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PLANT VARIETY PROTECTION

**Gazette and Newsletter
of the
International Union for the Protection of New Varieties of Plants (UPOV)**

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GAZETTE

TERRITORIAL EXTENSION OF THE APPLICATION
OF THE UPOV CONVENTION

Netherlands

The Government of the Kingdom of the Netherlands informed the Secretary General of the International Union for the Protection of New Varieties of Plants (UPOV), by a written notification of February 14, 1986, made pursuant to Article 36(1) of the International Convention for the Protection of New Varieties of Plants of December 2, 1961, as revised at Geneva on November 10, 1972, and on October 23, 1978, that the said Convention, to which the Netherlands is a party (for the Kingdom in Europe), applies equally to Aruba.

Pursuant to Article 36(3)(a) of the said Convention, the notification took effect on November 8, 1986.

EXTENSION OF PROTECTION TO FURTHER GENERA AND SPECIES

Federal Republic of Germany

By virtue of the First Order Amending Orders Concerned with Seed Legislation of December 18, 1986 (*Bundesgesetzblatt*, Part I, of December 24, 1986, p. 2527), protection was extended to the following taxa with effect from January 1, 1987 (the Latin and German names appear in the Order, whereas the English and French common names have been added, without guarantee of concordance, by the Office of the Union).

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Brassica oleracea L. convar. botrytis (L.) Alef. var. italica Plenck	Sprouting Broccoli, Calabrese	Brocoli (à jets)	Brokkoli
Exacum L.	Exacum	Exacum	Exacum
Melilotus alba Medik.	White Sweet Clover	Mélilot blanc	Weisser Steinklee
Melilotus officinalis	Yellow Sweet Clover	Mélilot officinal	Gelber Steinklee

In addition, protection has been extended to all taxa which are the result of:

1. a hybridization between taxa mentioned in the List of Species Under the Plant Variety Protection Law, or
2. a hybridization between a taxon mentioned in the List of Species and another taxon, where the examination procedures for the mentioned taxon are also applicable to the hybrid.

Pursuant to Article 13 of the Plant Variety Protection Law, protection extends to the end of the twenty-fifth year following the grant in the case of the taxa listed above.

Pursuant to Article 15 of the Law, nationals of the following States and natural and legal persons having their domicile or registered office in those States may obtain protection in the Federal Republic of Germany:

- (i) member States of the European Economic Community;
- (ii) member States of the International Union for the Protection of New Varieties of Plants (UPOV) if the State concerned grants protection to varieties of the same species or if the species is one that is mentioned in the Annex to the text of December 2, 1961, of the Convention and if and so long as the State concerned is bound by that text;
- (iii) other States insofar as, according to a notice published by the Federal Minister for Food, Agriculture and Forestry, the State concerned grants equivalent protection to German nationals or to persons having their domicile or registered Office within the territory where the Law is in force.

Pursuant to Article 6(1)3 of the Law, applications that relate to recently created varieties of taxa covered by this extension and are to benefit from the transitional limitation of the requirement of novelty must be filed within one year following the extension, i.e. before January 1, 1988.

The list of genera and species which are covered by plant variety protection legislation is given below, with some details on the grouping for fee purposes, the novelty requirement relating to prior commercialization and the period of protection. The Latin and German names appear in the Order of December 18, 1985 (Bundesgesetzblatt, Part I, of December 20, 1985, pp. 2325-2330), Concerning the List of Species under the Plant Variety Protection Law, as amended, whereas the English and French common names have been added, without guarantee of concordance, by the Office of the Union.

Explanations to the List Starting on Page 4

Column A indicates the grouping for fee purposes (for the fee levels, see Plant Variety Protection No. 50, page 31).

Column B indicates the duration of the period, ending on the date of the application, during which the variety may have been commercialized abroad without prejudice to its novelty and the period of protection (in full calendar years) as follows:

- 1 Four years and 25 years, respectively;
- 2 Four years and 30 years, respectively;
- 3 Six years and 30 years, respectively.

Notes explicatives sur la liste commençant à la page 4

La colonne A indique le groupement aux fins des taxes (pour le montant des taxes, voir Plant Variety Protection, No 50, page 31).

La colonne B indique la durée du délai, expirant à la date du dépôt de la demande, pendant lequel la variété peut avoir été commercialisée à l'étranger sans qu'il soit porté atteinte à sa nouveauté, ainsi que la durée de la protection (en années civiles complètes) comme suit :

- 1 Quatre années et 25 années, respectivement;
- 2 Quatre années et 30 années, respectivement;
- 3 Six années et 30 années, respectivement.

Erläuternde Anmerkungen zu der auf Seite 4 ff. wiedergegebenen Liste

Spalte A gibt die Gruppierung zum Zwecke der Gebühren an (für die Gebührensätze, siehe Plant Variety Protection Nr. 50, Seite 31).

Spalte B gibt die Dauer des Zeitraums vor dem Antragstag, in dem die Sorte im Ausland gewerbsmässig vertrieben werden kann, ohne dass dadurch ihre Neuheit beeinträchtigt wird, sowie die Schutzdauer (in vollen Kalenderjahren) an. Die hierfür verwendeten Ziffern haben folgende Bedeutung:

- 1 Vier Jahre bzw. 25 Jahre;
- 2 Vier Jahre bzw. 30 Jahre;
- 3 Sechs Jahre bzw. 30 Jahre.

Plant Variety Protection in the Federal Republic of Germany* /
Protection des obtentions végétales en République fédérale d'Allemagne* /
Sortenschutz in der Bundesrepublik Deutschland*

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>	<u>A</u>	<u>B</u>
Abies Miller	Abies	Sapin	Tanne	a	3
Achimenes Pers.	Achimenes	Achimenes	Achimenes	4	1
Aechmea Ruiz et Pav.	Aechmea	Aechmea	Aechmea	4	1
Aeschynanthus Jack	Aeschynanthus	Aeschynanthus	Aeschynanthus	4	1
Agrostis L.	Bentgrass	Agrostis, Agrostide	Straussgras	4	1
Allium cepa L.	Onion	Oignon	Zwiebel	4	1
Allium porrum L.	Leek	Poireau	Porree	5	1

* See explanations, page 3.

The last entry of the List of Species Under the Plant Variety Protection Law is as follows:

"All species which are the result of:

1. a hybridization between species mentioned [in the List], or
2. a hybridization between a species mentioned [in the List] and another species, where the examination procedures for the mentioned species are also applicable to the hybrid."

Voir les explications à la page 3.

La dernière entrée de la Liste des espèces soumises à la Loi sur la protection des obtentions végétales est comme suit :

"Toutes les espèces qui sont le produit :

1. d'une hybridation entre espèces mentionnées [dans la Liste] ou
2. d'une hybridation entre une espèce mentionnée [dans la Liste] et une autre espèce, lorsque les procédures d'examen relatives à l'espèce mentionnée sont aussi applicables à l'hybride."

Siehe Erläuterungen auf Seite 3.

Die letzte Position des Artenverzeichnisses zum Sortenschutzgesetz ist wie folgt:

"Alle Arten, die hervorgegangen sind:

1. aus einer Hybridisation zwischen [in der Liste] genannten Arten oder
2. aus einer Hybridisation zwischen einer [in der Liste] genannten Art und einer anderen Art, wenn das Prüfungsverfahren für die genannte Art auch auf die Hybride anwendbar ist."

a If marketing of propagating material of the variety is regulated by the Law on Forestry Seeds and Planting Material: 6; otherwise: 5 / Si la commercialisation du matériel de multiplication de la variété est assujettie à la loi sur les semences et plants forestiers : 6; sinon : 5 / Soweit das Vermehrungsmaterial der Sorte hinsichtlich des Vertriebs dem Gesetz über forstliches Saat- und Pflanzgut unterliegt: 6; andernfalls: 5.

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>	<u>A</u>	<u>B</u>
<i>Allium schoenoprasum</i> L.	Chives	Ciboulette, Civette	Schnittlauch	5	1
<i>Alopecurus pratensis</i> L.	Meadow Foxtail	Vulpin des prés	Wiesenfuchsschwanz	4	1
<i>Alstroemeria</i> L.	Alstroemeria, Herb Lily	Alstroèmère, Lis des Incas	Inkalilie	2	1
<i>Anthurium</i> Schott	Anthurium, Tail Flower	Anthurium	Flamingoblume	2	1
<i>Apium graveolens</i> L.	Celery, Celeriac	Céleri, Céleri-rave	Sellerie	5	1
<i>Arrhenatherum elatius</i> (L.) P. Beauv. ex J.S. et K.B. Presl	Tall Oatgrass, False Oatgrass	Fromental, Avoine élevée	Glatthafer	3	1
<i>Asparagus officinalis</i> L.	Asparagus	Asperge	Spargel	4	1
<i>Avena nuda</i> L.	Naked Oats	Avoine nue	Nackthafer	3	1
<i>Avena sativa</i> L.	Oats	Avoine	Hafer	1	1
<i>Begonia</i> - <i>Elatior</i> -Hybriden	Elatior Begonia	Bégonia elatior	Elatior-Begonie	4	1
<i>Begonia</i> x <i>tuberhybrida</i> Voss	Tuberous Begonia	Bégonia tubéreux	Knollenbegonie	4	1
<i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>alba</i> DC.	Fodder Beet	Betterave fourragère	Runkelrübe	1	1
<i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>altissima</i> Döll	Sugar Beet	Betterave sucrière	Zuckerrübe	1	1
<i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>conditiva</i> Alef.	Garden Beet, Beetroot	Betterave rouge, Betterave potagère	Rote Rübe	5	1
<i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>vulgaris</i>	Mangel, Leaf Beet, Spinach Beet	Bette commune, Poirée	Mangold	5	1
<i>Brassica juncea</i> (L.) Czernj. et Cosson	Brown Mustard	Moutarde brune	Sareptasenf	3	1
<i>Brassica napus</i> L. emend. Metzger var. <i>napobrassica</i> (L.) Rchb.	Swede	Chou-navet, Rutabaga	Kohlrübe	4	1
<i>Brassica napus</i> L. ssp. <i>oleifera</i> (Metzger) Sinsk.	Swede Rape, incl. Oilseed Rape	Colza	Raps	1	1
<i>Brassica nigra</i> (L.) Koch	Black Mustard	Moutarde noire	Schwarzer Senf	3	1
<i>Brassica oleracea</i> L. convar. <i>acephala</i> (DC.) Alef. var. <i>gongylodes</i> L.	Kohlrabi	Chou-rave	Kohlrabi	5	1
<i>Brassica oleracea</i> L. convar. <i>acephala</i> (DC.) Alef. var. <i>medullosa</i> Thell. & var. <i>viridis</i> L.	Fodder Kale	Chou fourrager	Futterkohl	3	1
<i>Brassica oleracea</i> L. convar. <i>acephala</i> (DC.) Alef. var. <i>sabellica</i> L.	Curly Kale	Chou frisé	Grünkohl	5	1
<i>Brassica oleracea</i> L. convar. <i>botrytis</i> (L.) Alef. var. <i>botrytis</i>	Cauliflower	Chou-fleur	Blumenkohl	4	1

