including more plant species in the list, but leaving the selection, from that list, of species to be protected to the discretion of the member State concerned, or alternatively by removing the list altogether and merely prescribing a minimum number of species to be protected.

It should be mentioned here that the Convention also allows the protection of genera and species in which there is as yet no interest, for instance algae and fungi. I can well imagine that this question will arise in the foreseeable future in connection with the steadily worsening world protein situation.

Ladies and Gentlemen, I must not allow myself to anticipate the speakers at this meeting, to whom I take this opportunity of extending a warm welcome, and will therefore not go into further detail. Permit me then to end my exposition here and wish you--or I might even say wish us--a meeting that will be a successful contribution to a better understanding of our common task.

[Translated from the German]

THE IMPORTANCE OF PLANT BREEDING
FOR THE DEVELOPMENT OF AGRICULTURE

by

Walter R. Smith

Mr. President, Ladies and Gentlemen:

It is a great honor to give the introductory address at this meeting of member and non-member States, sponsored by the International Union for the Protection of New Varieties of Plants.

The products of the plant breeders whether from commerce or from State institutions are so important to the agricultural industry that everything must be done to keep breeders in business! The production of new varieties which are genetically better than those in current use is expensive so it is important to protect those who dedicate their time, energy and money to this task. May I offer my best wishes for the success of this meeting and for your future in the agricultural industry whatever your country.

I would like to make it clear that I am not a plant breeder, but as one who is responsible for advisory and development work in England and Wales I recognize very fully the great contribution of plant breeders to the agricultural industry in the UK. You have asked me to review the importance of "Plant Breeding for the Development of Agriculture." I must of necessity relate this to the UK because it is the only country where I am in a position to assess the facts although I suspect from my visits to other countries that the experience is much the same. And none of us can be ignorant of the worldwide benefits of the "Green Revolution" notably in some of the developing countries although those benefits are not quite so great as they promised to be for disease reasons (which I will refer to later).

The ultimate benefit of breeding new and better varieties of crops depends on how quickly and how widespread they are incorporated into farm practice. I can only refer to our own situation in the UK, but there I can assure you any variety which is an improvement on existing varieties is quickly taken up by the farmer. I believe this is due to an alert farming population and also to a close partnership between the plant breeders, those responsible for the commercial testing of new varieties and the advisory service which communicates information on new varieties to the industry through its network of agricultural and horticultural advisors. This chain of events is what I want to describe to you today under the headings:

- First - How successful are the plant breeders?
- Second - The assessment of their products; new varieties by a thorough testing program.
- Third - The communication of information about new varieties through advisory services.

I do so because all three are important in the contribution of plant breeding to the development of the agriculture and horticulture of a country. I discuss the subject mainly from the point of view of the farmers because the biological performance of a plant depends not only on its genetic capability, but also on the environment which nature and the farmer impose on it. Major advances in agricultural development are achieved when these components are improved simultaneously. A good variety given proper nutrition and husbandry and a good growing season will, as the farmer knows, result in a good yield of a crop, or as the breeder says--will tend to express its full genetic potential.

Yield

A popular yardstick of efficiency of a variety is its total yield because of the importance of yield in economic and profitable crop production. So many items in the ever increasing cost of growing a crop are outside the control of the farmer--fuel, chemicals, machinery--that he must strive for maximum yield to pay for them. Thus the farmer has chosen varieties for example of cereals almost solely on potential yield. The plant breeder has been conspicuously successful in providing him with high yielding varieties. He has done this by breeding plants which are efficient in the conversion of carbon dioxide, water and minerals to dry matter, i.e. short strawed cereal varieties and potatoes with reduced haulm (tops). Such varieties allow of high soil fertility and demand good weed control, both of which are environmental factors which contribute to high yield.

A potential yield of modern varieties of for example cereals and potatoes is vastly above the average field performance. This year we have recorded a 4 ton per acre (10 tons per ha) winter wheat crop--a high yielding variety on good soil well fertilized and in good season for wheat.

One of our crop specialists grew a crop of potatoes in which all known knowledge and techniques were applied in the growing of the crop--a high yielding variety, sprouted seed, balanced manuring, irrigation, etc.--and recorded 35 tons per acre (87 tons per ha).

The cost of good certified seed for commercial production of the main British crop is relatively small when set against the economic benefits of high yields. Without question the breeder has given us varieties which our husbandry has not yet fully exploited for yield.

Quality (chemical quality)

The plant breeder I believe refers to "specific efficiency" of varieties in relation to their suitability for special purposes.

Wheat for bread making--50% of home grown wheat now goes into British flour, the other 50% is imported hard wheat. So it could be that demand for suitable varieties for bread making will increase provided a premium is paid for this quality. The Home Grown Cereals Authority in the UK is launching a scheme whereby a premium will be paid by the millers for specified varieties in good physical condition.

It can be said that the breeders have given us varieties for bread making, but it has been more profitable to grow varieties for maximum yield. This may change. In addition we have varieties of barley suitable for animal feed and beer and whisky making; potatoes for processing for the normal market; also field vegetables for all purposes.

Grasses and Clovers

The products of the plant breeder currently affect about one-third of the grassland area of the UK excluding rough grazings because two-thirds is in permanent pasture.

Our best varieties of perennial ryegrass have been bred for high yields of digestible organic matter, very high tillering capacity and persistency under conditions of high fertility. There is renewed interest in clover because of the high cost of nitrogenous fertilizers.

It can be said generally that the plant breeder has provided good varieties for specific purposes and a choice is available, but for economic reasons the farmer has placed much less emphasis on their ability to produce high yields.

Disease Resistance

Plant breeders have made consistent attempts to breed for disease resistance against lethal diseases, against those which reduce photosynthesis and those which affect the product. Success has been mixed with failure; sometimes conspicuous

failure--for example, the breakdown in resistance to rusts and mildews in cereals through the emergence of new strains of the disease.

The serious effects of diseases on yield constitute a major problem for plant breeders and everyone else. Estimates of loss vary but a figure of up to one-third of the potential crop is lost through disease.

It seems that a combination of non-specific field resistance (disease tolerance) in our varieties, chemical crop protection and good husbandry is likely to provide the best solution for the farmer.

Plant Physiologist

Reference should be made to the work of the plant physiologists and chemists in providing a better understanding of the processes working within the crop. In relation to cereals photosynthesis by the ear of barley accounts for 35% of the final mass of the whole crop--largely by the barley awns because they are favorably placed for light and CO₂ uptake. In potatoes control of tuber numbers and size means that specific requirements of the processing market and the normal market can be met by specific techniques of production. In sugar beet large monogerm seed has stimulated early leaf growth leading to an increase in sugar yield of between 10 and 20%.

Greater understanding of the physiological processes has exposed some weaknesses of present day crops in efficiency--good though they are. It seems likely that some changes will occur in the structure of some of our plants--more upright leaves in cereals to make better use of light--and to be fanciful will we have varieties of peas without leaves?!

Balance of Crop Species

The balance of crop species will change in the UK. Already double cropping, commonplace 100 years ago, is returning in the southern (more favorable) part of the country. Forage crops of rape, kale and turnips follow the harvesting of winter barley. Oil seed rape is gaining ground; so is maize for forage in the form of silage. The seed legume with its potential as the basis of a meat substitute will probably gain more popularity.

These developments are exposing some limitations of existing varieties because only limited breeding effort was put into what were minority crops.

I do not know how long farmers will continue to harvest forage maize in October/November. October has been a very wet month so far in Britain--the first one for some years.

Ruminant livestock producers are returning to the principle of self-sufficiency--growing as much of the food for their livestock as possible from their own soil. They too will be interested in high output crops with high digestibility because that kind of food gives a production diet. They are looking to alternatives for expensive grain and trying out high dry matter swede turnips as supplements to grass silage. The plant breeder clearly notes these trends and I suspect will be devoting time, energy and money to selected breeding programs where there is a need.

Summary

British farming can be conveniently divided into several sectors in order to assess the impact of plant breeding on the development of the industry.

Intensive arable farming where potatoes, sugar beet, field vegetables and grain are grown. The plant breeder has provided improved varieties in every crop and the influence of plant breeding is immense in this sector.

Intensive cereal farming where the farmer chooses varieties with resistance to diseases and with a high yield potential. This system would not be possible in the absence of high potential varieties.

Mixed farming based largely on a grain/grass system where the grass is rotation grass. Modern varieties of cereals and grasses have contributed greatly to the economy of these farms.

Grassland farms on which stocking density has increased in varying degrees. The proportion of sown swards increases as stocking density rises and modern grass and clover varieties have contributed substantially to livestock productivity.

Upland farms with a large area of permanent grass and rough grazing and a limited area of new swards with sown grasses and clovers. Obviously plant breeding has limited impact at the present time, but the breeding of strains of clover which can grow well at high altitudes could make a valuable contribution to the productivity of upland grassland.

Horticulture--plant breeding has had a major influence on all sectors--glasshouse crops, fruit and vegetables.

[Original: English]

HISTORIQUE DE LA CONVENTION DE PARIS DU 2 DECEMBRE 1961
POUR LA PROTECTION DES OBTENTIONS VEGETALES ET PRINCIPALES DISPOSITIONS

par

Bernard Laclavière

Le titre du présent exposé indique de lui-même qu'il comprendra deux parties : un historique de la Convention du 2 décembre 1961, et un examen de ses principales dispositions.

I. HISTORIQUE

Il serait fastidieux de reprendre une chronologie des faits qui ont abouti à la Convention dont il s'agit. On en trouvera tout le déroulement dans le remarquable ouvrage qui vient d'être publié sous la direction du Secrétariat général de l'UPOV.

Par contre, il est intéressant de mettre en évidence que la Convention n'est pas le fait d'une invention de technocrate : elle est venue à son heure, imposée par les faits, et ce sont ces faits que nous allons examiner car ils peuvent conduire à certaines conclusions particulièrement actuelles si l'on veut bien y prêter attention.

La biologie végétale est une science récente; malgré les résultats des géniales recherches de MENDEL, les milieux scientifiques et les agronomes ne se sont pas immédiatement intéressés aux possibilités que l'on pouvait en tirer en ce qui concerne l'amélioration des végétaux; sous l'influence de LIEBIG, BOUSSINGAULT, HUMPHREY DAVIES, la chimie a dominé le monde agricole à la fin du siècle dernier. Les savants et les agriculteurs formés à leur école se sont complu jusqu'à une époque très récente dans l'étude du sol et des engrais. Le perfectionnement du matériel végétal était le monopole de quelques grandes firmes qui faisaient mystère de leurs travaux et qui les présentaient d'une manière inaccessible au grand public.

Mais la reconstruction économique des pays dévastés par la première guerre mondiale va rendre indispensable un développement intense de la production agricole. Des services officiels de recherche élargissent leur activité ou se créent, travaillant en liaison avec les entreprises privées qui, de leur côté, s'équipent, recrutent des personnels techniques de haut niveau, ouvrent des laboratoires de recherches et multiplient les champs d'expérimentation. Aussi, des variétés à haute productivité, mieux adaptées au milieu, plus résistantes aux maladies, sont mises au commerce.

Cependant des voix s'élèvent, d'abord dans l'horticulture, puis dans les milieux les plus divers, pour souligner l'injustice que constitue l'absence de protection des droits des créateurs de variétés nouvelles, alors que l'auteur de l'invention la plus banale voit ses droits protégés par une excellente législation sur le brevet d'invention.

Devant les frais entraînés par l'obtention de variétés nouvelles que chacun peut exploiter à sa guise, les obtenteurs s'interrogent et réclament la protection de leurs travaux.

En France, entre 1920 et 1930, furent déposés plusieurs projets de loi tendant à organiser la protection des obtentions végétales dans le cadre du brevet d'invention, mais ces textes n'aboutirent pas. Dans d'autres pays tels que la Hongrie, la Pologne, la Tchécoslovaquie, on retrouve une tendance à la protection d'une sorte de droit d'auteur : il revient aux pouvoirs publics ou aux organisations professionnelles de reconnaître le caractère nouveau ou original des variétés qui leur sont soumises. Lorsque ce caractère est officiellement reconnu, l'obteneur a une base juridique pour faire valoir ses droits devant les tribunaux.