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>	<u>A</u>	<u>B</u>
Brassica oleracea L. convar. botrytis (L.) Alef. var. italica Plenck	Sprouting Broccoli, Calabrese	Brocoli (à jets)	Brokkoli	4	1
Brassica oleracea L. convar. capitata (L.) Alef. var. capitata	Cabbage	Chou pommé	Rotkohl, Weisskohl	5	1
Brassica oleracea L. convar. capitata (L.) Alef. var. sabauda L.	Savoy Cabbage	Chou de Milan	Wirsing	5	1
Brassica oleracea L. convar. oleracea var. gemmifera DC.	Brussels Sprouts	Chou de Bruxelles	Rosenkohl	4	1
Brassica pekinensis (Lour.) Rupr.	Chinese Cabbage	Chou de Chine, Pé-tsai	Chinakohl	5	1
Brassica rapa L.	Turnip, Turnip Rape	Navet, Navette	Herbstrübe, Mai- rübe, Rübsen	a	1
Bromus inermis Leysser	Smooth Brome (Awnless Brome)	Brome inerme	Wehrlose Trespe	4	1
Calluna vulgaris (L.) Hull	Heather, Ling	Callune	Besenheide	4	1
Cannabis sativa L.	Hemp	Chanvre	Hanf	5	1
Capsicum annuum L.	Sweet Pepper, Capsicum, Chili	Poivron, Piment	Paprika	5	1
Chamaecyparis Spach	Chamaecyparis	Chamaecyparis	Scheinzypresse	5	3
Chrysanthemum frutescens L.	Marguerite, Paris Daisy	Marguerite	Strauchmargerite	4	1
Chrysanthemum-Indicum- Hybriden	Chrysanthemum	Chrysanthème	Chrysantheme	2	1
Cichorium endivia L.	Endive	Chicorée frisée, Scarole	Winterendivie	5	1
Cichorium intybus L.	Chicory	Chicorée, Endive	Wurzelzichorie, Salatzichorie	5	1
Cotoneaster Medik.	Cotoneaster	Cotoneaster	Cotoneaster	4	1
Cucumis sativus L.	Cucumber, Gherkin	Concombre, Cornichon	Gurke	4	1
Cucurbita maxima Duchesne	Pumpkin	Potiron, Giraumon	Riesenkürbis	5	1
Cucurbita pepo L.	Pumpkin, Marrow, Courgette, Vegetable Marrow	Courge, Pâtisson, Citrouille	Gartenkürbis, Oelkürbis, Zucchini	b	1
Cydonia Miller	Quince	Ognassier	Quitte	5	3
Cynosurus cristatus L.	Crested Dog's-tail	Crételle	Kammgras	4	1
Dactylis glomerata L.	Cocksfoot, Orchard Grass	Dactyle	Knäulgras	3	1
Dahlia Cav.	Dahlia	Dahlia	Dahlie	4	1

a Turnip Rape / Navette / Rübsen: 3; Turnip / Navet / Herbst- , Mairübe: 5.

b [Fodder] / [Variétés fourragères] / Oelkürbis: 4; [Vegetables] / [Variétés potagères] / Gartenkürbis (Zucchini): 5.

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>	<u>A</u>	<u>B</u>
<i>Daucus carota</i> L.	Carrot	Carotte	Möhre	5	1
<i>Dianthus</i> L.	Carnation	Oeillet	Nelke	2	1
<i>Erica</i> L.	Heath	Bruyère	Erika	4	1
<i>Euphorbia fulgens</i> Karw.	<i>Euphorbia fulgens</i>	<i>Euphorbia fulgens</i>	Korallenranke	4	1
<i>Euphorbia lathyris</i> L.	Caper Spurge	Euphorbe épurge	Kreuzblättrige Wolfsmilch	4	1
<i>Euphorbia-Milii</i> -Hybriden	Christ's Thorn, Crown of Thorns	Epine du Christ	Christusdorn	4	1
<i>Euphorbia pulcherrima</i> Willd. ex Klotzsch	Poinsettia	Poinsettia	Poinsettie (Weihnachtsstern)	4	1
<i>Exacum</i> L.	Exacum	Exacum	Exacum		
<i>Fagopyrum esculentum</i> Moench	Buckwheat	Sarrasin, Blé noir	Buchweizen	4	1
<i>Festuca</i> L.	Fescue	Fétuque	Schwingel	3	1
<i>Fragaria</i> L.	Strawberry	Fraisier	Erdbeere	4	1
<i>Freesia</i> Eckl. ex Klatt	Freesia	Freesia	Freesie	2	1
<i>Gerbera</i> L.	Gerbera	Gerbera	Gerbera	2	1
<i>Glycine max</i> (L.) Merr.	Soya Bean, Soybean	Soja	Sojabohne	5	1
<i>Helianthus annuus</i> L.	Common Sunflower	Tournesol, Soleil	Sonnenblume	3	1
<i>Helianthus tuberosus</i> L.	Jerusalem Artichoke	Topinambour	Topinambur	4	1
<i>Hordeum vulgare</i> L. sensu lato	Barley	Orge	Gerste	1	1
<i>Humulus lupulus</i> L.	Hop	Houblon	Hopfen	4	2
<i>Hydrangea</i> L.	Hydrangea	Hortensia	Hortensie	4	1
<i>Ilex</i> L.	Holly	Houx	Stechpalme	4	3
<i>Impatiens</i> -Neu-Guinea- Hybriden	New Guinea Impatiens	Impatiente de Nouvelle-Guinée	Neu-Guinea- Impatiens	4	1
<i>Iris</i> L.	Iris	Iris	Iris	4	1
<i>Juniperus</i> L.	Juniper	Genévrier	Wacholder	5	3
<i>Kalanchoë</i> Adans.	Kalanchoë	Kalanchoë	Kalanchoë	4	1
<i>Lactuca sativa</i> L.	Lettuce	Laitue	Salat	4	1
<i>Larix</i> Miller	Larch	Mélèze	Lärche	a	3
<i>Lathyrus cicera</i> L.	Dwarf Chickling Vetch	Gesse chiche, Jarrosse	Rotblühende Platterbse	4	1
<i>Lathyrus sativus</i> L.	Grass Pea Vine	Gesse cultivée	Gewöhnliche Platterbse	4	1
<i>Lathyrus tingitanus</i> L.	Tangier Pea	Gesse du Maroc	Purpurblühende Platterbse	4	1
<i>Lens culinaris</i> Medik.	Lentil	Lentille	Linse	4	1

a See footnote a, page 4 / Voir note a, page 4 / Siehe Fussnote a, Seite 4.

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>	<u>A</u>	<u>B</u>
<i>Leptospermum scoparium</i> J.R. et G. Forst.	Tea Tree, Manuka	-	Südseemyrte	4	1
<i>Linum usitatissimum</i> L.	Flax, Linseed	Lin	Lein	5	1
<i>Lolium</i> L.	Ryegrass	Ray-grass	Weidelgras	3	1
<i>Lotus corniculatus</i> L.	Bird's Foot Trefoil	Lotier corniculé	Hornschotenklee	4	1
<i>Lotus uliginosus</i> Schk.	Major Bird's Foot Trefoil	Lotier velu, Lotier des marais	Sumpfschotenklee	4	1
<i>Lupinus albus</i> L.	White Lupin	Lupin blanc	Weisse Lupine	3	1
<i>Lupinus angustifolius</i> L.	Blue Lupin	Lupin bleu	Blaue Lupine	3	1
<i>Lupinus luteus</i> L.	Yellow Lupin	Lupin jaune	Gelbe Lupine	3	1
<i>Lycopersicon lycopersicum</i> (L.) Karsten ex Farw.	Tomato	Tomate	Tomate	4	1
<i>Malus</i> Miller	Apple	Pommier	Apfel	5	3
<i>Medicago falcata</i> L.	Yellow Lucerne (Sickle Medick), Variegated Lucerne	Luzerne (en faucille)	Sichelluzerne	4	1
<i>Medicago lupulina</i> L.	Black Medick, Yellow Trefoil	Luzerne lupuline, Minette	Gelbklee (Hopfenklee)	4	1
<i>Medicago sativa</i> L.	Lucerne, Alfalfa	Luzerne (cultivée)	Blaue Luzerne	3	1
<i>Medicago x varia</i> T. Martyn	(Hybrid) Lucerne	Luzerne hybride	Bastardluzerne	3	1
<i>Melilotus alba</i> Medik.	White Sweet Clover	Mélilot blanc	Weisser Steinklee		
<i>Melilotus officinalis</i>	Yellow Sweet Clover	Mélilot officinal	Gelber Steinklee		
<i>Nicotiana rustica</i> L.	Syrian Tobacco	Nicotiane rustique	Bauerntabak	4	1
<i>Nicotiana tabacum</i> L.	Tobacco (common)	Tabac	Tabak	4	1
<i>Onobrychis viciifolia</i> Scop.	Sainfoin	Sainfoin, Esparcette	Esparcette	4	1
Orchidaceae	Orchids	Orchidées	Orchideen	2	1
<i>Ornithopus sativus</i> Brot.	Serradella	Serradelle	Serradella	4	1
<i>Panicum miliaceum</i> L.	Common Millet	Millet commun, Panic millet, Panic faux millet	Rispenhirse	4	1
<i>Papaver somniferum</i> L.	Opium Poppy	Oeillette, Pavot	Mohn	4	1
<i>Pelargonium</i> L'Hérit. ex Ait.	Show and Fancy Pelargoniums, Ivy-leaved Pelargonium, Zonal Pelargonium	Pelargonium des fleuristes, Géranium-lierre, Géranium, Pelar- gonium zonale	Edelpelargonie, Efeupelargonie, Zonalpelargonie	5	1
<i>Petroselinum crispum</i> (Miller) Nyman ex A.W. Hill	Parsley	Persil	Petersilie	5	1
<i>Phacelia tanacetifolia</i> Benth.	Scorpion Weed	Phacélie à feuilles de tanaïsie	Phazelie	3	1
<i>Phalaris arundinacea</i> L.	Reed Canary Grass	Alpiste roseau	Rohrglanzgras	4	1

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>	<u>A</u>	<u>B</u>
<i>Phaseolus coccineus</i> L.	Runner Bean, Kidney Bean	Haricot d'Espagne	Prunkbohne	5	1
<i>Phaseolus vulgaris</i> L.	Dwarf French Bean, Climbing French Bean	Haricot nain, Haricot à rames	Buschbohne, Stangenbohne	a	1
<i>Phleum bertolonii</i> DC.	Timothy	Fléole diploïde, Petite fléole	Zwiebellieschgras	4	1
<i>Phleum pratense</i> L.	Timothy	Fléole des prés	Wiesenlieschgras	3	1
<i>Picea</i> A. Dietr.	Spruce	Epicéa	Fichte	b	3
<i>Pinus</i> L.	Pine	Pin	Kiefer	b	3
<i>Pisum sativum</i> L.	Pea	Pois	Erbse	c	1
<i>Poa</i> L.	Meadow-grass	Pâturin	Rispengras	3	1
<i>Populus</i> L.	Poplar	Peuplier	Pappel	b	1
<i>Potentilla fruticosa</i> L.	Shrubby Cinquefoil	Potentille ligneuse	Fingerstrauch	5	1
<i>Prunus</i> L.	Cherry, Plum, Quetsch	Cerisier, Prunier, Quetsche	Kirsche, Pflaume, Zwetschge	5	3
<i>Pseudotsuga</i> Carr.	Douglas Fir	Sapin de Douglas	Douglasie	b	3
<i>Pyracantha</i> M.J. Roem.	Firethorn	Pyracantha, Buisson ardent	Feuerdorn	5	1
<i>Pyrus</i> L.	Pear, except ornamental varieties	Poirier, sauf variétés orne- mentales	Birne, ausser Ziersorten	5	3
<i>Raphanus sativus</i> L. var. niger (Miller) S. Kerner	Black Radish	Radis d'été, d'automne et d'hiver	Rettich	5	1
<i>Raphanus sativus</i> L. var. oleiformis Pers.	Fodder Radish	Radis oléifère, Radis chinois	Oelrettich	3	1
<i>Raphanus sativus</i> L. var. sativus	Radish	Radis de tous les mois	Radieschen	5	1
<i>Rhipsalidopsis</i> Britt. et Rose	Easter Cactus	Cactus de Pâques	Osterkaktus	4	1
<i>Rhododendron</i> L.	Rhododendron, Azalea	Rhododendron, Azalée	Rhododendron, Azalee	4	d
<i>Ribes</i> L.	Currants, Goose- berry, except ornamental varieties	Cassis, Groseil- liers, sauf variétés orne- mentales	Johannisbeere, Stachelbeere, ausser Ziersorten	5	1
<i>Rosa</i> L.	Rose	Rosier	Rose	2	1

a Dwarf French Bean / Haricot nain / Buschbohne: 4; Climbing French Bean / Haricot à rames / Stangenbohne: 5.

b See footnote a, page 4 / Voir note a, page 4 / Siehe Fussnote a, Seite 4.

c Field Pea / Pois fourrager / Futtererbse: 3; Garden Pea / Petit pois / Erbse ausser Futtererbse: 4.

d Pot azaleas / Azalées en pots / Topfazalee: 1; Rhododendron, except pot azaleas / Rhododendron, sauf azalées en pots / Rhododendron ausser Topfazalee: 3.

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>	<u>A</u>	<u>B</u>
Rubus L.	Bramble, Rasp- berry, except ornamental varieties	Ronce, Fram- boisier, sauf variétés ornementales	Brombeere, Himbeere, ausser Ziersorten	5	1
Saintpaulia H. Wendl.	Saintpaulia	Saintpaulia	Usambaraveilchen	4	1
Salix L.	Willow	Saule	Weide	a	3
Schlumbergera Lem.	Christmas Cactus	Cactus de Noël	Weihnachtskaktus	4	1
Scorzonera hispanica L.	Black Salsify	Scorsonère, Salsifis noir	Schwarzwurzel	5	1
Secale cereale L.	Rye	Seigle	Roggen	1	1
Setaria italica (L.) P. Beauv.	Foxtail Millet, Italian Millet	Millet d'Italie, Millet des oiseaux	Kolbenhirse	4	1
Sinapis alba L.	White Mustard	Moutarde blanche	Weisser Senf	3	1
Solanum tuberosum L.	Potato	Pomme de terre	Kartoffel	1	2
Sorghum dochna (Forsk.) Snowden	Sweet Sorghum, Broom Corn	Sorgho sucré, Sorgho à balai	Besenhirse, Zuckerhirse	4	1
Spathiphyllum Schott	Spathiphyllum	Spathiphyllum	Spathiphyllum	4	1
Spinacia oleracea L.	Spinach	Epinard	Spinat	5	1
Streptocarpus Lindl.	Streptocarpus	Streptocarpus	Streptocarpus	4	1
Thuja L.	Thuja	Thuja	Lebensbaum	5	3
Trifolium alexandrinum L.	Berseem Clover	Trèfle d'Alexandrie	Alexandrin Klee	3	1
Trifolium hybridum L.	Alsike Clover	Trèfle hybride	Schwedenklee	3	1
Trifolium incarnatum L.	Crimson Clover	Trèfle incarnat	Inkarnatklee	4	1
Trifolium pratense L.	Red Clover	Trèfle violet	Rotklee	3	1
Trifolium repens L.	White Clover	Trèfle blanc	Weissklee	3	1
Trifolium resupinatum L.	Persian Clover	Trèfle de Perse	Persischer Klee	3	1
Trifolium subterraneum L.	Subterranean Clover	Trèfle souterrain	Bodenfrüchtiger Klee	4	1
Trisetum flavescens (L.) P. Beauv.	Golden Oatgrass	Avoine jaunâtre	Goldhafer	4	1
X Triticosecale Wittm.	Triticale	Triticale	Triticale	1	1
Triticum aestivum L. emend. Fiori et Paol.	Wheat, Soft Wheat, Bread Wheat	Elé tendre, Froment	Weichweizen	1	1
Triticum durum Desf.	Durum Wheat, Macaroni Wheat, Hard Wheat	Blé dur	Hartweizen	3	1
Triticum spelta L.	Spelt	Epeautre	Spelz	4	1
Ulmus L.	Elm	Orme	Ulme	a	3

a See footnote a, page 4 / Voir note a, page 4 / Siehe Fussnote a, Seite 4.

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>	<u>A</u>	<u>B</u>
Vaccinium-Corymbosum-Hybriden	Blueberry	Myrtille	Kulturheidelbeere	5	1
Vaccinium vitis-idaea L.	Cowberry, Mountain Cranberry	Airelle rouge	Preiselbeere	5	1
Valerianella locusta (L.) Laterr.	Cornsalad, Lamb's Lettuce	Mâche, Doucette	Feldsalat	5	1
Vicia articulata Hornem.	One-flowered Vetch	Vesce	Wicklinse	4	1
Vicia faba L.	Field Bean, Tick Bean, Broad Bean, Horse Bean	Féverole, Fève	Ackerbohne, Dicke Bohne	a	1
Vicia pannonica Crantz	Hungarian Vetch	Vesce de Pannonie	Pannonische Wicke	4	1
Vicia sativa L.	Common Vetch	Vesce commune	Saatwicke	3	1
Vicia sepium L.	Bush Vetch, Hedge Vetch	Vesce des haies	Zaunwicke	4	1
Vicia villosa Roth	Hairy Vetch	Vesce velue	Zottelwicke	4	1
Vitis L.	Vine, except ornamental varieties	Vigne, sauf variétés ornementales	Rebe, ausser Ziersorten	4	3
Vriesea splendens (Brongn.) Lem.	Vriesea	Vriesea	Vriesea	4	1
Zea mays L.	Maize	Maïs	Mais	1	1

- a Field Bean / Féverole / Ackerbohne: 3; Broad Bean / Fève / Dicke Bohne: 4.
- b Perl Maize, Sugar Maize, Ornamental Maize / Maïs perlé, maïs sucré, maïs ornamental / Perlmais, Zuckermals, Ziermais: 4; Other / Autre / Sonst: 1

NEWSLETTER
OBITUARY

Heribert Mast †

The very close cooperation between UPOV and the World Intellectual Property Organization and the fact that the headquarters of both organizations are under the same roof in Geneva were the reasons for which the Secretary-General of UPOV, Dr. Arpad Bogisch, pronounced a eulogy of the lamented Heribert Mast, shortly after his untimely death, to the staff of both UPOV and WIPO. It is in order to recall his memory that Dr. Bogisch's words are published hereafter.

Our dear colleague, Vice Secretary-General, Heribert Mast, is no longer.

He was operated on in June and died on August 15, 1986, in his home, surrounded by his wife and four children.

I saw him for the last time a few days before the end. He was perfectly lucid, and not a word of complaint passed his lips, although his physical condition showed that his forces could not last much longer. But he kept his composure perfectly and suffered as a real stoic.

His passing away fills me and, I am sure, fills all of us, with the deepest sorrow. He was a thoroughly lovable human being. And his passing away is an enormous loss for UPOV. He was an exemplary servant and promoter of the cause for which the International Union for the Protection of New Varieties of Plants was founded and continues to exist.

He was born in Bochum, in Germany, on October 28, 1925. He studied law in Germany, the United States of America and The Hague, and obtained his doctor's degree at the University of Freiburg. He was in government service, mainly in the Ministry of Justice of the Federal Republic of Germany, until he became, on March 1, 1974, Vice Secretary-General of UPOV.

During his service in Bonn, he represented the Federal Republic of Germany in many international meetings. I myself met him for the first time in a preparatory committee of the European patent system. He was an excellent delegate, defending and promoting the policy of his Government with skill, courtesy and tenacity and with a profound knowledge of the subject matter. He was always meticulously prepared for the discussions of each meeting. And he did all this with equal ease in German, French and English.

When the post of Vice Secretary-General became vacant, it was obvious to me, on the basis of what I had seen from his performance as a German delegate, that he would be the ideal man for Vice Secretary-General. And he was appointed to that post exactly three months after I became Director General of WIPO and Secretary-General of UPOV.

During his mandate as Vice Secretary-General, which lasted 12 and a half years, he did all and more than could be expected in that important position. He completely identified himself with UPOV and put his brilliant intelligence, solid legal background and exemplary assiduity at work entirely at the disposal of UPOV, at the disposal of international cooperation in the field of the protection of the rights of those who create new plant varieties and thereby constantly improve the food situation or, as far as flowers and other ornamental plants are concerned, thereby beautify the surroundings in which we live.

The professional erudition of Heribert Mast was exceptional. He was one of the most outstanding, if not the most outstanding, specialists in that field of law. His erudition played a particularly important role when, in 1978, the UPOV Convention was revised since he was also a skillful diplomat, a forger of compromises where the views of the member States differed.

Heribert Mast saw the number of the member States of UPOV grow by 200% during his tenure. He employed all his powers of persuasion and negotiation to bring about this spectacular result.

His merits were recognized by the member States, who, on my proposal, in 1982, elevated the rank of the UPOV Vice Secretary-General to the same level as that of an Assistant Secretary-General in the United Nations or Deputy Director General in WIPO.

The human qualities of Heribert Mast were as excellent as his professional qualities. His relations with his staff were characterized by fairness and understanding. He solved the problems which arose from time to time thanks to that fairness and patience.

His humor delighted us all. It was a sign of his sense of proportion and of the warmth of his heart.