Mais ce qu'il faut souligner c'est que, par suite de la convergence de ces aspirations diverses, le problème prit vite un caractère international. A la suite du 11e Congrès international d'agriculture tenu en 1927, sous les auspices de l'Institut international d'agriculture de Rome, fut fondée, sous l'impulsion d'Emile SCHRIBAU, premier Directeur de la station centrale d'amélioration des plantes de Versailles, une Association internationale des Sélectionneurs de Plantes de grande Culture, dont le siège était à Paris et le Secrétariat à GEMBLOUX.

L'un des articles de ses statuts indique que le but de l'association est d'agir auprès des pouvoirs publics dans les différents pays afin d'aider la sélection, et en particulier d'assurer aux nouveautés végétales la protection légale dont bénéficient déjà les inventions industrielles.

Cette association comprenait plusieurs centaines de membres appartenant à la sélection officielle et privée des principaux pays d'Europe occidentale, centrale et orientale, y compris l'Union soviétique et la Turquie, ainsi que de différents pays d'Amérique du Nord et du Sud. On y relève de grands noms comme DUCOMET à GRIGNON, STRAMPELLI à ROME, VAVILOF à LENINGRAD, Jacques de VILMORIN à PARIS, MARTINET à LAUSANNE.

Or, on remarque déjà dans son activité le souci d'une entente internationale sur le problème : au cours de l'Assemblée générale tenue à PRAGUE en juin 1928, le Bureau reçoit mission "de suivre de près le mouvement qui se dessine dans différents pays, de façon à arriver à une entente internationale".

Au cours de l'Assemblée générale de 1929, M. BOTTO, Directeur du Ministère de l'Agriculture d'Argentine, déclare : "Une Convention internationale donnerait une nouvelle impulsion à l'amélioration des plantes".

Enfin, l'Assemblée générale réunie à BERLIN le 14 juin 1931 essaie de formuler les principes fondamentaux concernant la réglementation légale et internationale du droit d'auteur en matière de sélection.

Peu après, cette Association cessera son activité. Si, sur le plan scientifique, elle a permis la publication de travaux de recherche importants dans ses bulletins, sur le plan juridique son oeuvre est maigre; cependant, elle a eu le grand mérite de sensibiliser l'opinion à un problème nouveau.

C'est pourquoi, le 17 novembre 1938, des professionnels de la France, de l'Allemagne, des Pays-Bas et de la Belgique fondèrent à AMSTERDAM une nouvelle association internationale des sélectionneurs, plus connue sous le nom d'ASSINSEL, dont le siège fut fixé à BRUXELLES, et transféré par la suite à PARIS, et se trouve actuellement à SOLOTHURN. La présidence fut confiée à E. TOURNEUR, sélectionneur bien connu de plantes de grande culture.

La guerre obligea cette association à se mettre en sommeil, et son activité ne reprit qu'en 1948; mais après cette date, son activité fut très grande, et il est intéressant de suivre la démarche de sa pensée.

Si depuis plus de vingt ans la solution du problème de la protection du droit de l'obtenteur n'a guère avancé, c'est que la nouveauté, l'ampleur et la complexité de ce problème, l'incertitude qui régnait et qui règne encore sur l'hérédité des caractères des variétés, ne permettent pas d'apporter facilement une réponse acceptable, d'autant plus que si on le considère en industriel et non en biologiste, on se heurte à des obstacles insurmontables.

C'est pourquoi dans une première phase, l'ASSINSEL explora vainement cette question en recherchant une solution dans le cadre du brevet d'invention.

Les milieux de propriété industrielle estimaient en effet, d'une part, que les obtentions végétales ne répondaient pas aux critères exigés pour qu'une invention soit brevetable, et que d'autre part il n'était pas possible d'assouplir ces critères pour tenir compte des particularités du domaine végétal. Dans ces conditions, ce n'étaient pas les lois de brevets qui étaient inadaptées; les obtentions végétales comportaient des caractères inventifs insuffisants pour pouvoir être protégées.

C'est alors que l'ASSINSEL s'efforça de clarifier et de définir la notion d'obtention végétale qui jusque là était restée très vague. C'est autour des années 1950-1953 que l'on voit se dégager dans ses travaux les notions de nouveauté, d'homogénéité, de stabilité et de dénomination, notions fondamentales autour desquelles a été construite la Convention. On y relève la participation de personnalités appartenant au monde officiel ou professionnel, telles que V. DESPREZ, DUDOK VAN HEEL, DUMON, LAROSE, BOERSMA, DE CILLIS, etc.

C'était un progrès capital : on allait enfin disposer de bases techniques claires, permettant à des juristes de concevoir un système de protection adapté à cette situation tout à fait particulière.

Par ailleurs, le caractère international des discussions autour desquelles ces notions ont été dégagées allait à nouveau conduire tout naturellement à l'idée de réaliser une entente internationale sur la protection du droit de l'obtenteur.

Si l'on ajoute qu'à ces discussions, en principe menées dans un cadre professionnel, assistaient souvent des fonctionnaires gouvernementaux, on comprend que se soit rapidement imposée l'idée d'établir une Convention internationale de caractère diplomatique liant les Etats adhérents.

Aussi, lorsqu'en 1956, à la suite de son congrès tenu à SEMMERING (Autriche), l'ASSINSEL adressa officiellement au Gouvernement français un vœu tendant à l'organisation d'une Conférence internationale en vue d'établir une Convention, ce vœu fut accueilli d'autant plus favorablement que le Gouvernement français savait par avance, d'une manière officieuse, qu'un certain nombre d'Etats étaient tout prêts à y participer.

Rappelons très brièvement les conditions dans lesquelles s'est déroulée la Conférence.

La France a commencé par adresser aux pays de l'Europe occidentale qui lui paraissaient les plus intéressés une invitation à participer à une Conférence; en annexe à cette invitation se trouvait un aide-mémoire en douze points s'efforçant de faire le tour des problèmes à résoudre.

Le nombre des invitations a été volontairement limité aux principaux Etats de l'Europe occidentale dont les vues sur ces problèmes étaient les plus voisines.

Après avoir examiné ces points pendant trois jours, tous les participants à la Conférence tombèrent d'accord sur la nécessité d'instituer une protection légale du droit de l'obtenteur, selon un certain nombre de principes qu'ils avaient arrêtés. En outre, ils demandèrent au Gouvernement français de provoquer la réunion d'un Comité d'experts qui serait chargé d'établir un projet de convention en fonction de ces principes. Lorsque les experts estimèrent avoir rempli leur mission, ils déposèrent un rapport et un avant-projet de convention qui, après discussion, est devenu le texte de 1961.

A l'issue de l'exposé de cet enchaînement des faits, certains pourraient penser qu'il s'agit de problèmes n'intéressant que les pays dont l'agriculture et les services de recherche ont atteint un haut niveau, et que les pays en voie de développement ne sont pas concernés. Mais rien ne serait plus inexact : tout d'abord, ces pays ont le plus grand intérêt à organiser une protection des droits des obtenteurs étrangers, car sinon ces obtenteurs refuseraient de mettre à leur disposition leurs meilleures variétés. Mais surtout, nous voyons se reproduire les mêmes phénomènes dans ces pays. C'est ainsi qu'en Afrique, les services de recherche de différents jeunes Etats, après avoir consacré une grande partie de leur activité à l'étude du sol et de la fertilisation, commencent à créer des variétés originales qui sont intéressantes, non seulement pour ces pays mais pour beaucoup d'autres. C'est ainsi que le Niger a créé une variété d'oignon qui serait très recherchée par les Etats des Iles Caraïbes, que le Sénégal a créé une variété de mil particulièrement intéressante pour le Yemen et la Péninsule Arabique.

Or, ces pays s'interrogent sur la politique à suivre; doivent-ils mettre dans le commerce ces variétés qu'ils ont créées à grands frais sans avoir l'espoir d'une juste rémunération de leurs travaux, ou doivent-ils purement et simplement garder leurs variétés au secret dans l'attente de jours meilleurs, ou enfin ne vendre que de très faibles quantités de semences, et à des prix exceptionnellement élevés ?

Il y a là un problème nouveau, mais dont l'importance va croître très rapidement. Sans doute certains penseront qu'il ne serait pas sage que ces Etats créent dès maintenant leurs organismes de protection, leurs collections de références et leurs services d'examen. Mais on peut s'interroger sur le point de savoir si, pour résoudre cette difficulté, on ne pourrait pas envisager la création d'un organisme interafricain comparable à l'Office interafricain et malgache de YAOUNDE, dans le cadre de la propriété industrielle.

Cet exemple pourrait servir d'ailleurs de conclusion à la première partie du présent exposé. Les milieux professionnels du commerce des semences réclament la plus grande liberté dans les transactions et s'inquiètent parfois des entraves que la protection du droit de l'obtenteur pourrait apporter à leur activité. Qu'ils se rassurent, cette protection est au contraire pour eux aussi un gage d'avenir et de prospérité. Du moment que les obtenteurs seront assurés d'obtenir la rémunération qu'ils estiment légitime de leurs travaux, ils n'hésiteront pas à mettre au commerce le plus largement possible des variétés nouvelles de plus en plus nombreuses.

II. PRINCIPAUX POINTS DE LA CONVENTION

L'examen des principaux points de la Convention que nous allons aborder maintenant va comporter trois parties.

La première partie porte sur les quatorze premiers articles qui jettent les bases juridiques de la protection en fonction des problèmes techniques.

La deuxième partie, qui porte sur les articles 15 à 26, traite de l'Union internationale pour la protection des obtentions végétales.

Enfin la troisième partie, portant sur les articles 27 à 41 relatifs au fonctionnement de la Convention, comprend des dispositions diverses d'intérêt inégal.

1) Articles 1 à 14

La Convention débute par une déclaration capitale : "La présente Convention a pour objet de reconnaître et d'assurer à l'obtenteur d'une variété végétale nouvelle un droit dont le contenu et les modalités d'exercice sont définis ci-après".

Cette déclaration, de par son caractère universel et absolu, constitue une innovation dans le domaine juridique. On sait en effet que des controverses se sont élevées sur la légitimité du droit de l'obtenteur. On a critiqué l'institution d'un monopole, au moins lorsqu'il porte sur des plantes nécessaires à l'alimentation humaine.

Certes, il existe des précédents : décrets français de 1922 sur les semences, loi de 1937 sur la propriété intellectuelle en Union soviétique, décret de 1941 sur le droit d'obtenteur hollandais, de 1953 sur les semences allemand, ou indirectement : amendement de 1930 à la loi des Etats-Unis sur les brevets d'invention.

Mais jamais, jusqu'à présent, une déclaration de portée aussi générale n'avait été formulée.

Il faut par ailleurs souligner son caractère libéral, puisque l'article 2 laisse aux Etats le soin d'adopter le système législatif ou réglementaire qui leur paraît le plus convenable pour protéger le droit de l'obtenteur.

L'article 4 confirme ce caractère universel : la Convention est applicable à tous les genres ou espèces botaniques. Elle s'applique aussi bien aux plantes des zones tempérées qu'à celles des zones équatoriales ou tropicales, voire boréales. Elle s'applique aussi bien aux plantes vivrières telles que le blé ou le maïs, qu'aux plantes ornementales telles que le rosier ou l'orchidée. Elle s'applique enfin aussi bien aux végétaux du règne supérieur qu'aux champignons, voire aux souches de bactéries, aux levures, etc.

Cet article prévoit pour des raisons techniques une entrée progressive en vigueur de la Convention, pour permettre aux Etats de mettre en place les services d'examen dont il sera parlé plus loin. Des minima allant en croissant ont été prévus pour inciter les Etats qui désirent adhérer à la Convention à protéger largement le droit de l'obtenteur.

On a critiqué le choix de ces espèces qui peut effectivement être un obstacle à l'adhésion des Etats situés dans des zones équatoriales ou tropicales. Les Etats membres sont conscients de cette difficulté, et actuellement envisagent une révision de cet article pour tenir compte des situations diverses.