* * * * *

We shall all miss Heribert Mast. He was a warm human being, a fair superior, an efficient public servant. It is a real tragedy that he left us when, normally, he should have directed the Office of UPOV for several years more. It is equally a tragedy for his wife and his children. Our thoughts today are with Mrs. Doris Mast and with Stephan, Christoph, Isabel and Verena Mast, as well as with Heribert Mast, whom we shall never forget.

Arpad Bogsch

GENERAL STUDIES

The Relationship Between Plant Variety Protection and Patent Protection in the Light of Developments in Biotechnology

Heribert Mast

Heribert Mast spent a considerable amount of time during the spring of 1986 preparing a lecture that was to be given in Hamelin (Federal Republic of Germany) on May 14, 1986, to the General Assembly of the Bundesverband Deutscher Pflanzenzüchter (Federal Association of German Plant Breeders). Like each of the tasks which he performed, he took the lecture as a challenge. But it was a challenge of a much greater dimension than usual in view of the continuing debate surrounding first achievements of--and the many more expectations from--techniques for which the terms "biotechnology" and "genetic engineering" had been coined.

Heribert Mast therefore invested his vast knowledge and experience in legislative practice and intellectual property, and also in the technical background to the issue, into what was to become an essential contribution to the debate and the foundation for a possible new design of the legal systems for the protection of intellectual property in the field of breeding at large. But fate left him with no time to complete the writing-up of his lecture. Instead, fate made the lecture his last will and testament to the field of intellectual property.

The lecture has been published in German under the title "Sortenschutz/ Patentschutz und Biotechnologie" by the Carl Heymanns Verlag KG as No. 30 in the Schriften zum Wirtschafts-, Handels-, Industrierecht (essays on economic, commercial and industrial law) collection.

It was introduced by a preface from Dr. Ignaz Kiechle, Federal Minister for Food, Agriculture and Forestry. The preface reads as follows :

"Valuable food and raw materials suitable for industrial processing may only be gained from plants that have been made available by plant breeders in the form of particular varieties adapted to their intended use. Plant breeders thus create the basis for various production and utilization chains. Their work deserves particular attention from the agricultural policy viewpoint.

"An important instrument for the promotion of plant breeding activities was the introduction, in 1953, of plant variety protection law. Plant breeders have understood since how to use this incentive effectively. The almost 1000 applications for protection filed yearly with the Federal Office of Plant Varieties testify to that. But the system of plant variety protection, that has been separated in full knowledge of the facts from patent law and specially adapted to the biological subject matter "plant variety," has also been beneficial to producers and users.

"Today, the biotechnological and genetic engineering processes, including the possibility of transferring genes in some plant species, constitute a new challenge for plant breeding research and industry. The question of patent protection, in particular for breeding processes, and product protection for new plant varieties in the form of plant breeders' rights is actively debated at present at the national and international level in the light of scientific developments. In that debate over the most suitable form of protection and its substance, the agricultural policy-maker must ensure that the balance between the wishes of the applicants for protection and public interest remains unaffected.

"Through its comprehensive presentation of both systems--patent protection and plant variety protection--the following publication is particularly suited to improving the understanding of this quite complex biological-legal subject."

I have been asked to give a lecture on the present and the probable future interplay between patent protection and plant variety protection and on the possible shift of emphasis between these two types of protection provoked by the results of research into genetic engineering. It is with great pleasure that I have accepted, since it is a matter that will be of absolutely vital importance to both UPOV and the plant breeding industry in a future that could be very near. It is likewise an area of great personal interest to me that has accompanied me over long stretches of my professional life, during my previous activities as a patent law specialist with the Federal Ministry of Justice, in the negotiations leading up to the European Patent Convention and, finally, in my work with UPOV. The demarcation between patent law and plant variety protection law is laid down quite clearly in the European Patent Convention and in those domestic patent laws that are patterned on it, in the form that is now generally applicable, and therefore runs like a thread through the whole of my professional past in two different specialized areas.

However, before I go further and perhaps irritate you with references and terms with which you are not necessarily familiar, for example that of European patent law, I would first like to explain what is in fact fundamentally involved. I have been told that I should begin at the beginning and describe the basic principles of the patent system and of the plant variety protection system. Those of you that are already familiar with this problem and its background run the risk of being bored over the next half an hour and I therefore beg your comprehension and forgiving.

Plant variety protection clearly derives from patent law, at least as far as the legal aspect is concerned. Patent law itself can be traced back for some centuries. Historically, patents constitute a privilege (litterae patentes), that is to say a favor shown by the sovereign, which, when conferred in respect of inventions, permitted the recipient to exercise certain commercial activities alone, to the exclusion of any competition. Venice is often cited as the birthplace of the patent and of the first patent legislation (1474) and reference is also frequently made to the somewhat more recent English Statute of Monopolies of 1623/24. As time went on, not only in Venice and in England, but also elsewhere, the idea gained favor that such an exclusive right should be conferred not merely on someone enjoying the prince's favors, but on those persons who could prove to have enriched society with new, industrially applicable knowledge, or, as German patent law theorists would today say, on the inventors of a new teaching for a technical act. Indeed, this is the concept on which today's system of patents for invention is based.

Although it is not my intention to give you a historical lecture, it is nevertheless interesting to know that the concept of protection for inventions by means of patents found its place in the Constitution of the United States of America, thus drawing considerable attention, in which it is stated that the purpose of granting patents is "to Promote the Progress of Science and useful Arts." In the USA, therefore, patents constitute a long-standing institution, as old as the independence of the country and of its democratic Constitution. A further system of patent law of considerable age, and which today continues to be integrated in the historical development of the country, is that of France (1789 or 1791), whereas, in the German-speaking countries, the medieval bases that derived from the corporations withered away during the Thirty Years' War and, subsequently, in the last century, the patents that were issued by the territorial States of the time fell victim to the freedom of trade that was introduced with the creation of the German Zollverein, a fact practically forgotten today, but which almost repeated itself in the EEC. Patent law did not become a reality in Germany again until, or to be more precise, a few years after the founding of the Empire in 1871. The Imperial Constitution of April 16, 1871, afforded legislative power in respect of "patents for invention" to the Empire. Following lengthy argument between the advocates of patent law and the supporters of unrestricted free trade, the first Imperial Patent Law was promulgated on May 25, 1877, which makes it, therefore, almost a quarter of a century older than the German Civil Code. The Imperial Patent Office became one of the high Imperial authorities in Berlin. The building that was put up in 1904 still stands today and accommodates the Berlin Annex of the German Patent Office, itself transferred to Munich, and a sub-office of the European Patent Office. Thus, in all those countries I have mentioned, patent law is closely bound up with contemporary national history and, as a result, possesses the aura of an institution anchored in tradition.

What are in fact patent rights? A patent affords an exclusive right giving the patentee alone, that is to say the inventor or his successor in title, authority to commercially use, that is to say to work, the subject matter of the patent. Patents are granted for new inventions, whereby "new" is taken to mean something that on the application date (or the date of a foreign application which may be up to one year earlier, known as the priority date) does not form part of the state of the art. The state of the art is held to be everything disclosed to the public by means of written or oral description, by use or in any other way. Until a few years ago, that is to say until harmonization with the European patent law established in 1973, the state of the art was limited to printed publications over the last 100 years together with obvious prior uses that had taken place within the territorial scope of German patent law. An invention must also involve an inventive step or, to use the term previously employed in Germany, inventive level. The Americans, in such cases, say that an invention may not be obvious. What is meant is that it should not be possible for a person with ordinary skill in the art to make the same invention with no particular effort. What is to be rewarded is thus a special creative effort that is not perfectly obvious to every specialist. In addition, the invention has to be complete. It must be possible for anyone skilled in the art to carry out the invention on the basis of the inventor's instructions. It is not necessary, however, for the invention to be already marketable, but solely that it should have progressed beyond the experimental stage. This is related to the requirement that an invention must be industrially applicable and technically usable. Such exclusive rights are only to be granted to those who have invented something that can be immediately implemented for the benefit of the consumer. If a monopoly were to be awarded for preliminary steps along the way to a commercially applicable invention, for instance a scientific discovery, the monopoly could well prevent the practical utilization of the discovery instead of promoting it. An earlier requirement was also that of progress, which has now quite rightly been abandoned or in any case no longer constitutes a special prerequisite.

Anyone wishing to obtain a patent must file his invention with the corresponding national patent office, that is to say the German Patent Office in the case of the Federal Republic. In so doing, the inventor must disclose his invention in such a way for it to be carried out by a person skilled in the art--that is to say in a sufficiently precise and complete way. However, there exist in various countries what are known as registration offices that issue a patent for every invention that is filed and leave it to competitors to oppose the grant of a patent for non-patentable inventions in the courts. Such registration offices sometimes accompany their patents with the formula "without guarantee by the Government." In Germany, on the other hand, the Patent Office is what is known as an examining office. It verifies, ex officio, that the requirements of patentability are met, although only on special request to be filed within seven years of the date of application. This explains why the German Patent Office (its title is not the Federal Patent Office) is a major authority employing large numbers of highly qualified specialists, scientists and technologists, and also lawyers. The exclusive right granted by a patent office is territorially limited; it derives from national sovereignty and is therefore only valid on the territory of the State concerned. The scope of the protected matter is determined by what are known as the claims. Here again, there exist differences between the various countries. In Germany, the scope of protection, contrary to other countries, still does not depend slavishly on the wording of the claims. The matter of scope of protection, that is to say what is truly protected by a patent, how far its area of protection extends, is not decided by the patent office in the event of a dispute. Such decisions are taken by ordinary courts, although quite specific ones in the Federal Republic of Germany, to whom this business is allocated (the Patent Litigation Courts), whose territorial competence sometimes even extends across individual provincial boundaries. On the other hand, a special Federal Administrative Court has been created to hear appeals from decisions of the German Patent Office, that is to say the Federal Patent Court in Munich. The legal remedy against decisions of both the Patent Litigation Courts and the Federal Patent Court lies with the Federal Court of Justice.

Patents are granted in the main for two categories of inventions: inventions of new technical processes and inventions of products (also of semi-products). A third category of inventions frequently mentioned is that of new uses of known substances. This is simply a rough classification since there also exist further, less important categories. A process patent affords its owner the exclusive right to make commercial use of the process. However, both German and other legislators have extended the scope of protection under

a process patent since the poor inventor would otherwise go empty-handed. As a general rule, infringement of a process patent through imitation is only obvious from the product manufactured by means of that process. An infringer or imitator could easily use the dishonest argument that the product he was marketing was produced by another process, not covered by the patent. Protection under a process patent therefore extends, under German law and under a number of other legislations, to the product obtained directly by the process and, under German law, anyone who markets the product, but claims that it has been manufactured in a different way, must furnish proof. This reversal of the onus of proof under German patent law, which, as I have said, does not exist in all countries, protects the owner of a process patent against his rights being circumvented. However, the concept of "a product directly obtained by means of the patented process" is interpreted very restrictively by German courts.

Product or substance patents were not previously available under German law for all products. For instance, chemical and pharmaceutical products were excluded. It is only in recent decades that these limitations have been lifted. A product patent affords its owner the exclusive right to manufacture the product in any way whatsoever or to market or use in any other way a product manufactured in any way whatsoever if it complies with the patent description. As I have already said, however, the use of a process or a product that is already known for a new inventive purpose may constitute subject matter for protection. The product-by-process claim that originated in the USA differs from a true product patent in that it only covers the product if it is manufactured by means of the patented process. In our country, this legal construction is still extensively contested in many respects.

In the discussion on the patentability of plant varieties, a legal construction has reappeared from time to time that was developed when chemical and pharmaceutical substances as such were still excluded from patent protection, that is to say, for the Federal Republic of Germany, in the period up to 1967. I am referring to what are known as the chemical analogy processes. These were understood as new processes by means of which, in comparison to known processes, initial substances of analog composition were made to react with each other using the same methods-- or the same initial substances were made to react with each other using analog methods-- and, as was to be expected, new final products of analog composition were obtained. Such processes were held to be patentable in the Federal Republic of Germany where the final products thus obtained comprised new, unexpected and technically valuable properties. Although only the process is protected, as I have already explained, this automatically extended to the product directly obtained by that process. The patentability of such analogy processes was not undisputed, however. They were once even referred to as "the crippled child of patent law." They were nevertheless recognized by the prevailing doctrine. Now that chemical and pharmaceutical substances have become fully patentable, analogy process patents have lost their significance and, indeed, are probably not relevant at all. However, it is now proposed that this legal construction should be resuscitated for the protection of new plant varieties. However, even this could at best lead to process protection extended to the immediate product of the process. To transpose this legal construction from the area of chemistry would be far-fetched indeed. What are "initial substances of analog composition" in the case of plant breeding, what are "analog working methods" and when do new plant varieties have a "technically valuable and unexpected effect"? Nevertheless, the fact that this legal construction has been mentioned points to the efforts being made in the Federal Republic of Germany by patent law specialists and the industrial circles behind them in order to obtain patent protection in the area of plant breeding.

When granting patents for inventions in the field of animate nature, an important question that arises is whether the invention is reproducible. Something that has been accidentally developed by the inventor, and which he perhaps cannot repeat, is not able to obtain patent protection.

You have perhaps all heard in recent years of European patent law. Indeed, there exists in Munich a European Patent Office, established on the basis of a Convention signed in Munich in 1973 following lengthy preparation. Its membership goes beyond that of the EC States, but, on the other hand, does not yet include all of those EC States. This European Patent Office grants

patents that are valid not for an individual State, but for the States party to the Convention. However, the effect of such a patent in each State is only the same as the effect of a national patent granted in that State. The unified European patent that has been issued thus splits up at the time of grant into what has been picturesquely described as a bundle of national patents. A further Convention, signed in Luxembourg, which has not yet entered into force however, applies to the territory of the European Communities and automatically converts this bundle into a uniform patent, that is to say a patent that is identical for all of the States and that can lead no separate existence in each. It would be valid for the same period and could be annulled only for the whole territory of the Convention. However, as already mentioned, the Community Patent Convention which is to bring this about, thus constituting the keystone of European development, has not yet entered into force.

With the creation of European patent law, the domestic patent laws of the member States of the Convention, that continue to exist in parallel, have been adapted to the European model by means of legislative measures (that is to say, not automatically) in respect of their substantive law provisions, particularly as regards the requirements for patentability. As things currently stand in Germany, an invention can either lead to a German patent whose effect is limited to the Federal Republic of Germany or a European patent which, in the Federal Republic of Germany, also has only the effect of a German patent. The conditions of grant are the same in both cases as a result of the harmonization mentioned above; however, there is of course no guarantee that the two Offices will always take the same decision on individual legal questions.

Further important national patent offices are to be found within Europe, particularly in the United Kingdom, in Austria, in Sweden and in the Netherlands. All these national European offices are of course now suffering from a drop in the number of applications and, in the case of the smaller offices, this has reached a critical level that places a question mark on their continued existence in the future. That is of course the whole point of the European Patent Convention. Nevertheless, this state of affairs is not exactly welcomed by the national patent offices involved. Outside Europe, there also exist very important and very significant patent offices, such as those of the United States of America, which has a very long, recognized patent tradition, and of Japan and the Soviet Union.

The Patent Cooperation Treaty (PCT), concluded some years ago, represents a great success for WIPO, the World Intellectual Property Organization, UPOV's sister organization. It simply means that a unified patent application can be filed for a whole number of countries, that it is then centrally processed to a certain extent, but prior to grant is transferred to the national offices or to the European Patent Office. The outcome of the uniform application is in fact the grant of separate national patents or of a European patent, albeit on the basis of uniform preliminary procedure, for example an international search report or even an international preliminary examination.

Before leaving the field of patent law, I would like to say a few words on why patents are granted at all. In the old patent countries, society has become accustomed to this legal institution and there is practically no opposition to it, whereas in all those countries in which patent law was introduced or re-introduced at a late date, such as Germany or Switzerland, this led to bitter fighting between differing schools of economists. Although this belongs to the past, the question of the purpose and utility of patent law is now arising in the developing countries that have not yet introduced patent law or in which it has not yet taken deep roots.

Theoretically, it could perhaps be claimed that the concept of patent law is in fact in contradiction with our economic system. In all modern countries, development has moved towards the extensive removal of obstacles to trade. Beginning with the removal of road and bridge tolls--although these have cropped up again in the form of motorway tolls--through the freedom of trade and industry that has been extensively introduced, through the easing of cross-frontier movements, the removal of internal duties, the harmonization of duties and excise in Europe, in all fields we observe the endeavors made to enable goods to move freely within each country and also from one country to the other, the efforts made to remove both domestic and international obstacles to trade, to combat protectionism in the individual States and to ensure a free, unhampered flow of goods. Seen against this background, patent law at first appears as an antiquated restriction, a survival of the medieval economic

system. Moreover, imitation, that is so disapproved of under patent law, and indeed in the whole field of intellectual property, is altogether desirable in other walks of life where it constitutes the very basis for all development. A teacher is happy for his pupils to take up and apply the teaching he has given them and is unlikely to make its use conditional on a license. The point of these heretical observations I am making is simply to make it quite clear to you that there is in fact a need to provide grounds and justifications for patent rights and that it should never be forgotten when attempting to remove the remaining restrictions. Patent law experts who move only in specialized circles are not always fully aware of this problem. For them, every extension of patent law is naturally something to be welcomed, the next step along the path of evolution.

Indeed, there exist valid and incontrovertible reasons for patent law. The best proof of its usefulness is that an effective, strong national patent law always goes hand in hand with an effective, strong economy and that differences of opinion can only arise as to which is the cause and which the effect, whether a State possesses a strong economy because it possesses an effective patent law (surely an exaggeration) or whether a strong patent law is a necessary concomitant of a strong economy.

There exist a number of theoretical justifications for patent rights. The main one is that they provide an incentive for undertaking inventive activities, an incentive for the individual inventor to busy himself with new developments or, viewed at a higher level, an incentive for industry to carry out research and development and, in particular, to consent to the necessary investments. Occasionally, the purpose of patent law is viewed in a rather more limited way. It is seen as an incentive not to keep an invention secret, not to exploit it as a trade secret, leading to duplication of work by inventors and inventively active undertakings, but to disclose the invention to the public. If patents did not exist, inventors would indeed attempt to keep their inventions secret, but only at the cost of considerable efforts and also at considerable risk, since their competitors would not lie asleep. It would also be of disadvantage to society in general, since the progress of science and technology would be slowed down. Patent law not only affords to the inventors those same commercial advantages that could be secured, in the best of cases, by secrecy, but also provides society with early knowledge of the invention and thus represents a means of technology transfer. This latter aspect has assumed growing importance in recent years and considerable practical efforts are being undertaken to make available to the community in an optimum manner the knowledge stored in patent offices and in patent descriptions. Patent classification and documentation, and also patent information using the new technological possibilities, is indeed one of the main reasons for the present renaissance of patent law and also, in my view, a reason why even the State-trading countries set great store by patent law despite the fact that they have less interest in its competitive effect. The ease with which the description or even the drawings of inventions made in other parts of the world and for which a patent application has been filed can be called up on a screen is indeed fascinating, and developments are literally astonishing. Theoretically, such an information system for new technical developments would of course be conceivable without patent law, but it would not be practical. Indeed, there would be no patent offices with whom inventions could be filed and who would publish, collect, classify and process inventions.

The justification for patent rights that has given its name, in languages other than German, to the overall field and which is also to be found in the name of our sister organization WIPO, has taken somewhat of a back seat in the meantime. I am referring to the term "industrial" or "intellectual property." When patent law was introduced in the last century, a time at which the term property enjoyed a considerably better reputation than today, the essential argument put forward in the public debate was that inventors had to be entitled to exploit their own knowledge. They were afforded a natural right to their own inventive ideas, at least for a certain period of time. It was held to be the moral duty of the State to provide the inventor, whose knowledge helped mankind to progress, with protection against other less creative persons who would exploit his invention and skim off the economic cream. Although I feel it unlikely that the inventor's right in his intellectual effort is still regarded as a divine natural right, nevertheless the idea that inventors deserve protection remains an accepted principle of our legal system. For example, in the Federal Republic of Germany we recognize and fully respect the moral rights of salaried inventors in their inventions--beyond the simple right to be named as inventor in each published patent. The principle of reward is

not out of date and will continue to play a part in every re-moulding of patent law, as it indeed now does in the debate on the patentability of genetic engineering inventions. Even today, it is by no means the case that we consider the good elements of society should be rewarded only when it is also useful to the State and to the economy.

To return to the relationship between new plant varieties and patent law, you are probably all aware that in the past breeders have attempted to obtain patents for new varieties. As you probably also know, they did not succeed or any success they did have was of questionable value. In most cases, patent applications in respect of plant varieties as such, and also for specific breeding processes, were refused by the patent offices. In some countries, particularly in the United States of America, it was held that living matter was not patentable and, indeed, pure products of nature are still not patentable in that country. Finally, under German patent law, in an epoch-making decision by the Federal Court of Justice in what is known as the "Red Dove" case, breeding processes were generally held to be patentable, but with the proviso that the invention must be reproducible in accordance with the strict requirements of patent law. The German Federal Judge Hesse, who died prematurely last year, described the decision, in a widely acclaimed article, as a "Greek gift" since normal breeding processes would never in fact satisfy the requirement of reproducibility. Nevertheless, a number of patents for plant varieties and breeding processes were granted in the Federal Republic of Germany, but their legal validity has not as yet passed the test of a high court decision. Whether plant breeding or plant varieties are at all eligible for patent protection by their very nature is hotly disputed in the Federal Republic of Germany, particularly in legal writings. Even if they proved to be valid, there remains the question whether the scope of protection under such patents would correspond to the wishes of the patentee.