L'article 5 est un des plus originaux de la Convention, car il donne pour la première fois une définition du droit de l'obtenteur, qui mérite un examen particulier : on s'est interrogé sur la portée de ce droit; les obtenteurs auraient souhaité un véritable droit de propriété sur leurs variétés.

En fait, et sans doute par une réminiscence du droit des brevets, ce droit, limité dans le temps porte uniquement sur le moyen de reproduire ou de multiplier les variétés, c'est-à-dire la graine en tant que graine de semence, la bouture, etc. A contrario, il n'est nullement question de protéger la graine qui va au moulin ou le fruit qui va à la consommation et qui, en principe, ne sont pas aptes à constituer de bons moyens de reproduction. La distinction entre le matériel végétal qui sert à la multiplication ou la reproduction de la variété et ce qui va à la consommation présente d'autant moins de difficulté que pour beaucoup d'espèces la vente des semences et plants donne lieu à une réglementation particulière.

Un problème spécial se pose pour les fleurs coupées vendues chez le fleuriste, qui peuvent servir de matériel de départ pour une multiplication par voie végétative. Les obtenteurs ont demandé que la protection puisse aller jusqu'à la fleur coupée, non pas pour percevoir des redevances, mais pour s'assurer que ces fleurs ne constituent pas des sources d'une multiplication faite en fraude de leur droit. La Convention ouvre la possibilité aux Etats d'étendre la protection jusqu'à ce stade.

Cet article 5 comporte une innovation capitale par rapport au droit des brevets : on sait que lorsqu'un inventeur réalise une invention mettant en oeuvre un produit ou un procédé déjà breveté, il doit avoir l'autorisation du titulaire du brevet pour exploiter son invention.

Une telle disposition transposée dans le domaine végétal aurait eu pour effet de bloquer toute sélection. Elle eut été d'autant plus inopportune qu'à la différence du droit des brevets, le droit de l'obtenteur ne porte pas sur un procédé.

Lorsqu'une nouvelle variété est obtenue, non seulement il est inutile mais il est généralement impossible de recommencer avec succès les opérations qui ont abouti à son obtention. C'est pourquoi la Convention édicte un principe contraire : la liberté d'utiliser des variétés protégées comme matériel de départ dans un travail de sélection. Il n'existe d'exception à ce principe que dans le cas de plantes hybrides : si les lignées de départ sont protégées, l'obtenteur d'une combinaison de ces lignées pour la création d'un hybride doit avoir l'autorisation du propriétaire des lignées.

L'article 6 est aussi particulièrement important, car il définit pour la première fois à quelles conditions une variété peut être protégée.

Ces conditions sont au nombre de quatre : nouveauté, homogénéité, stabilité, dénomination.

Il faut souligner que les experts ont résolument écarté un cinquième caractère, celui de la valeur agronomique ou culturelle de la variété. L'exigence de ce caractère se justifie, dans le cadre des réglementations sur le commerce des semences pour l'inscription des variétés à des listes nationales. Dans le domaine qui nous occupe, il n'aurait pas sa place.

Le problème de la nouveauté est sans doute le plus difficile qui s'est posé aux experts, et aujourd'hui encore ils n'ont pas trouvé une définition qui les satisfasse et surtout qui satisfasse le juriste.

Pour être nouvelle, une variété doit pouvoir être nettement distinguée par un ou plusieurs caractères importants de toute autre variété dont l'existence est notoirement connue. Mais qu'est-ce qu'un caractère important ? De multiples problèmes se posent sur la solution desquels les experts ne se mettent pas toujours facilement d'accord. C'est ainsi par exemple que la résistance d'une variété de haricot à l'anthracnose serait un caractère important, par contre la résistance d'une variété de maïs à l'helminthosporiose ne serait pas un caractère important. Il y a encore là de nombreuses discussions.

Enfin, les experts ont jugé utile de consacrer plus loin tout un article à la question de la dénomination. On peut s'interroger sur l'opportunité de la présence d'un tel article dans une Convention qui traite du droit de l'obtenteur. La dénomination des variétés est un problème beaucoup plus général qui relève de la législation sur le commerce des semences.

Cependant, à l'époque à laquelle les experts travaillaient, des problèmes de nomenclature commençaient à se poser : l'Union internationale des Sciences biologiques, organisation privée, a tenté d'établir des règles élémentaires pour guider les obtenteurs. Ces règles sont contenues dans un code de nomenclature qui a été remis à jour à diverses reprises. On retrouve l'esprit de ces règles dans l'article 13. Toutefois, comme les législations sur le commerce des semences sont en général peu précises à cet égard, il a semblé nécessaire aux experts d'édicter quelques règles, car la dénomination joue un rôle capital dans l'identification de la variété par rapport aux autres variétés protégées ou non. En particulier, il leur a paru indispensable que la même variété soit, dans la mesure du possible, affectée de la même dénomination dans tous les Etats adhérents à la Convention, et un système d'information entre Etats, avec l'intervention du Bureau de l'UPOV, a été prévu dans l'article 12 pour faciliter cette unicité dans la dénomination. Ce système n'est pas encore entré en vigueur, mais les Etats se concertent déjà étroitement à ce sujet.

L'article 7 subordonne la protection à la réalisation d'un examen, pour vérifier que la variété pour laquelle la protection est demandée possède bien les caractères que nous venons d'énumérer. Cet article a soulevé des critiques et des difficultés. Tout d'abord le principe même de la nécessité d'un examen a été mis en cause. Les experts, habitués de longue date à l'examen qui est pratiqué dans leur pays pour l'inscription des variétés à un Catalogue ou à une liste officiels, inscription à laquelle est subordonnée la liberté de commercialisation, ont estimé que cet examen était encore plus indispensable lorsqu'il s'agit d'accorder des droits civils dont les obtenteurs vont tirer indiscutablement des avantages substantiels, et qui doivent pouvoir, le cas échéant, être défendus avec succès devant les tribunaux.

Certes, la réalisation de cet examen soulève de multiples difficultés, mais elles ne sont pas aussi insurmontables qu'on le prétend, et une collaboration internationale, qui est déjà entrée en pratique, doit permettre de les aplanir.

La suppression de l'exigence de l'examen irait à l'encontre des intérêts des obtenteurs, car, comme le montre le domaine des brevets, des titres de protection délivrés sans vérification n'ont qu'une faible valeur de négociation.

L'article 8 traite de la durée de la protection. Cet article a été difficile à établir, et a nécessité une grande diplomatie de la part du Président de la Conférence, en raison de la divergence d'opinion entre les partisans d'une durée courte, et ceux d'une durée longue. La solution contenue dans cet article - 15 ou 18 ans selon les espèces - est le résultat d'un compromis. Actuellement encore, le souhait de certains Etats de voir harmoniser la durée dans le sens d'un allongement des minima semble difficilement réalisable.

L'article 9 est un peu un article de circonstance : pour répondre aux critiques de ceux qui invoquent l'inopportunité d'un monopole sur les plantes vivrières, il prévoit la possibilité de limiter d'autorité le droit de l'obtenteur, par l'institution de licences obligatoires, à la condition qu'une juste rémunération soit assurée.

Les articles 11 et 12 soulignent la territorialité du droit de l'obtenteur : chaque Etat ne légifère que pour son territoire national dans le respect de sa souveraineté. Il n'est pas interdit de penser que l'on puisse dans l'avenir organiser une protection internationale à l'égal de ce qui se réalise pour le Brevet

européen. Toutefois, un régime de priorité est prévu afin que le dépôt d'une demande de protection dans un Etat ne soit pas considéré comme une cause de divulgation et de perte de nouveauté dans les autres Etats.

Ce régime est assez compliqué, et le Conseil a envisagé de le revoir.

Enfin, l'article 14 souligne que la législation sur la protection des obtentions végétales est indépendante des législations sur le commerce des semences. Il émet le vœu que ces dernières n'interfèrent pas de telle manière qu'elles gênent l'exercice du droit de l'obtenteur.

2) Articles 15 à 27

Les articles 15 à 27 traitent de l'Union internationale pour la protection des obtentions végétales, dont le principe est posé dans le deuxième paragraphe de l'article 1.

Le texte est clair et sa rédaction ne soulève guère de difficulté d'interprétation. Par contre, il est intéressant de voir comment les experts ont été conduits à l'idée d'instituer cette Union, et les services qu'ils en attendaient.

Le questionnaire joint à la lettre d'invitation aux Gouvernements à participer à la Conférence de Paris en 1957 dans ses alinéas 11 et 12 fait allusion à l'opportunité de créer une union restreinte, en vue de préparer la rédaction d'une convention internationale.

Cette idée n'a pas été retenue : il a paru plus sage aux membres de la Conférence de suspendre la session, de constituer un Comité d'experts, et de demander au Gouvernement français de le réunir.

Ce sont les experts et leur Comité de rédaction qui, à partir de 1959, ont imaginé qu'il serait utile d'avoir un organisme de gestion de la Convention, doté d'un Secrétariat. Les experts ont bien insisté sur le fait que ce Secrétariat devrait être un organe de préparation et d'exécution des décisions d'un Conseil de l'Union. Il ne saurait être doté de pouvoirs propres.

Il est certain que les experts ont été influencés par l'existence de la Convention de Paris de 1883 pour la protection de la propriété industrielle, mais dès le début la majorité des experts a exprimé le souhait de voir adopter une Convention absolument indépendante et de constituer les Etats en une Union avec son organisation spécifique.

En fait, ce que l'on ne voit pas dans la Convention, c'est que le Conseil de l'Union constitue pratiquement la prolongation de l'activité du Comité des experts.

Lorsque la Conférence fut terminée en 1961, les membres se séparèrent, déçus de ne plus avoir de cadre juridique pour se retrouver; malgré quelques divergences bien naturelles, une collaboration amicale s'était établie, et l'on savait que de nombreux problèmes restaient à résoudre.

C'est la raison pour laquelle des réunions officielles se tinrent en 1963 et en 1964 à Paris, en 1965 à deux reprises à Londres, puis en 1966 à Berne, à Genève, à La Haye et enfin à Londres.

A la satisfaction générale, le Conseil put enfin se réunir en décembre 1968. Depuis, l'activité du Conseil et de ses groupes de travail, dont vous parlerez M. SKOV, s'est développée, dans une atmosphère d'amicale coopération, restant dans l'esprit des auteurs de la Convention.

Le Conseil, malgré sa petite taille et sa jeunesse par rapport aux autres Unions internationales, est néanmoins fier et jaloux de son indépendance. Certes, il a passé un accord de travail avec l'OMPI dont il n'a d'ailleurs qu'à se féliciter, mais cet accord ne constitue pas une reconnaissance d'appartenance à l'OMPI. Aux termes de cet accord notamment, le Directeur général de l'OMPI est Secrétaire général de l'UPOV. On observera que pour désigner des titulaires exerçant des fonctions du même ordre, les termes ne sont pas identiques. Cette différence a été nettement perçue et voulue par les auteurs de la Convention.

Une première modification de la Convention est intervenue pour faciliter sur le plan financier l'accession d'Etats en voie de développement, ou encore de faibles dimensions. A l'issue de ces réunions, je pense que le Conseil envisagerait très volontiers de rechercher des solutions aux obstacles que nos discussions pourraient révéler à l'adhésion d'autres Etats, à la condition bien entendu de ne pas s'écarter des principes de base que je me suis efforcé de vous exposer.

3) Articles 27 à 41

Ces articles appellent peu de commentaires, car ils comportent des dispositions d'ordre que l'on retrouve dans de nombreuses conventions similaires.

III. CONCLUSION

Comme toute oeuvre humaine, cette Convention est certainement perfectible. Une première révision a eu lieu pour faciliter l'adhésion d'Etats dont les ressources sont limitées. La révision d'autres points est également envisagée à la lumière de l'expérience déjà acquise, mais les retouches qui pourraient être apportées au texte de 1961 ne sauraient en ébranler les bases.

Il est intéressant de noter que si le nombre des Etats ayant décidé d'adhérer à l'UPOV est encore limité, la Convention a déjà eu des répercussions dans le monde entier. Des Etats, sans déclarer pour l'instant leur intention d'adhérer à l'UPOV, ont modifié leur législation ou adopté des législations nouvelles de protection du droit de l'obtenteur étroitement inspirées des principes fondamentaux de la Convention. Il est même intéressant de noter que les principes et les définitions qui ont pu être mises au point dans la Convention ont débordé le cadre particulier du droit de l'obtenteur et ont pénétré dans la réglementation sur le commerce des semences. C'est ainsi par exemple que la Directive 70/457 du 20 septembre 1970 de la Communauté économique européenne concernant le Catalogue commun des variétés des espèces de plantes agricoles pose comme condition à l'inscription des variétés les notions de nouveauté, d'homogénéité, de stabilité et d'examen dans les termes mêmes de la Convention.

Il n'est pas interdit de penser que les travaux actuellement entrepris par l'UPOV pour internationaliser l'examen des variétés soient utilisés également pour l'inscription des variétés aux listes ou catalogues officiels.

Il faut donc souhaiter que les adhésions à cette Convention soient de plus en plus nombreuses, car elle intéresse les milieux agricoles du monde entier.

[Original : français]

THE WORK OF UPOV
PAST ACHIEVEMENTS - PRESENT TASKS - PLANS FOR THE FUTURE

by

Halvor Skov

After the signature of the Convention on December 2, 1961, nearly seven years elapsed before the Convention entered into force in the second half of 1968, and even then some time had to pass before the UPOV bodies really started functioning.

But that did not mean that nothing happened during that time. On the contrary. First on the national level, of course, where the preparation of national legislation and its implementation involved a considerable amount of work, and where it soon became apparent that the new concepts and ideas required international cooperation. Therefore contacts between the various States were renewed or intensified.

I think that we all have a great debt of gratitude to the then Controller of the UK Plant Variety Rights Office, who took the initiative of convening meetings--unofficial ones--to prepare the entry into force of the Convention. Unofficial working groups were established to discuss the testing variety denominations and the future organization of the Union.

Of course, it was only after the entry into force of the Convention that results could be seen.

I think that the best way of describing the work of UPOV is to consider the various auxiliary bodies existing within the Union.

For chronological reasons I shall mention first the Working Group on Variety Denominations. This group was so advanced in its work that in 1970 it was able to submit draft Guidelines for Variety Denominations to the Council, which adopted them on a provisional basis. In 1973 the Guidelines were revised. There has now been a great deal of discussions about these Guidelines, so I do not think it necessary to go too deeply into details. I think simple plant varieties must have a name which the public must be free to use, and which indeed must be used in connection with the sale of seed and propagating material. Consequently the name --or denomination--cannot be subject to private ownership and must be of such a nature that the ordinary buyer is able to make use of it, in other words, it must be recognizable and not liable to confuse.

In my opinion this simple philosophy can be deduced directly from Article 13 of the Convention, and the Guidelines should therefore be regarded more as a common approach to the application of Article 13 itself.

So much for denominations. The question of the principles for testing was also taken up at an early stage, and the bodies entrusted with the elaboration of these principles have been developed concurrently with the progress made. UPOV now has five Technical Working Parties for

- (1) agricultural crops,
- (2) vegetables,
- (3) ornamental plants
- (4) fruit crops
- (5) forest trees.

When these groups had produced provisional results it became clear that some coordination was needed. This coordination is now carried out by the Technical Steering Committee, and to a considerable extent by its Editing Committee.

I must confess that when in 1970 I became acquainted for the first time with the technical work done so far, I was greatly impressed by the amount of work and skill the experts had applied to the establishment of their drafts. However, some time had to elapse before the first texts could be published.

I could not say today what took most time. The finding of suitable characteristics, the description of those characteristics, the way the descriptions could be computerized or the underlying general principles.

I shall mention only the Convention's requirement that the characteristics be important. What does that mean? Must they be important for growing (higher yield, resistance, etc.) or for marketing (perfume of a flower, taste of a fruit), which I would call functional characteristics, or are other characteristics also permissible? As you will know from the General Introduction to Guidelines and from the Test Guidelines for individual species which have been published so far, UPOV has adopted the philosophy of using non-functional as well as functional characteristics.

The possibility of computerizing descriptions was discussed at length. The final result was to use the 1 - 9 scale, with 5 as the median and 1 and 9 as the extremes.

A number of Test Guidelines have been published and many more are in preparation. Dialogue has been going on among breeders on the basis of this material, and I am sure that the results will be profitable.

I attach an enormous importance to these Test Guidelines. They are so to speak the key-stone for future international cooperation. First of all they make it possible for the testing authorities to perform the tests in a uniform way and they inform the breeders as to what they may expect from testing. Also, however, the existence of test guidelines enables the authority of one country to know how tests have been carried out in other countries and thus to base its decision whether or not to grant rights on the results of another authority, thereby avoiding the necessity of carrying out the tests itself.

Considering the need for costly testing facilities such as soil, glasshouses, well-equipped laboratories, extensive reference collections and highly skilled and well-trained people, it is in the interest of governments to avoid duplication of work. It benefits not only breeders, by avoiding the cost and the time involved in the grant of rights, but also governments, by enabling them to extend protection to more species.

These are the reasons why I believe that this work should be given the highest possible priority.

Inside UPOV the first steps have already been taken towards making arrangements for joint tests. Some test results have already been accepted by other member States, but so far only on a limited scale.

But we must go further. In fact I visualize a sort of auction in which member States partly offer and partly request testing facilities, and, if I do not misjudge the situation, there are already many possibilities at the present stage.

But in any event the existence of test guidelines is the main prerequisite.

The Council of UPOV soon realized that harmonization of the fees to be paid by breeders was most desirable, and a Fee Harmonization Working Party was established. It must be made clear at the outset that the harmonization of fees is a very difficult matter: Ministries of Finance are entitled to their say, and some Ministries of Finance can be more rude than others. What I mean by this is that the attitude of governments towards the covering of costs may differ. Moreover, there are other fees to be paid than those for plant breeders' rights, and they also play an important part.

In spite of the difficulties, some progress has been made towards harmonization. The most important result of the work of the Fee Harmonization Working Party, however, is undoubtedly the arrangement made for payment for the use of the test results of other countries. Briefly, the country which has carried out the tests receives each time from those making use of the test results the fee it has itself fixed for testing, and the country making use of the tests refrains from collecting the test fee from the breeder.

It could be said that it is only a small start, but it is a start which I hope will prevent the fees from increasing at the same rate as inflation. This is a modest hope, I admit, but as time goes on it may help us to reduce costs and so benefit the breeder.

What I have said until now is more or less an inventory of the present situation. I will now try to look into the future, remembering what a Danish humorist once said: There is nothing so difficult as making forecasts, especially about the future.

The first development I expect and hope for is a division of labor, in the sense that the testing of different species will be entrusted to the various member States. These States, and they only, will maintain reference collections and other special material for the species concerned, and other States will be freed from the burden of handling those species.

The ultimate goal would be to establish international protection, on the lines of the European patent system: applications could be sent to UPOV, which would ask an existing national authority to undertake the test and report back to UPOV. A special UPOV body would then make the decision. This of course is a long-term idea and it would be premature to discuss it in detail, but it is worth bearing in mind.

At the present time I firmly believe that many very real tasks lie immediately before us, and that we should endeavor to tackle these first.

By doing this we have a chance of developing UPOV step by step, in the interest of breeders, growers and governments alike.

I wish to conclude by expressing my confidence in UPOV and its future.

[Original: English]

THE VALUE AND BENEFIT OF THE CONVENTION
TO PLANT BREEDERS

by

Carl-Ernst Büchting

1. HISTORY

Seed has the same importance for plant production that raw materials have for industrial production. It is a primary product in the proper sense; an indispensable prerequisite, as without it plant production is absolutely impossible.

While industrial raw materials can in general only be processed into goods of economic use through special (perhaps patented) procedures, the productive capacity which seed provides is genetically fixed and can be utilized with well-known cultivation methods. Seed therefore contains the key to success (in the form of its genetic code).

Over thousands of years a multitude of plants have emerged in the process of evolution and man has developed these plants into cultivated plant forms through systematic utilization. But only for a hundred years, since the rediscovery of Mendel's Laws, has man endeavored to improve these cultivated plants and increase their productive capacity by the exertion of a systematic influence on the hereditary mass, in other words by plant breeding.

But it is also known that over a thousand years ago the Red Indians knew how to utilize the hybrid maize. Brieger reported an observation of Wellhausen according to which the Red Indians applied a special breeding technique on a large scale by producing "synthetically balanced populations of race hybrids."

The reason for these plant breeding efforts--whoever made them--was the wish for an improvement in plant production.

During the last hundred years decisive, indeed prodigious advances have been made in this field. This is not the subject of my paper, but it certainly forms the background to it. For without these achievements the Convention would certainly not exist today (and we should not have assembled for these meetings).

Thus an arc stretches between the first paper concerning the value of plant breeding to agriculture, and thereby to the general public, and my paper on the value of the Convention, or, to put it in a different way, on the value and the benefit of variety protection rights to the plant breeder.

As an introduction we shall first of all examine how and why this legal system of a "plant variety protection right" came into being, in other words its motivation and objectives.

In the preamble to the Convention it says that the Contracting States of the Convention are:

"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."

Thus the two great objectives of the Convention are both the promotion of the development of agriculture and the safeguarding of the plant breeders' interests. Similar motives can be found in the texts and preambles of all the national laws:

(i) In the preamble to the Variety Protection Law of the Federal Republic of Germany it is stated that the Law should provide a private protection right for plant varieties, similar to patent rights, in order to protect the breeding work on which the creation of a new plant variety is dependent, but that this protection right should be designed to meet the particular requirements of living plant material.

(ii) The most recent bill of the Swiss Federal Council concerning the protection of plant varieties simply states that it is intended to put the breeder on an equal footing with the inventor.

Such pronouncements show the intention of the legislator to provide benefit for the public, and also for the breeder for his creative effort by the creation of a variety protection right.

As is sometimes the case with legislative activities, neither the authors of the Convention nor the national legislators took the first step in the creation of a special protection right for plant varieties, but it was they who molded into the form of the Convention and national laws those rules which the people engaged in practical plant breeding had been insisting upon for decades. The usefulness of such a protection right had been recognized long before the first legal regulations were enacted. The classic example is the breeding of "sweet lupins" by Professor Erwin Baur and his assistant, who is now Professor von Sengbusch. It was known at that time that wild lupins had a high protein content and would have provided an ideal forage if they did not have a bitter taste which made them unsuitable as animal fodder. It occurred to Professor Baur and his colleagues that there must be mutants without the bitter taste and, by screening millions of individual plants, they found a few mutants with a low level of bitter taste, which they selected and multiplied systematically. Eventually larger quantities of seed were put on the market and shrewd farmers and dealers in agricultural commodities undertook the production of seed on a commercial scale, thereby deriving economic benefit from the creative idea of the original breeders. Plant breeders found this unjust and called for a protective right for their creations. Initially an attempt was made to provide this protection through the traditional legal instruments on intellectual property (patent and trademark law). Other examples could be cited here, for instance "Edelperle," the pea variety of Wenzel, Teutschenthal.

Soon, however, it became evident that these legal instruments were not particularly well suited to meet the requirements of the biological material. Breeders therefore demanded adaptation of the patent laws or special legislation, and the potential benefits of such legislation to the plant breeder were recognized.

In this connection I should like to make a brief mention of ASSINSEL, an organization which was founded in 1938 by private plant breeders from Denmark, France, Germany and the Netherlands with the express objective of securing official and internationally effective legal protection for each plant variety. Today this association groups plant breeders from a large number of different countries.

Mention should also be made of CIOPORA, an organization affiliated to ASSINSEL. Both organizations have been concerned with the Convention, as may be seen from documents published recently by UPOV.

2. THE STATUS OF THE PLANT BREEDER AS HOLDER OF THE VARIETY PROTECTION RIGHT

We will now deal with the notion of the plant breeder (hereinafter referred to as "the breeder") as the holder of the variety protection right.