I personally am convinced, as may also be deduced from the article by Hesse, that the difference between a patent for invention in respect of an industrial invention in the field, for instance, of mechanical engineering, electrical engineering, chemistry or pharmaceuticals, and a title of protection for a plant variety is of a quite essential nature. The legal arguments, in my personal view, have never gone further than to concentrate on individual symptoms that simply express this basic difference. The difference becomes clear if one quite simply compares the intended effect of the two types of rights. Someone who has made a technical invention wishes to be protected against the working of his invention by others. The owner of a process patent wants others to be prevented from using that process for commercial purposes without his consent. The inventor who holds a product patent, for instance in respect of a chemical substance, wishes to ensure that no one can manufacture or import that same substance or--where it is manufactured by someone other than the patentee--that no one can market the substance. The situation in respect of plant breeding is quite different. No one would seriously consider re-developing a variety, that is to say repeating the complete development work undertaken by the breeder over a number of years or even decades. Instead of doing that, he would multiply the final result--that is to say plants of the final variety--and then try to market those plants. Thus, the need for protection begins in the case of a plant variety exactly at that point at which, in the case of a technical invention, it ends, if I may be a little imprecise for once. This, to me, would seem the true reason for which patents are unsuited to plant varieties, why patent offices have hesitated to grant patents and also why, in cases where patents have been granted, the patentees have hesitated for their part to assert them or have been disappointed when they have tried to do so.

Years of effort on the part of the plant breeders to obtain patent protection finally wound up at a dead end, from which a way out was found at a Diplomatic Conference held in Paris in the years 1957 to 1961. The Conference negotiated a Convention, that is to say the UPOV Convention, that establishes a sui generis type of protection, known as plant breeders' rights. The Convention introduces sui generis provisions that are better suited to the subject matter to be protected than were the traditional requirements of patentability. As you know, these conditions are basically distinctness, homogeneity and stability, together with a certain type of novelty that differs from that required under patent law, and the need to register a variety denomination. The Convention makes these conditions binding for all the contracting States. It also regulates the nullity and forfeiture of the granted rights in its own

way. The scope of protection is the most important example of the difference with patent law. However, the Convention does not simply refuse patents. It even permits States to grant the newly introduced protection in either the form of plant breeders' rights or patents. However, such a patent must meet the requirements of the Convention, that is to say that it simply bears the name of a patent, but its nature is that of plant breeders' rights.

Permit me to dwell a little longer on the difference in the scope of protection, since it is of importance for the ongoing debate. Under patent law, every commercial utilization of the subject matter of an invention is covered by the protection. However, patent law contains what is known as the principle of exhaustion of the rights deriving from a patent, which I may briefly sketch here: once the patentee has put the patented object on the market, that object then becomes free, that is to say that the patentee cannot assert his patent for a further utilization of the subject matter. This applies equally to all types of utilization. To give an illustration: if the patentee permits a manufacturer to fabricate the patented product, that manufacturer can market the products manufactured under the license without any patent restriction.

Plant variety protection, on the other hand, determine the scope of protection basically as follows: each contracting State must grant the following protection at least: it must provide that alone the holder of the right, that is to say the plant breeder or his successor in title, be authorized to produce propagating material of the variety, that is to say seed or other vegetative propagating material, for purposes of commercial marketing as such--that is to say as propagating material--or to market it as propagating material, whereby marketing also covers offering for sale. In the case of ornamental plants, this minimum protection extends somewhat further, but I will leave this aside for the moment in order not to spoil the train of thought. What is not covered by minimum protection is material at the consumer stage or at the stage of production for consumption. Let us take the example of a farmer who acquires seed of a protected variety quite lawfully on the market and plants his fields with it. The harvest material thus produced can be freely sold as consumption material. The situation would indeed be quite the same under patent law. However, he is able to keep back a part of the harvest for himself and sow it on his own fields in the following year and subsequently, one year later, sell it as harvest material. In such case, he makes use of the harvest material produced in the first year as propagating material, however, not for marketing as such but for the production of harvest material on his own fields. This type of marketing is not covered by plant variety protection. The term used in the debate on this particularity is "farmers' exemption." On the other hand, plant variety protection unequivocally prohibits the production of propagating material--of seed--for marketing as propagating material even where this has been produced with lawfully acquired seed. Under the laws of some countries, however, farmers are permitted to pass on seed they have held back to neighboring farmers, although this theoretically contradicts the concept of variety protection. This unorthodox type of marketing, "over the fence," has become known to us in the debate as "farmers' privilege."

A further particularity of the scope of protection under plant breeders' rights is that the UPOV Convention explicitly stipulates that a protected variety may be freely used for further development. Someone takes seed of a protected variety and improves it in such a way that the result amounts to the creation of a new variety. For instance, a protected variety may be sensitive to frost. Someone crosses it with a frost-resistant variety. The outcome is a new variety that comprises all the advantages and features of the first variety but, in addition, is resistant to frost. He may then market that new variety and may even obtain protection for it without having to ask the first breeder for his authorization or having to pay a license fee to him for its marketing. This would probably be quite a different case under patent law. In the case of patents, when a second patent is granted, it is said that this second patent is dependent on the first one. If patents existed for varieties, the second variety could therefore be protected, but its commercial use by the second breeder would be dependent on authorization from the first breeder (under many patent laws) or the second breeder would have at least to pay a license fee. This particularity of plant breeders' rights has been termed in the debate as the "research exemption."

The UPOV Convention further lays down that any State may go beyond the minimum extent of protection in its own legislation. This is aimed in particular at ornamental plants and cut flowers. A State may specify in its own law

that the protection of a variety also extends to cut flowers produced by means of that variety. A number of countries have availed themselves of this possibility, but the Federal Republic of Germany is not yet one of them. This right to extend the scope of protection to the final product does not, however, upset what is known as the research exemption. This exemption cannot be removed by the national lawmaker.

In this matter, patent laws are extensively silent. What would happen under patent law, if it were applicable to plant varieties, would have to be deduced from the case law of each individual country. It is possible that the farmers' right to hold back seed could exist under some patent laws on the basis of the theory of exhaustion, but this would then also apply to the marketing as seed of the seed that had been held back. The use of a protected variety for further development would also probably remain free, but not the commercial exploitation of the further developed variety. The final product would surely fall within the scope of protection on condition that it be set out in the patent claims. In some countries, the legislation excludes the right of prohibition in the case of dependent patents. In each of these cases, however, we would have to rely on the expectations and interpretations of national case law.

It thus becomes obvious that plant breeders' rights are specifically adapted to the protected matter and that considerable differences exist between them and patent law. At least the legal consequences are clearly set out, that is to say already in the international Convention.

The authors of the UPOV Convention held that it should not be possible to obtain for a plant variety of the same botanical genus or species both a patent, where varieties have been declared to be patentable, and plant breeders' rights at the same time. Neither cumulatively, that is to say affording a plant breeder both types of rights, nor alternatively, i.e. giving him the choice of applying either for one type of right or the other. It is for the national lawmaker to decide whether, for the same botanical genus or species, protection is to be provided by means of a patent or by means of plant breeders' rights. This even applies in the relationship between the specially adapted plant patent and plant breeders' rights. This is laid down in Article 2 of the UPOV Convention. This is followed up by a basic provision in the 1973 European Patent Convention, that is to say the famous Article 53(b). The European Patent Convention made this choice, this legislative decision, that was already provided for by Article 2 of the UPOV Convention, in that it stipulates that industrial patents cannot be granted for plant varieties. In so doing, it makes room for the granting of special plant variety rights. But it makes also the same stipulation in respect of animal varieties although as yet no arrangements for animal breeding similar to the UPOV system exist, meaning, in fact, that a legal vacuum remains. That Article of the European Patent Convention further excludes essentially biological processes for the breeding of plants. One of the reasons for this is to prevent normal biological propagating methods from becoming patentable. However, the primary aspect of this prohibition lies in the fact that under German law and various other laws, a process patent would also extend to the direct product of the process and could thus also cover a plant population. That would mean that the population could enjoy two-fold protection. Protection remains available, on the other hand, for technical processes for the breeding of plants (and animals) and for processes for the breeding of plants (and animals) that are not essentially biological.

Article 53(b) of the European Patent Convention contains an exception to this exception constituted by microbiological processes and their products. These are not excluded from patent protection and are therefore patentable where they meet the national requirements for patentability.

The German Patent Law basically adopts this same approach although, just as the French law and, more recently, the Spanish patent law, it does so in a special way. It excludes plant varieties and essentially biological processes only where plant breeders' rights can be granted for a specific genus or species. Where this is not the case, the applicant is to be left his possibility of trying his luck at the Patent Office to see whether he can obtain a patent for the variety he has bred of an as yet unprotected botanical genus or species and also whether he is able to work with such a patent. The laws of the remaining UPOV Member States, with the exception of that of the United States of America, are more radical and simply exclude plant varieties and the processes referred to from patent protection.

I would now like to explain to you the situation as it exists in the United States of America.

Whether we like it or not, the United States enjoys a rather special position within UPOV as a result of the history of protection for plant breeders' rights in that country. The United States has the undeniable merit of having introduced special protection for plant varieties at a very early date, before the rest of the UPOV Member States, that is to say protection for vegetatively propagated plants. This type of protection has existed since 1930 on the basis of a separate Law, subsequently integrated in a formal manner into American patent law. Plant patents are granted for asexually reproduced plants, subject to somewhat reduced requirements. It is noteworthy that plants propagated by means of tubers, such as potatoes and topinambours, are excluded. Exclusion of this group of plants is particularly interesting since it demonstrates the intention not to include in protection those plants that are important for feeding the nation. The statement of grounds to the Law in fact claimed that protection of such plants was unsuitable because the propagating material and the consumption material were identical in that case. Thus, a system of protection was set up basically for ornamental plants and a number of fruit species, but not for the main crop species that were of greater importance for the economy. The restriction to vegetatively propagated species can also be explained by the fact that reproducibility is far more likely in the case of vegetatively propagated plants than in the case of sexually propagated plants. If I am speaking in this context of the protection of vegetatively or sexually reproduced plants, it is simply that this is the usual terminology. However, a closer look at the American patent law will show that it concerns the protection of the asexual reproduction of a new plant variety. A further exception also exists for plants that are found in an uncultivated state. Contrary to general patent law, discoveries are also included. It is the plant itself that is claimed.

In 1970, perhaps not altogether unrelated to developments in Europe, a Bill was passed in the United States of America giving a type of protection to sexually propagated plants, more or less comparable with German plant variety protection; it was almost certainly the intention to create protection of the kind that had become recognized throughout a part of Europe. Initially, the Law excluded a number of vegetable species, that is to say all those species which the politically influential firm of Campbells, that was opposed to plant variety protection at that time, needed for manufacturing its preserves. The exclusion made it possible to persuade this difficult opponent to withdraw his opposition to the introduction of protection. Some years ago, following a change of opinion within Campbells, this exclusion was removed. Currently, the only exclusions from protection are for bacteria, fungi and F₁ hybrids.