The holder of the protection right is the breeder and, with the exception of some amateur plant breeders, he engages in plant breeding as in any other business, namely with the objective of obtaining lasting economic benefits, in other words a profit. Our business depends heavily on expenditure on technical equipment, and profits are the prerequisite of continuing investment. In all countries of the Western world breeding is carried out on a private enterprise basis by persons and companies, in conformity with the existing legal systems. Plant breeding is also frequently undertaken by public authorities, either through departments affiliated to universities or through independent institutes financed by the State. In private plant breeding the expenditure for research and breeding can only be met by the sale of seed for protected varieties. Thus the profit--which corresponds directly to the seed sales--is in proportion to the success of the new plant varieties. For breeding work undertaken by the public authorities, however, there is a budget available at the outset, and therefore the economic success of the breeding and research is not a condition of an institute's existence. Consequently the public authorities can and should deal mainly with plant breeding projects

which do not hold the promise of direct economic success, that is, those which fall within the scope of research or applied research.

Thus it seems to me that the ideal relationship between the breeding undertaken by public institutes and private plant breeding is a system whereby the public institutes deal with the breeding research and the results of this research work are then made available to the private, practical plant breeders, so that the latter may concentrate their efforts specifically on the creation of new plant varieties. This does not mean that the work of the institutes cannot also result in the production of new varieties which are eligible for variety protection.

According to statistics in my possession for the year 1968, the ratio of private breeding to breeding by public institutes in the Federal Republic of Germany was 74.4: 25.6% for listed varieties of agricultural crops and 96.9: 3.1% for horticultural species. Since then the proportion of varieties introduced by the institutes has diminished to 8.8% for agricultural species and increased to 7.3% for horticultural species. It can also be demonstrated that the results have varied a great deal between the different crops: for potatoes and other root crops it amounted up to a maximum of about 10% while for grape vines it reached almost 100% (see Chart 1 below).

Chart 1

Varieties listed in the
Federal Republic of Germany (Extract)

| | <u>Private Breeding</u> | | <u>Breeding by Institutes</u> | |
|----------------------------------|-------------------------|---------------|-------------------------------|---------------|
| | <u>as of</u> | <u>as of</u> | <u>as of</u> | <u>as of</u> |
| | <u>1.4.68</u> | <u>1.4.74</u> | <u>1.4.68</u> | <u>1.4.74</u> |
| | % | % | % | % |
| (a) <u>Agricultural species</u> | | | | |
| Cereals (with- out Maize) | 74.6 | 94.3 | 25.4 | 5.7 |
| Maize | 74.3 | 100.0 | 25.7 | - |
| Potatoes | 89.6 | 100.0 | 10.4 | - |
| Other root and tuber crops | 100.0 | 100.0 | - | - |
| . | . | . | . | . |
| . | . | . | . | . |
| . | . | . | . | . |
| Vine | - | 3.6 | 100.0 | 96.4 |
| | 74.4 | 91.2 | 25.6 | 8.8 |
| (b) <u>Horticultural species</u> | 96.9 | 92.7 | 3.1 | 7.3 |

The legal protection provided under national laws in accordance with the Convention does not differentiate, as a rule, between varieties developed by private plant breeders and those created by public institutes. However, where the public authorities are holders of plant variety protection rights, they naturally enter into competition with the private holder of variety protection rights. Therefore, the competitive advantage which the public authorities derive from their expense budgets can and should be adjusted. In a free market economy this is done most easily by licensing varieties. If such a protected variety is

marketed, whether by private enterprise or by a public organization, agreed license fees have to be paid to the holder of variety protection rights. In this way competitive equality with private plant breeders can easily be restored.

In the majority of countries of the "Eastern" world plant breeding is carried out exclusively by the government. Frequently variety protection rights are granted and some form of remuneration is awarded to the breeder of a new variety. To my knowledge, however, these payments are intended only as a reward for the breeder working at an institute and can in no way be regarded as compensation for the breeding expenditure involved. We shall deal with the actual amounts of license fees later.

I should now like to end this study of the status of the plant breeder and the situations resulting from it and devote my attention to the variety protection right itself.

3. THE VARIETY PROTECTION RIGHT AS A TYPE OF INDUSTRIAL PROPERTY RIGHT

In the Paris Convention of 1961, the plant variety protection right is formulated as a true industrial property right. It is a patent destined to meet the particular needs of plant breeding. It is an exclusive right like other industrial property rights: like them, it has the effect that the holder of the property right is for a limited period exclusively entitled to exploit the protected variety, to produce seed for its reproduction, to offer it for sale and to commercialize that seed. It also entitles him to give other persons a share in the exploitation under such conditions as he has negotiated (licenses). The message of the Swiss Federal Council expresses this as follows:

"Free exploitation by other persons of the intellectual achievement embodied in the creation and also in the discovery of a new variety shall not be permitted."

Thus the decisive practical effect of the Convention resides in the fact that the producer of a new variety is protected, for the duration of his protection right, against other persons who might exploit his creation without his prior authorization and thereby diminish his profit or render it illusory. With this assurance the breeder will be interested in and capable of devoting his time to the breeding of other new plant varieties.

4. RIGHTS AND ECONOMIC CONSEQUENCES OF VARIETY PROTECTION

What is the economic value of the variety protection right to plant breeders?

In our opinion, the main value to the plant breeder is on one hand the reduction of the economic risk and, on the other, the legal security offered him.

In order to substantiate this it must be realized that, in spite of the progress achieved in plant breeding during the past decades, the breeding of a new variety up to the production of the necessary quantities of marketable seed requires, for most crops, an average time of ten to twenty years. The average exploitation period of a variety which varies strongly with the different crops might today be approximately the same.

The financial risks inherent in breeding are due to the fact that the success of a new, stable and homogenous variety cannot be guaranteed from the beginning of the program and that huge expenditure on research and development may be wasted if the breeding objective is not attained.

On the other hand, it sometimes happens that the market conditions which existed when a breeding program was started have fundamentally changed by the time the original objective has been achieved. Thus the breeding aim is reached, but the variety does not produce any profit as there is no demand for it.

If, however, the breeder succeeds in reaching the original breeding objective and the new variety is put on the market, it is then important for the breeder to secure the economic benefit from his variety during the relatively short period of

exploitation and to prevent illegal exploitation by others who have not paid anything towards the cost of breeding. This is very necessary in order to enable the breeder to make further investments in new breeding activities and thereby maintain the continuity of his breeding program. In this way the plant variety right, diminishes the risks inherent in breeding work and assures the breeder of the economic exploitation of his variety.

4a. THE VARIETY PROTECTION RIGHT AS A BASIS FOR THE GRANTING OF LICENSES

Owing to its exclusive effect the variety protection right is frequently also the basis for both the production and distribution systems. As a rule, the breeder and holder of the variety protection right is not in a position to produce and commercialize the quantities of seed required by the market on his own, as usually he does not have access to the acreages necessary for seed production or the expensive sales organization. Also seed production may have to be carried out in other countries for cultural reasons.

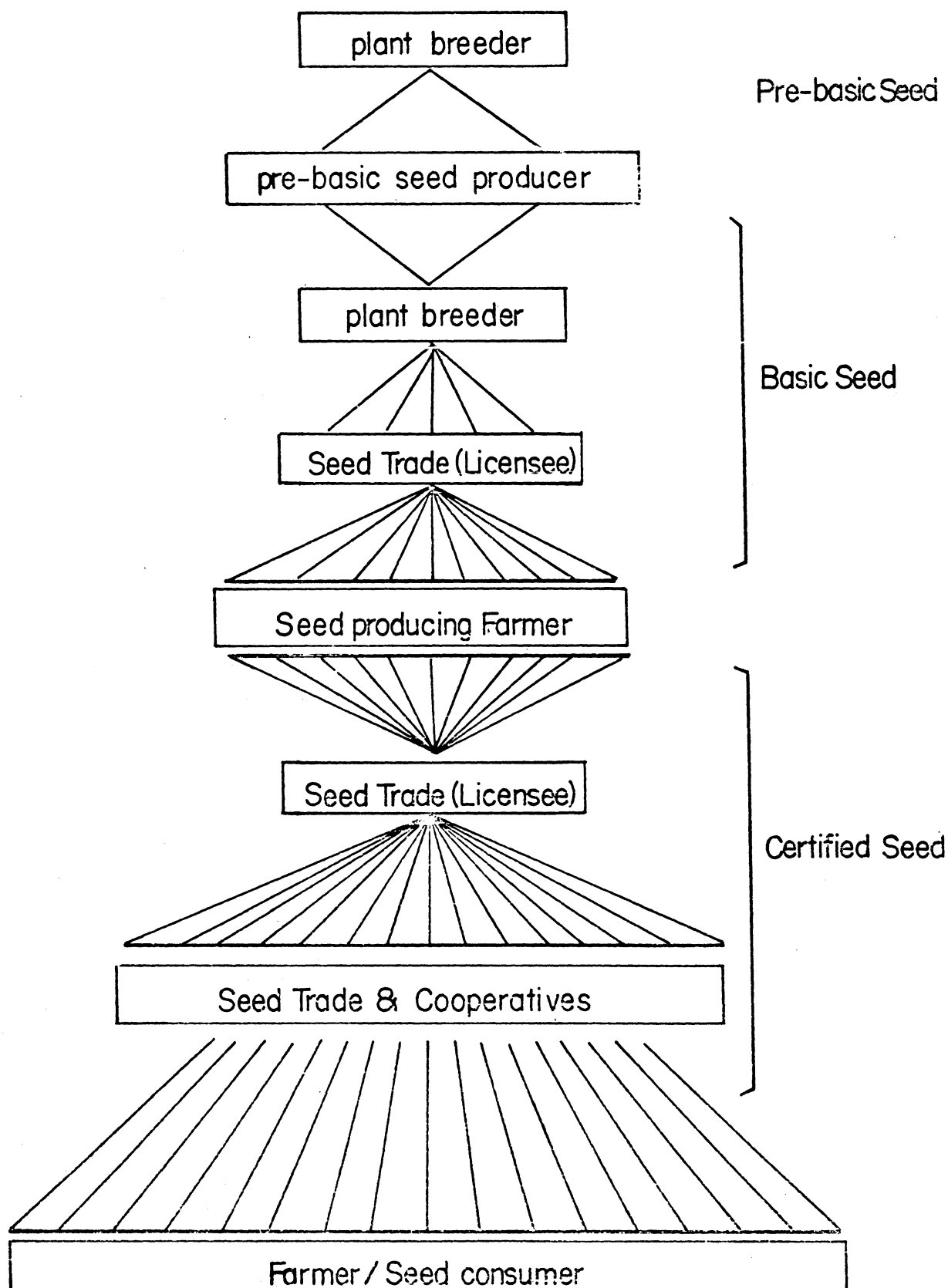
The plant variety protection right offers the breeder the possibility of giving other persons a share in the marketing as producers and/or sellers, by granting licenses under certain conditions, and, by virtue of his right to charge license fees, the breeder still benefits from the introduction of the new variety.

The implementation of these license agreements has recently been the subject of critical discussions from an anti-trust standpoint. It is obvious that the plant breeder is not allowed to utilize licensing agreements as an abusive means of exceeding the content of the protection right. On the other hand, he ought to have the same right and the same possibilities as the holder of any other industrial property right, namely to conclude license agreements within the limits allowed by the exclusive right. In this connection it would certainly seem desirable to obtain a general release from the registration and examination requirements of anti-trust law for certain types of contracts and certain clauses in contracts.

For some species certain types of production contracts have been developed in a number of countries, and these can be regarded as usual for the industry. They, too, are based on the exclusive nature of the variety protection right, which permits the appointment of specially qualified contractors for the production and sale of a variety. Quality control by the holder of the variety protection right is also an integral part of such license agreements. In the Federal Republic of Germany, for instance, several "multiplication and organization contracts" have been developed under which the breeder and holder of the protection right is often only the producer of the "basic" seed, while the entire production of the certified seed and its distribution is undertaken by the licensee. The breeder receives his reward in the form of the license fee.

Chart 2 on page 44 gives an example of the structure of a seed multiplication and distribution system of the type customary in the Federal Republic of Germany.

Chart 2

Structure of Seed Production and sale in the FRG *

* Reproduced from "Deutsche Landwirtschaftliche Presse" No. 9, of May 6, 1972, with the kind permission of the author.

This system, with its strict division of duties, has evolved here and elsewhere during the past decades. The variety protection right has thus resulted in the development of an organized system controlling the production, the quality and the distribution of the seed of protected varieties which benefits all the parties concerned and particularly the eventual consumer. For the routine transaction of business the breeders sometimes avail themselves of the services of trust organizations such as the Caisse de gestion in France, the Plant Royalty Bureau in the United Kingdom and corresponding institutions in the Federal Republic of Germany such as the Saatgut-Treuhand GmbH and the Bayerischer Verband, or the Association internationale de gestion des licences végétales in Geneva.

Such institutions are today an integral part of the seed industry at both the national and the international levels. Particularly on the latter level their importance has continually increased, as license agreements have brought about a growth in cooperation during the past decades which even goes beyond the production and the distribution arrangements and includes cooperation in the field of plant breeding itself. This kind of cooperation was a logical consequence as on one hand it enables a division of work in breeding, the cost of which increases continually owing to scientific and technological progress. On the other hand this cooperation promises a better use of investment in breeding, which can thus be utilized on a correspondingly larger scale. This ever-growing international cooperation in breeding results in requests and demands on the breeders which I shall mention briefly later on.

I shall merely mention here that these international connections are of great importance to the breeder and that there is still a tremendous potential in this field as far as the utilization of the breeding products is concerned.

5. VARIETY PROTECTION RIGHTS GRANTED SO FAR

To give you an idea of the benefit which the owner of the variety derives from the plant variety protection right, the following table (Chart 3) lists the number of variety protection rights granted in UPOV member States. The figures are based on an analysis of the publication of the national Plant Variety Offices or information supplied by those Offices.

Chart 3

Number of varieties having received protection in the
UPOV member States as of end of 1973

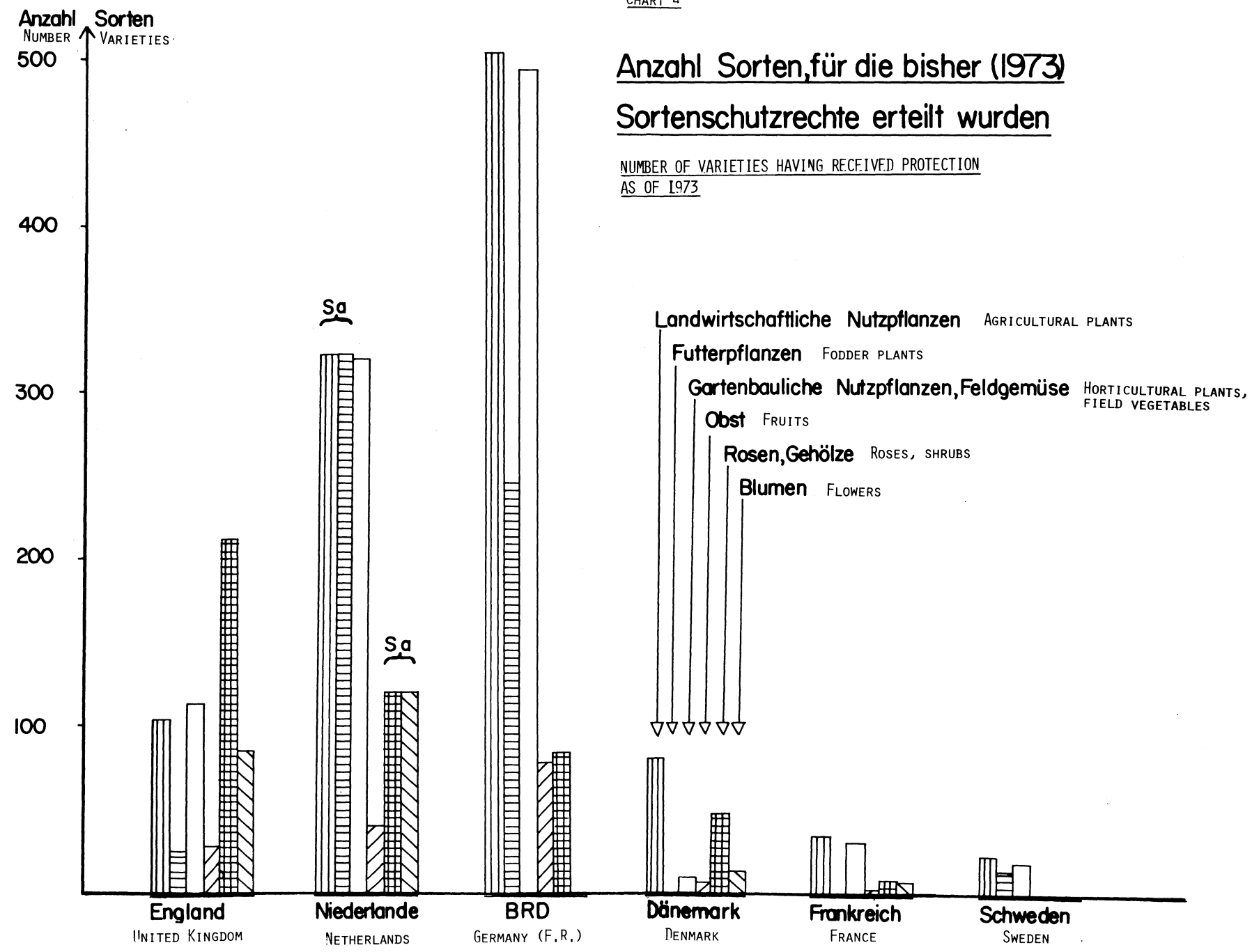
| Group of plant species | United Kingdom | Netherlands | Germany (F.R.) | Denmark | France | Sweden |
|--|----------------|-------------|----------------|---------|--------|--------|
| Agricultural plants | 104 |] 625 | 508 | 100 | 34 | 22 |
| Fodder plants | 24 | | 246 | - | - | 13 |
| Horticultural plants, field vegetables | 114 | 311 | 494 | 8 | 30 | 18 |
| Fruits | 28 | 40 | 78 | 5 | 1 | - |
| Roses, shrubs | 212 |] 240 | 84 | 48 | 7 | - |
| Flowers | 85 | | - | 12 | 6 | - |
| Sum of all varieties | 567 | 1,216 | 1,410 | 173 | 78 | 53 |

These figures are even more striking in the form of a diagram, as reproduced in Chart 4 on page 46.

CHART 4

Anzahl Sorten, für die bisher (1973) Sortenschutzrechte erteilt wurden

NUMBER OF VARIETIES HAVING RECEIVED PROTECTION
AS OF 1973



The very great differences between the various countries are partly based on traditional causes which necessarily produce strong effects in the initial phase.* But another interesting fact is the different crop preferences. For the rest, it has to be taken into account that the existence of variety protection rights varies in the different countries shown. In the Federal Republic of Germany, for instance, they have been in force for quite a long time, while in Sweden and France they came into force only a short while ago.

As we learn from the "News of the US Department of Agriculture" of June 26, 1974, 100 certificates of protection have been issued for lettuce, soya beans, wheat, cotton, beans, peas and asters to 35 firms, institutes and universities in the United States of America since the entry into force of the US Plant Variety Protection Act in December 1970. Another 305 applications for variety protection are pending.

According to UPOV statistics published at the end of 1972 the total number of plant variety protection rights would increase to 1839 in the United States of America if the plant patents granted under the patent law of 1951 were also included.

All these figures of variety protection rights granted clearly represent a value which is also reflected in an economic benefit. The amount of this benefit is difficult to ascertain in concrete terms, however. In the same way as it is often impossible to speak of the calculable economic value of an industrial patent, so one cannot accurately express the economic value of a plant variety right in absolute figures. Just as innumerable industrial patents are never economically viable and still less profitable, the great majority of variety protection rights do not show measurable profits from their exploitation. To quote St. Matthew, Chapter 20, verse 16: "Many are called, but few are chosen."

However, we shall try by indirect means to establish some idea of the amounts which are involved. If we assume that one practical plant breeder can only be intensively engaged in the breeding of one plant species--this applies at least to the main agricultural crops--experience shows that this results in a total expenditure (staff salaries, material costs including nurseries, trial fields, greenhouse facilities, technical and other staff) of approximately 400,000 to 500,000 DM per year (Indication Sengbusch).

But it will only be once in every five to ten years that the breeder achieves a striking success in the form of a really successful variety.

The expert knows this very well and a glance at the shares in the market of the varieties of some plant species in a few countries makes this quite evident.

In the Federal Republic of Germany only 10 out of every 120 protected potato varieties are grown on approximately 60% of the acreage entered for seed certification; four winter wheat varieties out of 32 contribute more than 80% of the seed produced; four winter barley varieties out of 20 cover 85% of this acreage; for rye and spring wheat the proportions are even more unequal.

In France only 9 out of the 49 winter wheat varieties are grown on 90% of the acreage entered for seed certification; two winter barley varieties out of 16 cover 60% of the seed production, and only two oat varieties out of 8 cover 92.5% of the acreage for this crop.

Striking successes are thus relatively rare in plant breeding, and to my knowledge this situation differs little from that of industrial patents.

But a "great" variety only once every five to ten years means that, according to this approximate calculation, the cost of breeding this variety amounts to 2.5 to 5 million DM. To earn such large sums of money in the form of license fees is not easy, and it is certainly only possible with the major agricultural crops which have been chosen as an example here. We also arrive at the same result when, working in reverse, we try to calculate the possible economic benefit from new varieties.

* Netherlands and the Federal Republic of Germany.

In order to realize a profit that covers the above net breeding cost of half a million DM annually, some 2000 hectares of certified seed of a protected wheat variety (2' ha at 40 quintals = 80' quintals x 6 = 480' DM) must be produced and sold in the Federal Republic of Germany. But as we know from experience such large figures are achieved only very rarely and furthermore it has to be pointed out that the breeding costs mentioned above do not include administrative or marketing expenses. The introduction of a new variety and its continual promotion requires a considerable investment, and only a layman can believe that a good variety "sells itself." It is always in competition with other good varieties and this is right and proper because, from the point of view of cultivation, a certain degree of variety competition is desirable and even necessary. Intensive sales promotion is therefore required to promote a new variety and its cost has also to be financed.

The breeder consequently has a hard life as a businessman, and a huge investment is required before he derives an economic benefit. A few varieties may yield a good profit, but the great majority will certainly not achieve this aim. A few "best-selling" varieties cannot be taken as a true example.

As a matter of fact it is a good thing that a number of well-equipped plant breeding enterprises deal with these tasks instead of one or a few public institutes. The inducement to creative achievement held out by the variety protection right is, in our opinion, a far greater incentive than a non-competitive mandate. This, too, can be regarded as an advantage of the variety protection right, the value of which benefits both the private plant breeding enterprise and the public.

What applies to the great agricultural crops applies also, in a slightly different way, in the horticultural sector, primarily to some vegetable species, but also to other cultivated plants in this sector.

However, other dimensions are involved in this field, as the prerequisites are different, and they vary according to the plant species and its importance for the market.

Even from the viewpoint of breeding costs the conditions are different. In this field, a single plant breeder can deal intensively with several species and breed them successfully if he has all the other necessary means at his disposal, such as a qualified staff of technicians, breeding installations, etc. In contrast to the agricultural branch, it is almost an economic necessity in the horticultural sector for a highly qualified plant breeder and the staff working under his direction to be engaged in the breeding of a large number of species.

Owing to the great number of species or varieties which are often of little economic importance, and the smaller quantities sold, breeding costs in the horticultural field are frequently not proportionate to the potential market. An effective protection right for the breeder is therefore even more necessary in this sector and, owing to the generally shorter period of economic use and the lower sales volume in the horticultural sector, the official fees ought to be lower.

The charts on variety protection rights granted which were shown here a little while ago also make this perfectly clear. They provide indirect proof that for these plant species variety protection is valuable. Whether the species in question are vegetables, flowers or other horticultural plants, the results of breeding work can only successfully be utilized when the varieties are protected.