The fact that these two systems of protection existed in parallel was long held to be an obstacle to accession to UPOV since, of course, the above-mentioned division could mean, in exceptional cases, that for varieties of the same species protection could be afforded under both the one system and the other, that is to say for those species in which both sexual and asexual propagation is possible. The conflict with the provision of the UPOV Convention stating that only a patent or only plant breeders' rights may be granted for one and the same botanical genus or species was therefore more of a formal than a practical nature. It was felt, however, within UPOV, that this possible overlapping in the United States could be accepted. When the UPOV Convention was revised in 1978, with the main purpose of enabling the United States of America to take up membership in UPOV, Article 37 of the Convention was therefore formulated to permit those States that had hitherto provided protection in two forms to enter a reservation, that is to say to maintain their right to continue providing protection for the same species in two forms, of which the United States of America availed itself on acceding to the Convention. The Americans therefore reserved their right to protect varieties of the same genus or species under both the forms of protection referred to in Article 2 of the UPOV Convention, that is to say by means of a patent or by means of plant breeders' rights. Obviously, alone the two already existing forms of protection, plant patents and plant variety protection, had been entertained.

Recently, however, American Government quarters have begun to advocate the point of view that any type of patent, that is to say general patents in addition to plant patents and plant breeders' rights, can be granted in the United States of America, at the choice of the applicant. Quite a lot can be said against this interpretation. Nevertheless, it has been legitimized by the legal situation created by an internal Patent Office appeals tribunal in

its decision in what is known as the Hibberd case. This tribunal, or to give its full title, the Board of Patent Appeals and Interferences of the United States Patent and Trademark Office, held on August 9, 1985, that the American legislator, when introducing the plant patent in 1930 and when introducing plant variety protection in 1970, had not intended to limit the possibilities open to an applicant, but had simply wished to open up additional possibilities to that applicant. Thus, general patent protection is also available for plants. The US Patent and Trademark Office is bound by this decision. The disturbing aspect of this decision for us is that the Board states that its decision is in conflict with the UPOV Convention, but that the fact is of no consequence since the UPOV Convention is binding on the Government and not on the American courts. It is indeed true that before depositing its statement of accession to the UPOV Convention, the United States did not obtain the consent of the legislative bodies. The American Government believed at that time that domestic American law--of course after entering the above-mentioned reservation--complied altogether with the UPOV Convention. On the point of law involved in the Hibberd case, it had believed that normal patents could never be granted for plants since the requirements could not be met. If the views of the Board were to be correct, that is to say that American law as interpreted by the Board does not comply with the UPOV Convention, the American Government would be required under international law (after exhausting its domestic legal remedies) to bring its national law into compliance with the UPOV Convention by means of an amendment or to denounce the UPOV Convention. However, American Government quarters would seem, as mentioned above, to be of the opinion that they are not faced with this alternative, since that which is now held lawful in the United States of America is covered by the reservation entered by the United States on the basis of Article 37 of the UPOV Convention. We have, of course, every reason to welcome this view, that is legally arguable at least, since I doubt whether the American Government could table such a legislative amendment and even less so whether it could have it adopted. At best, a change could be brought about by the decision of a higher court if the question were to be submitted to it. However, this could only happen if the holder of a general patent in respect of a plant variety asserted his patent against an infringer and the infringer went to court. It would therefore seem, in practice, that we would have to learn to live with the Hibberd decision, at least for the foreseeable future.

The United States of America were further permitted, during the preliminary negotiations for the 1978 Revision Conference and at the Conference itself, to deviate from the practice of the other UPOV States in the examining of plant varieties. It was made clear by the UPOV Council that the Convention permitted plant breeders' rights to be granted only subsequent to an examination and that this examination had to deal with plant material, that is to say not just paperwork, but that the examination could be carried out by the breeder himself under the responsibility of the authorities.

Although a member of UPOV, the United States of America therefore departs from the usual UPOV system. As a result of the reservation entered by the United States, it enjoys a certain amount of freedom of action that the other UPOV member States do not have. One may therefore deduce that the United States of America do not constitute a model for the other UPOV member States. Indeed, the situation in the United States differs considerably from that in the European UPOV member States. I have recently read the proofs of a forthcoming publication by an American economist in which he expresses his view that patent law is preferable to plant breeders' rights for the reason that a variety is more intensively examined under patent law. That may be the case in the United States, but in Europe I consider the very opposite to be true.

Following the approach of the Hibberd decision, the Swiss Federal Office of Intellectual Property in Berne, that is to say the Swiss Patent Office, has surprisingly rushed ahead to amend its implementing rules on Article 1(a) of the Swiss Patent Law with an express reference to developments in biotechnology, and in fact has done so in quite clear opposition to the wording of the message addressed by the Federal Council in Berne--that is to say the Swiss Government--to the Swiss Parliament in connection with the recent revision of the Swiss Patent Law. The greater part of these changes refer to microorganisms, which do not fall within the ambit of UPOV and which the Swiss Federal Office considers as neither plants nor animals, but as a separate category. Patent claims in respect of microorganisms as such are permissible and compliance with certain patent law requirements, such as sufficient disclosure and reproducibility, are deemed to be replaced in part by deposit. The amended

provisions still stipulate that new plant varieties are not eligible for patent protection. However, this exclusion is to be given a narrow interpretation for the very reason that it constitutes an exception. What are to be permissible in future are therefore "product claims relating to whole plants or their propagating material (seeds, tubers, cuttings, etc.), but in which no variety is specified, i.e. claims containing only characters that are valid for several varieties (for example, a whole genus)." In so doing, the term "variety" is to be interpreted in the same way as in the Plant Variety Protection Law, that is to say by reference to the criteria of homogeneity, stability and distinctness from other plant varieties. Product claims will also be accepted in respect of other botanical material, particularly components that cannot be regenerated into whole plants, such as cell lines, modified cells, genes, plasmids and the like. In practice, this therefore means, as in the Hibberd decision, that a whole plant species or a whole plant genus will be eligible for patent protection, on condition that the plants contain a specific inventive feature. This approach, excluding varieties, but not whole genera and species from patent protection, would not seem very logical to me. At a recent meeting, I drew a telling comparison, although like all comparisons it may limp a little. Assuming that a law or an ordinance were to temporarily prohibit the importing into Switzerland of pigs of certain other countries on the grounds that foot-and-mouth disease had broken out in those countries, no one would be able to get around that prohibition by claiming that it was not pigs that were being brought over the border, but vertebrates; that the fact that some of them were pigs was pure coincidence. And indeed, the prohibition against the import of pigs from certain areas in such a situation constituted an exception and was therefore to be restrictively interpreted. What I am trying to say by means of this example is that when interpreting a statutory provision, its purpose and objective is far more important than the fact of it constituting the general law or the exception. Representatives of the Swiss Federal Office stated in a UPOV meeting that the intention of this liberalization had been to prepare the way for a court decision. However, the road to the courts would have been just as open if the Swiss Federal Office had refused certain patent applications and left it to the applicant to involve the courts.

Despite these attempts in the USA and in Switzerland to water down the exclusion from patentability, the current fact is that the fields of patent law and of plant variety protection law are clearly and unequivocally demarcated. Plant variety protection, and plant variety protection alone, is granted for plant varieties, and that also applies both in the USA and in Switzerland. It makes no difference with what means and on what basis the variety has been bred. Whether the initial material was a mutation discovered by a breeder, whether it represented a discovery or a mutation, whether freely available material was developed by means of selection or crossing to produce a variety, whether freely available varieties or the varieties of other breeders were utilized (this does not apply of course to parent lines used in the production of hybrid seed), whether use was made of material supplied by public breeding centers, whether national or international, plays absolutely no part. As soon as a variety satisfies the requirements of the UPOV Convention or, to be more precise, the requirements of the national statutory provisions based on the UPOV Convention, protection can be applied for and can also be granted. Where material belonging to others has been utilized during development, those parties cannot enter opposition nor can they demand the payment of a license fee. There is no such thing as dependency. All genetic material is available for breeding.

This applies, in any event, to varieties whose genera and species are protectable. In those cases where protection--plant variety protection--cannot yet be granted, there is nothing to prevent patent protection being obtained in the Federal Republic of Germany, France and Spain, except perhaps the patent law requirements for protection, but that would also lead to dependency.

As briefly mentioned, microorganisms are not excluded from protection in the UPOV Member States. It was the intention of the drafters of the European Patent Convention and of the national lawmakers who adapted domestic patent law to leave microorganisms to the field of patents. From a scientific point of view, this exclusion could perhaps appear unlogical. However, practical economic concerns were behind this decision. It was not wished to transfer a field primarily of interest to the pharmaceutical industry and perhaps a small number of other industries, to the authorities responsible for agriculture and their subordinate bodies. Should certain types of microorganisms, for instance algae, become important for feeding the population or for supplying it with

other basic substances, there would be nothing from the point of view of legal theory to prevent application of the UPOV Convention, that is to say of plant variety protection. Perhaps it would then be necessary in the Federal Republic of Germany for the patent law to be restricted. However, for the moment there would seem to be no obvious reason. Edible fungi, in respect of which there seems to be an incipient need for protection, constitute in my view plant varieties in the traditional meaning and not microorganisms. Their botanical classification should be of no consequence.

On the other hand, patent protection is unrestrictedly available to all inventions that are not explicitly excluded, that is to say anything that does not constitute the invention of a plant or animal variety or an essentially biological invention for the production of plants and animals. Inventions of important technical processes, of chemical substances, of laboratory equipment for agriculture and for the breeding industry, or new uses of known substances which the breeding industry uses in breeding plants, are of course patentable. Breeders who make use of such patented inventions require the consent of the patentee and must also pay the corresponding license fee. Where they buy such substances or equipment on the free market, they can of course use them unrestrictedly; the patentee's consent that is theoretically needed is considered to have been given in such a case by the fact that the products have been put on the market with his consent and that he has likewise obtained his remuneration.

Obviously, all fields of law contain their problems of demarcation and borderline cases. It would therefore be quite surprising if there were no such cases involved in the present demarcation between patent law and plant variety protection law. Surprisingly enough, there have so far been no reports of problems arising in practice. All those problems referred to in discussions are in fact theoretical or fictitious cases. I have not as yet learnt of a case in which intervention on the part of the legislator would be necessary. They are in fact all cases with which the authorities, and if necessary the courts, ought to be able to cope. So far, it would seem that as far as demarcation is concerned, all is still well with the world.