6. OUTLOOK

The value of the Convention to the breeder is thus manifold, and its overall usefulness is certainly beyond dispute. Also beyond dispute, however, is the fact that this usefulness can be increased in many ways.

In certain respects UPOV is an integrated system. Experts have attributed great importance to the fact that the outline provisions of the Convention go far beyond those of the Paris Union Convention of 1883¹ for instance. As we know, it was the express wish of the experts to bind the member States much more firmly together, as regards both the actual content of the variety protection rights and the methods used in granting them. It is obvious that some of the consequences of this are positive, for instance the harmonization of the legal regulations in member States. On the other hand, some are also negative, for instance the somewhat

exclusive character of UPOV. While the first certainly increase the value of the Convention for the breeder, there are, however, certain dangers in the exclusiveness which ought to be rectified in the future. Owing to lack of time I cannot go into the details of this problem, but the subject has come up for discussion with some persistence during the last few days. It is likewise not the place to discuss, for instance, the problem whether a growing of the test material should be compulsory in every case and for all crops in the official preliminary examination.

In UPOV territory this has been done in the past, because it is felt that Article 7 of the Convention is to be interpreted in this way. But we know that outside UPOV there are countries which either believe that they can do without a compulsory preliminary examination or leave the decision on this question to the discretion of the responsible authority, for instance New Zealand and the United States of America.

We believe that in these countries the useful effect of the variety protection right for the breeder is by no means reduced. Our discussion here of the value of the variety protection right to the plant breeder referred, according to the subject of my paper, to the variety protection right under the UPOV Convention; but by analogy this value also covers the variety protection rights of other countries which have not (yet) acceded to the Convention, but where otherwise the same legislative provisions are applicable.

As regards the cost of granting variety protection, these other legal systems offer the advantage of remarkably low fees: as an example of this we would mention the United States of America. The following table gives a general picture of the duration of the variety protection right and the administrative fees that have to be paid in UPOV member States and in the United States of America (Chart 5).

Chart 5

Period of Protection and Administrative Fees
(calculated in Swiss francs) for the Protection of Agri-
cultural Plant Species in the UPOV member States and in
the United States of America

| State | Period of Protection | Application Fee | Testing Fees (partly depending on species and time) | Decision Fee | Annual Fee (differs depending on time and species) |
|-------------------|-------------------------|--------------------|--|-----------------|--|
| | () = special cases | | | | |
| | Years | Sw.frs. | Sw.frs. | Sw.frs. | Sw.frs. |
| United Kingdom | 15 (20) | 242 | 283 - 605 | 162 | 202 - 726 |
| Netherlands | 20 (25) | 220 | 275 - 385 | - | 220 - 660 |
| Germany (F.R.) | 20 (25) | 170 | 340 | 170 | 57 - 679 |
| Denmark | 15 (20) | 512 | 256 | 256 | - |
| France | 20 (25) | 213 | 350 | 142 | 156 - 567 |
| Sweden | 15 (20) | 286 | individual | - | - |
| U.S.A. | 17 (25) | 740 | 740 | 740 | - |

Assuming that cultivation is compulsory in the preliminary examination--as it is in UPOV member States--its cost is high. A more elastic interpretation of this rule, as mentioned above, would be desirable in many respects, and this would also enhance the value of the Convention to the plant breeder.

Breeders are nevertheless very grateful that UPOV has taken decisive steps in the harmonization of test methods and criteria. The rationalization, the quicker handling and the savings brought about by this measure will undoubtedly enhance the value of the variety protection right for the breeder, especially the breeder of "small" species, as it is important to consider whether the cost of obtaining the variety protection right in such cases is in reasonable proportion to the possible economic benefit. As I said, these steps towards harmonization taken by UPOV are very much welcomed, but the breeders still have some additional wishes. These relate to certain restrictive practices in the interpretation of the Convention and national laws; such practices might impair the usefulness of the variety protection right for the breeder. I am also thinking here of the Guidelines on Variety Denominations, which, in our opinion, are restrictive and unanimously regarded as being impracticable by both breeders and the seed industry as a whole.

Thus the value of the Convention to the breeder can still be increased, either through a simplification of application procedures or through an increase in the number of member States (perhaps including those countries which have only a "similar" system).

The Convention's restrictions on the requirements for protection are of great value to the worldwide expansion of the variety protection system. Novelty, homogeneity and stability are the criteria, not "agricultural" value, for this value is a criterion of suitability for growing and therefore goes beyond the scope of the Convention. Agricultural value, suitability for growing and usefulness in cultivation depend on agricultural policies, in the same way as they may be more or less limited to certain regions. The "variety protection" concept need not, therefore, necessarily concern a plant variety; it can, for instance, be limited to the parental lines of a hybrid variety, for only the possession of the parental lines makes the production of the variety possible. These parental lines are the result of systematic breeding work. Their examination for novelty, homogeneity and stability is, incidentally, much less complicated than that of the hybrid variety. More recent variety protection laws have therefore gone so far as to exclude hybrid varieties from protection expressis verbis. The value of the respective variety protection rights for the breeder is not diminished thereby. We shall confine ourselves here to these observations, without going into the details of what a hybrid variety is.

7. CONCLUSIONS

I do hope that my explanations have illustrated the benefit of the variety protection right for the breeder in a broad sense, and that of the Convention in a narrower one. I think I have shown you, with the aid of the figures on the protection rights granted in the member States, that breeders in UPOV territory have recognized the importance and the value of variety protection. There are clear indications that interest is increasing, and that this experience has also gained ground outside UPOV: I maintain that this is shown, in the international context, by the great number of variety protection laws which have recently been enacted or the passing of which is imminent. It is to be hoped that UPOV can now look forward to a remarkable increase in the number of its member States.

I want to conclude with the wish that the date will not be remote when the breeders of all crop species can avail themselves of a universally effective variety protection right for the benefit of progress in breeding and thereby ultimately for the benefit of mankind.

I know that all breeders share my wish, particularly those who gave me their advice for this attempt at an analysis of the value of variety protection rights to the plant breeders, and whom I want to take this opportunity of thanking.

Professor Dr. Ludwig Pielen
Federal Republic of Germany

After studies of agriculture Promotion and Habilitation in the topics of plant growing and plant breeding, became Scientific Assistant at the Universities of Giessen and Munich.

From 1948 to 1956, Referent for Seed Material and Plant Breeding in the Chamber of Agriculture in Bonn.

After 1956, Referent for Agriculture and Plant Growing in the Federal Ministry of Food, Agriculture and Forestry in Bonn. In 1957, Director and, since 1965, Director-General heading the Department for Agriculture of this Ministry.

Took part, in 1961, as Delegate of the Federal Republic of Germany in negotiations which led to the founding of the International Union for the Protection of New Varieties of Plants; later became Representative of his country in the Council of UPOV and since 1971 has been President of the Council of UPOV.

Mr. Walter R. Smith B.Sc.(Agric.)
United Kingdom

Graduated at Durham University as Bachelor of Science in 1936.

Awarded National Diploma in Agriculture in 1936.

Post graduate work at Newcastle University Farm and at Durham College of Agriculture.

From 1939 onwards, worked in Northumberland on Food Production until entering the National Agriculture Advisory Service where he was concerned initially with livestock husbandry.

In 1961, appointed Deputy Regional Director for the Yorkshire and Lancashire Region.

In February 1964, appointed Director for the Northern Region at Newcastle.

In 1967, appointed Director of the National Agriculture Advisory Service.

In 1971, promoted to the post of Deputy Director General of the New Agriculture Development and Advisory Service.

Mr. Bernard Laclavière
France

Formerly a student of the "Ecole libre des Sciences politiques" and a Doctor of Law of the University of Paris, Mr. Laclavière was in 1939 appointed "rédacteur" at the Central Administration of the Ministry of Agriculture.

In 1949 he was entrusted by the Ministry of Agriculture with promoting, at both the national and the international levels the protection of the rights of French breeders of new plant varieties.

It was in this capacity that he was given the task of organizing the 1957-1961 Paris Diplomatic Conference, of which he was elected Secretary.

Having been entrusted with the preparation of the French Law on the Protection of New Plant Varieties, he was in 1972 appointed Secretary General of the Committee for the Protection of New Plant Varieties, which was created for the application in France of Article 30(1)(b) of the Convention of December 2, 1961.

He has followed since its inception the work of the UPOV Council, in which he is at present the titular Representative of the French Government.

Mr. Halvor Skov
Denmark

After legal studies at the Universities of Aarhus and Copenhagen from 1936 to 1942, where he graduated as a Master of Law, Mr. Skov was employed in the Danish Ministry of Agriculture, where from 1959 to 1964 he was concerned with veterinary and phytosanitary matters and with plant breeders' rights; from 1964 onwards he was personally responsible to the Minister of Agriculture for the preparation of laws and regulations on "plant matters" (plant health, quality of plant products, pesticides, plant breeders' rights), and also for negotiations with interested groups. From 1959 to 1970 he was Secretary of the Danish Plant Health Board and also from 1959 to 1962 and 1967 to 1968 Secretary of the Preparatory Commission for a Law on Plant Breeders' Rights; from 1962 to 1968 he was Legal Advisor to the Plant Variety Board and to the Government Dairy and Egg Control Service. From 1970 to 1973 he was the first Vice Secretary-General of UPOV. At the present time he is again working in the Danish Ministry of Agriculture and is the Representative of the Danish Government in the UPOV Council.

Dr. Carl-Ernst Büchting
International Association of Plant Breeders
for the Protection of Plant Varieties (ASSINSEL)

Born on September 6, 1915, at Kleinwanzleben, Germany.

After volunteering as a commercial trainee at Copenhagen (Denmark) studies of sugar technology at Berlin with examination as certified engineer for sugar technology (1939), followed by graduation as Doctor of Agriculture (1943).

Transfer of his grandfather's enterprise from Kleinwanzleben to Einbeck. Since 1952 Président of the Kleinwanzlebener Saatzucht AG vormals Rabbethge & Giesecke, Einbeck, and member of various supervisory and advisory boards.

Honorary activities:

President of ASSINSEL (International Association of Plant Breeders for the Protection of Plant Varieties)

Vice President of FIS (International Federation of Seed Trade)

President of GFP (Association for the Promotion of Private Agricultural Plant Breeding in Germany)

Council member of the Bundesverband Deutscher Pflanzenzüchter (Federation of German Plant Breeders)

President of the Board of Curators of the Max-Planck-Institut for Research on Breeding (Erwin Baur-Institut), Köln-Vogelsang

LIST OF PARTICIPANTS/LISTE DES PARTICIPANTS/TEILNEHMERLISTE

I. MEMBER STATES/ETATS MEMBRES/VERBANDSSTAATENDENMARK/DANEMARK/DÄNEMARK

- M. H. SKOV, Chef d'expédition, Ministère de l'Agriculture, Slotsholmsgade 10, 1216 Copenhagen
- Mr. E. SØNDERGAARD, Chairman, Plant Variety Board, Rolighedsvej 26, 1958 Copenhagen V

FRANCE/FRANKREICH

- M. B. LACLAVIERE, Secrétaire général du Comité de la protection des obtentions végétales, 11 Rue Jean Nicot, Paris
- M. J.G. BUSTARRET, Directeur général honoraire de l'INRA, Président du Comité directeur technique de l'UPOV, 2 Rue Léon Gatin, 78 Versailles
- M. R.M.N. LABRY, Conseiller d'Ambassade, Ministère des Affaires étrangères, Direction des Affaires économiques et financières, Affaires générales, 37, Quai d'Orsay, 75 Paris VIIe

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

- Prof. Dr. L. PIELEN, Ministerialdirektor, Bundesministerium für Ernährung, Landwirtschaft und Forsten, 53 Bonn
- Dr. D. BÖRINGER, Präsident, Bundessortenamt, Rathausplatz 1, 3011 Bemerode/Hannover
- Dr. B. VIEWEG, Bundesministerium für Ernährung, Landwirtschaft und Forsten, 53 Bonn
- Dr. D. BELDE, Zweiter Sekretär, Ständige Vertretung der Bundesrepublik Deutschland bei dem Büro der Vereinten Nationen und bei den anderen internationalen Organisationen, 28 D, chemin du Petit Saconnex, Genf

NETHERLANDS/PAYS-BAS/NIEDERLANDE

- M. J.I.C. BUTLER, Ingénieur, Raad voor het Kwekersrecht, Postbox 104, Wageningen
- M. W.R.J. VAN DEN HENDE, Juriste, Ministerie van Landbouw en Visserij, 1^e v.d. Boschstraat, 4 La Haye

SWEDEN/SUEDE/SCHWEDEN

- Prof. H. ESBO, Statens Växtnämnd, 17173 Solna
- Mr. S. MEJEGAARD, Lord Justice of the Court of Appeal, Slättgardsvägen 46, 12658 HÄGERSTEN
- Mr. C. G. JUNBACK, Head of Section, Ministry of Agriculture, 10320 Stockholm
- Mr. O. SVENSSON, Head of Office, National Plant Variety Board, 17179 Solna

UNITED KINGDOM/ROYAUME-UNI/VEREINIGTES KÖNIGREICH

Mr. H.A.S. DOUGHTY, Ministry of Agriculture, Fisheries and Food, Whitehouse Lane, Huntingdon Road, Cambridge

Mr. W.R. SMITH, Ministry of Agriculture, Fisheries and Food, Horseferry Road, London S.W. 1

Mr. A.F. KELLY, Deputy Director, National Institute of Agricultural Botany, Huntingdon Road, Cambridge

Miss E.V. THORNTON, Plant Variety Rights Office, White House Lane, Huntingdon Road, CB3 0LF Cambridge

II. SIGNATORY STATES/ETATS SIGNATAIRES/UNTERZEICHNERSTAATENBELGIUM/BELGIQUE/BELGIEN

M. R. DERVEAUX, Inspecteur général, Service juridique, Ministère de l'Agriculture, rue Joseph II, 30, 1040 Bruxelles

SWITZERLAND/SUISSE/SCHWEIZ

M. M. ROCHAIX, Directeur, Station fédérale de recherches agronomiques de Changins, SFRA 1262 Changins s/Nyon

M. A. TRITTEN, Adjoint juridique, Station fédérale de recherches agronomiques de Changins, SFRA 1262 Changins s/Nyon

M. F. MARSCHALL, Chef de la Section de la production végétale et du contrôle des graines, Station fédérale de recherches agronomiques de Zürich-Reckenholz, 8046 Zürich

M. R. KÄMPF, Chef de Section, Bureau fédéral de la propriété intellectuelle, 3003 Berne

M. R. GFELLER, wissenschaftlicher Adjunkt, Abteilung für Landwirtschaft, EVD, 3003 Bern

III. OTHER INTERESTED STATES/AUTRES ETATS INTERESSES/ANDERE INTERESSIERTE STAATENAUSTRIA/AUTRICHE/ÖSTERREICH

Dipl.-Ing. E. ROSSOLL, Ministerialrat, Bundesministerium für Land- und Forstwirtschaft, Stubenring 1, 1011 Wien

CANADA/KANADA

Mr. C.H. JEFFERSON, Director, Plant Products Division, Canada Dept. of Agriculture, Sir John Carling Bldg., 930 Carling Ave., Ottawa

Mr. D.N. HUNTLEY, Consultant, Canada Dept. of Agriculture, Sir John Carling Bldg., 930 Carling Ave., Ottawa

CZECHOSLOVAKIA/TSCHECOSLOVAQUIE/TSCHECHOSLOWAKEI

M. F. HOLENDA, Chef de Section, Ministère de l'Agriculture, Prague

FINLAND/FINLANDE/FINNLAND

Prof. Dr. K.R. MANNER, Agricultural Research Center, Department of Plant Breeding, 31600 Jokioinen

HUNGARY/HONGRIE/UNGARN

- M. Z. SZILVASSY, Vice-président, Office National des Inventions, Budapest
- M. J. BERKO, Chef de département, Ministère de l'Agriculture et de l'Alimentation, Budapest
- M. J. HEGER, Directeur, Ministère de l'Agriculture et de l'Alimentation, Budapest
- M. G. PALOS, Conseiller juridique, Office National des Inventions, Budapest

JAPAN/JAPON

- Mr. Y. MATSUNOBU, Official, Ministry of Agriculture and Forestry, 2-1 Kasumigaseki, Tokyo
- Mr. T. MANABE, First Secretary, Permanent Delegation to the International Organizations at Geneva, Geneva

KENYA/KENIA

- Mr. J.J. NJOROGE, Director of Agricultural Research, Ministry of Agriculture, P.O.Box 30028, Nairobi

NEW ZEALAND/NOUVELLE-ZELANDE/NEUSEELAND

- Mr. I.G. FORBES, Assistant Director (Horticulture), Ministry of Agriculture and Fisheries, Box 2298, Wellington
- Mr. C.M. PALMER, Scientific Attaché, New Zealand High Commission, Haymarket, London

NORWAY/NORVEGE/NORWEGEN

- Mr. J. RASTEN, State Seed Inspector, Moerveien 12, 1430 Aas
- Mr. B. JOHANNESSEN, Head of Division, State Grain Corporation, Stortingsgt. 28, Oslo 1

POLAND/POLOGNE/POLEN

- M. J. VIRION, Ingénieur agronome, Ministère de l'Agriculture, 30, ul. Wspolna 30, Varsovie
- M. W. KUZMICZ, Avocat, "Rolimpex", Al. Jerozolimskie 44, Varsovie

SOUTH AFRICA/AFRIQUE DU SUD/SÜDAFRIKA

- Mr. J.F. VAN WYK, Director, Division of Plant and Seed Control, Department of Agricultural Technical Services, Pretoria
- Mr. J.A. THOMAS, Agricultural Attaché, Ambassade d'Afrique du Sud, 59 Quai d'Orsay, Paris 75007

SPAIN/ESPAGNE/SPANIEN

- M. R. LOPEZ DE HARO, Subdirector, Registro de Variedades Protegidas, Ministerio de Agricultura, Instituto de Semillas y Plantas de Vivero, Ciudad Universitaria, Madrid 3

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

- Mr. J.C. BLUM, Associate Administrator, Agricultural Marketing Service,
U.S. Department of Agriculture, Washington, D.C.
- Mr. S.F. ROLLIN, Commissioner, Plant Variety Protection Office, U.S. Department
of Agriculture, A.M.S., Grain Division, 6525 Belcrest Road, Hyattsville, Md.
- Mr. R. BAGWILL, Patent Examiner, Group 330, U.S. Patent Office, Washington, D.C.
22301
- Mr. S.D. SCHLOSSER, Attorney, Office of Legislation and International Affairs,
U.S. Patent Office, Washington, D.C. 20231

IV. INTERNATIONAL ORGANIZATIONS/ORGANISATIONS INTERNATIONALES/INTERNATIONALE ORGANISATIONENAIPH (International Association of Horticultural Producers/Association internationale des producteurs de l'horticulture/Internationaler Verband des Erwerbsgartenbaues)

- Mr. R. TROOST, Vorsitzender, Ausschuss für Neuheitenschutz, Nederlandse
Vereniging voor de Teelt van en de Handel in Tuinbouwzaden, Jan van
Nassaustraat 109, Den Haag

ASSINSEL (International Association of Plant Breeders for the Protection of Plant Varieties/Association internationale des sélectionneurs pour la protection des obtentions végétales/Internationaler Verband der Pflanzenzüchter für den Schutz von Pflanzenzüchtungen)

- Dr. C.-E. BÜCHTING, Präsident der ASSINSEL, Kleinwanzlebener Saatzucht A.G.
3352 Einbeck, Deutschland (Bundesrepublik)
- M. V. DESPREZ, Ingénieur agronome, Cappelle 59242, Templeuve, France
- Dr. F.G. FAJERSSON, Weibullsholm, Landskrona, Sweden
- Mr. C. GILLET, Miln Marsters, King's Lynn, Norfolk, United Kingdom
- Mr. E. GRUNDLER, Präsident, Futterpflanzen-Sektion, 8441 Steinach,
Deutschland (Bundesrepublik)
- Mr. E. JOHANSSON, Breeder, Fil. Kand, Hillesgögs Frö AB, Box 302, Landskrona
Sweden
- Mr. W. MARX, Kleinwanzlebener Saatzucht A.G., 3352 Einbeck, Deutschland
(Bundesrepublik)
- Dr. C. MASTENBROEK, Plant Breeding Station Cebeco, Lisdoddenweg 36, Lelystad,
Netherlands
- Dr. H. SCHEPERS, Hauptgeschäftsführer, BRD - Bundesverband Deutscher
Pflanzenzüchter, Kaufmannstrasse 71, 53 Bonn, Deutschland (Bundesrepublik)
- Mr. K. WALTER, Agronome, Hillehøgs Frö AB, Landskrona, Sweden
- Mr. J. WINTER, Conseiller juridique, Kaufmannstrasse 71, 53 Bonn, Deutschland
(Bundesrepublik)
- M. J.E. VELDHUYZEN VAN ZANTEN, Ingénieur agronome, Eikstraat 13, Hoorn, Pays-Bas

CIOPORA (International Community of Breeders of Asexually Reproduced Ornamentals/
Communauté internationale des obtenteurs de plantes ornementales de reproduction
asexuée/Internationale Gemeinschaft der Züchter vegetativ vermehrbare Zier-
pflanzen)

- M. R. KORDES, Präsident der CIOPORA, 2201 Sparrieshoop bei Elmshorn,
Deutschland (Bundesrepublik)
- M. R. ROYON, Secrétaire général de la CIOPORA, Les Roses du Capiton, 83600
Fréjus, France
- M. P. FAVRE, Secrétaire administratif de la CIOPORA, 4, Place Neuve, 1204
Genève, Suisse

FIS (International Federation of Seed Trade/Fédération internationale du commerce
des semences/Internationale Vereinigung des Saatenhandels)

- Mr. S. SLUIS, President of FIS, Royal Sluis, Enkhuizen, Netherlands
- Mr. A. ANOS, P. Habana 56, Madrid-16, Spain
- Mr. H. BØGH, Director, Dansk Planteforædling Ltd., 7080 Børkop, Denmark
- Mr. J.G. KEELING, Chairman, Elsoms Seeds Ltd., Pinchbeck Road, Spalding, Lincs.,
United Kingdom
- Mr. H.H. LEENDERS, Secretary-General of FIS, Leidsekade 88, Amsterdam-1002,
Netherlands

ISTA (International Seed Testing Association/Association internationale d'essais
de semences/Internationale Vereinigung für Saatgutprüfung)

- Mr. S.F. ROLLIN, Commissioner, Plant Variety Protection Office, United States
Department of Agriculture, A.M.S., Grain Division, 6525 Belcrest Road,
Hyattsville, Md., United States of America

V. SPEAKERS/CONFÉRENCIERS/REDNER

- Prof. Dr. L. PIELEN, Ministerialdirektor, Ratspräsident der UPOV, Bundes-
ministerium für Ernährung, Landwirtschaft und Forsten, 53 Bonn
- Mr. W.R. SMITH, B.Sc. (Agric.), Ministry of Agriculture, Fisheries and Food,
Horseferry Road, London S.W.1, United Kingdom
- M. B. LACLAVIERE, Secrétaire général du Comité de la protection des obtentions
végétales, 11 Rue Jean Nicot, Paris
- Mr. H. SKOV, Member of the Council of UPOV, Ministry of Agriculture,
Slotsholmsgade 10, Copenhagen, Denmark
- Dr. C.-E. BÜCHTING, Präsident der ASSINSEL, Kleinwanzlebener Saatzucht A.G.,
Einbeck, Deutschland (Bundesrepublik)

VI. OFFICERS/BUREAU/VORSITZ

- Prof. Dr. L. PIELEN, Chairman
Prof. H. ESBO, Vice Chairman

VII. OFFICE OF UPOV/BUREAU DE L'UPOV/BÜRO DER UPOV

- Dr. A. BOGSCH, Secretary General
Dr. H. MAST, Vice-Secretary General
Dr. M.-H. THIELE-WITTIG, Administrative and Technical Officer