It is said, however, that the time will come soon, or is imminent, at which this demarcation will cease to be reasonable. This claim is made on the grounds of developments in biotechnology or, to be more precise, genetic engineering. The fact that genetic engineering is in the process of achieving significance for plant breeding and that it will be of very great importance in the future can hardly be denied. I do not intend to venture here into the difficult field of defining the term "genetic engineering" and even less to attempt to precisely demarcate that which is included in the expression and that which is not. When I use this term, I basically mean that new scientific knowledge in the field of biochemistry or cytology that enables interventions to be made in the laboratory in the cell nucleus of plants in order to change the genetic information. Those cases that are most frequently considered and must be taken into consideration have basically been known for years already. They have not only been reported at UPOV symposiums, one of which already lies five years in the past, but also in popular scientific literature if not in fact already in the daily press. I am thinking here, for instance, of the fusion of two protoplasts. The walls of the cells of two plants with differing characteristics are removed, the two cells that have been deprived of their walls (protoplasts) are left to fuse, the cell walls are reconstituted and a new plant is developed containing the genetic information of both plants. Another possibility is to "cut" a specific part, a gene, with the help of enzymes or in some other way out of the chromosome loop of the cell nucleus, and then to splice the gene by means of a vector or, in time, perhaps by other means, into the chromosome loop of the cell nucleus of a different plant, whereby genetic information is cut out at the same time from the cell nucleus of this second plant, although I have been told that this is not as yet feasible. A further possibility is to develop artificial genes--some consider this to be possible--which are then spliced into a plant protoplast. All of this, as we astonished laymen have been told, is already possible in the laboratory in the case of some plants and much is spoken of the laboratory plant, which is naturally not of any practical use, which forms tubers like a potato at its roots and bears tomatoes above ground. Tobacco and other Solanaceae in general are said to be particularly suited to experimentation of this kind. Since we believe in progress, we naturally assume, quite justifiably, I believe, that in time similar developments will become possible for other categories of

plants, that it will therefore become possible to control breeding in an improved and more reliable way and to create that have practical economic significance. We are thinking in particular of cases such as that of a valuable, but fragile plant variety into which resistance against certain diseases or pests would be inserted or plants which would be given the capability, known in the case of Leguminosae, of binding nitrogen and thus permitting the use of fertilizers to be reduced. Again, particularly effective resistance against artificial herbicides could be inserted into a plant with the result that very strong, highly toxic herbicides could be utilized on the farmer's field and thus destroy everything apart from the manipulated plant, that is to say the much hated weeds in particular, although it must be observed that this prospect does not please the ecologists at all.

Obviously, the plant breeders are no longer alone in these developments and other branches of industry are encroaching, to use a negative term, on their traditional area; and the chemical industry is assuming a significance of its own in the development of plant varieties, an industry which already shows great interest in this field.

These newcomers, in particular, are claiming that plant variety protection no longer satisfies the needs of these developments, whereas patents, that is to say the legal system that the breeders had unhappily to ascertain as completely unadapted even for the normal protection of new plant varieties and whose main features had been created for inanimate material and, moreover, has still been unable to regulate the field of microorganisms, that has been left to it, in an orderly way, is now suddenly to be looked upon as the more suitable form of legal protection. They demand that all restrictions on the patenting of plant varieties and breeding processes should be removed--both in the European Patent Convention and in the domestic laws based on it. Indeed, this demand has been made in a most hefty manner. The point of departure was constituted by a questionnaire sent out by the OECD in Paris. The questionnaire was filled in by biotechnical undertakings, basically chemical firms, and also by national Government authorities responsible for patent protection. I believe that in the Federal Republic of Germany that demand was not taken up by the Government authorities when replying to the questionnaire. The OECD nevertheless pursued the demands made by industry, convened a working group, and the result of that group is surely known to all of you: the study by Professor Beier of Munich, the Head of the Max Planck Institute for Patent, Copyright and Competition Law, his fellow Straus and Mr. Crespi from the United Kingdom, on the subject of genetic engineering and patent protection, which, just like a decision taken by the Executive Committee of AIPPI, the respected worldwide non-governmental organization for the protection of industrial property, propagates the demand that the patent route be opened up. Many of you also know the working paper drawn up by our sister organization, the World Intellectual Property Organization (WIPO), for the purposes both of a joint hearing of the associations by UPOV and WIPO and a second session of a WIPO Committee of Experts. At both meetings, that demand received support from patent law circles. However, the governments were seen to be very reticent. Nevertheless, the question of the reintroduction of patent protection for varieties is in the air and we in UPOV cannot ignore the matter. In fact, we have been concerning ourselves with the question for some years.

The first matter I would like to discuss at this point is why in fact variety protection should not be adequate for genetic engineering. Variety protection is available for every plant variety, that is to say even for those created by genetic engineering or by means of artificial genes. There is therefore no question of UPOV or of the national plant variety offices denying protection to future varieties. However, protection can only be granted as at present, that is to say for finished plant varieties of which all the characteristics are fixed. The industrial circles involved in genetic engineering point out that, as a rule, they do not intend to manufacture finished varieties. They are developing either processes or substances that can be used for the creation of varieties. In the possible future case of artificial genes being produced, they wish to make available to society genes which, for example, impart a specific resistance or other particularly valuable expression of a characteristic, for instance, to take the practical example of the Hibberd case, maize with a certain content of a certain amino-acid, ornamental plants with a special color, plants with extensive tolerance to acid soil, to drought or to humidity, or plants which, as already mentioned, absorb nitrogen from the air and store it in their roots. The inventor of such genes, it is claimed, would not obtain adequate protection under current plant variety protection.

Even if he were to personally breed plant varieties--which is in fact the exception--he could not apply for protection for all or not even the greater part of the varieties that could be created with the help of his gene. The inventor therefore wishes to obtain protection whose scope--naturally for a limited period of time--covers the plants of all varieties containing the new expression attributable to the gene. If necessary, it would suffice to him for the scope of protection to cover only those plants that owe a certain new expression to his invention--or to be more precise, to the insertion of the gene invented by him. The fact that variety protection could also be granted for varieties of such plants would not, it is claimed, worry him unduly.

It could naturally be pointed out to such an inventor that the process invented by him or possibly the new gene developed by him is already patentable, under certain conditions, in the current situation, that is to say when the general requirements of patentability are met. If an inventor were to adopt this approach and to take out a patent for such a process or such a gene, that would mean that a breeder making use of that invention in order to develop a new variety with its help would require the consent of the patentee and, of course, would have to pay corresponding license fees. The breeders would be quite prepared to do so, at least some of them have convincingly claimed. To illustrate this situation with a practical case, a breeder would insert into a given plant population a resistance gene with the consent of the person who had inventively developed the gene and had obtained a patent for it--that is to say, he would do so on the basis of a license--and would apply for plant variety protection in respect of the variety developed in that way. Thus both parties would be happy.

However, the research exemption under Article 5(3) of the UPOV Convention is a nuisance to the inventor and possibly even to the licensee, that is to say the breeder. The world is of course full of smart characters, particularly when it is a matter of getting something for nothing, and it is to be feared that other breeders or--even worse--pseudo-breeders exist that are only waiting for this new variety to be placed on the market. Then, it is feared, they will take the new variety, use it as initial material for the development of a further distinguishable variety, cross it with other material for example, and there you already have an independent variety which, when not prevented by patent law, they can use without fear of contestation and for which they can even obtain variety protection. This independent third variety would contain all the positive characteristics that constitute the inventive activity of the owner of the patent in the gene. Whether the inventor can take action against the third party on the basis of his patent is not even certain under patent law. It depends how far the scope of protection of a gene patent would extend in the country concerned, namely whether protection really continues for as long as any influence of the patented gene may be proven; even if that were so, it would be extremely difficult to prove it in practice. Even if we were to assume that the gene patent would permit the inventor to obtain satisfaction against the further breeder and that no problems existed in furnishing proof, we would be faced with a not very satisfactory discrepancy between the research exemption under Article 5(3) of the UPOV Convention and the national laws based on it, and the claims under patent law.

It is therefore being said, not altogether without justification, that failing sufficient protection for the inventor of a gene in such cases, an unsatisfactory situation indeed exists for the inventor. Firstly, he of course receives no remuneration from further breeders and, in addition, such a legal situation would reduce the inventor's licensing expectations in his relationship with his partner, that is to say the first plant breeder. For if this first plant breeder is not able to obtain, under plant variety protection, for the variety produced with the help of the gene, an exclusive right in all plants that contain the new expression, then he is also unable to pay licensing fees of an amount that would correspond to the genuine, full economic value of the invention. It is further said that such a situation has a negative effect on the willingness of industry to invest, that is to say for the firms involved in the development of genetic engineering processes or even of genes, and that this situation also impairs the breeders' interest in taking out licenses to make use of the genetic engineering inventions of others.

I have first set out here the arguments advanced by the biotechnical industry in a very detailed, and possibly also exaggerated manner, in order to show you that a problem can indeed exist, or at least can be postulated, and that we should reflect on it. However, the problem also has a further aspect.

In the overall debate, it is simply assumed that the expression of a characteristic imparted by the gene will constitute special progress and economic value. However, it is not true that such must be the case. One could assume that an inventor creates an artificial gene, and obtains a patent for it, that can be spliced into all varieties of a given species with a resultant morphological change, but which adds no specific value of any kind to the new variety. Assuming again that the insertion of the gene is simple, it would be possible in this way to bypass the protection of well-proven varieties without it being possible for the holders of the rights to prevent that happening (this would result from Article 5(3) of the UPOV Convention) and without themselves being able to use the manipulated varieties, not even for further development (that would be the result of the lack in patent law of a provision corresponding to Article 5(3) of the UPOV Convention). In this way, the insertion of genes could be used to undermine plant breeders' rights. Alone the seed trade laws, where they exist, could form a barrier against this aberration. Not only can the new technologies be misused, to the detriment of inventors, by ill-intentioned or pseudo-breeders, but also--and this is perhaps more probable--to the detriment of traditional breeders by ill-intentioned inventors, in which case the opening of the patent route is of no help.

From the diagnosis, that is to say the inventory, let us now move on to the therapy that has been proposed by patent circles.

To begin with, there is of course the proposal already mentioned that the present restrictions of general patent protection in respect of plant varieties and specific breeding processes be removed.

On reflection, it is astonishing that this proposal should have been made at all in so many well-informed quarters. It is indeed a fact that efforts were made over a long period to grant patents for plant varieties and that finally the conclusion had to be accepted that patent protection was unsuitable for plant varieties. The recent comment made by an American seed expert that patent law was fine for mousetraps but had not been created for seed is perhaps a little disparaging in its formulation, but nevertheless hits the nail on the head. The structure of patent law in all countries has been based altogether on inventions that involve inanimate matter. Not only the statutory provisions but also case law and legal writings have developed doctrines that are workable for inanimate matter, that is to say matter that in any event always has to be created anew by man. As soon as an attempt is made to apply this doctrine to self-reproducing matter, difficulties arise or arbitrary results are obtained. In order to achieve usable results, it would be necessary not only to bend, twist and interpret this doctrine, but also the statutory provisions themselves. Patent law is unsuited to living matter already in respect of the grant procedure and of the patentability requirements, that is to say the conditions that constitute the essential aspects of the examination procedure: novelty, inventive step and industrial applicability. They are tailored to inventions in the field of inanimate matter. For such subject matter, prior disclosure in printed matter or some other form of publication is naturally important, since with such a description anyone can subsequently carry out the invention. In the case of living matter, such as a plant variety, such a description is usually meaningless. The essential factor is that the corresponding material should be available. Indeed, as I have already said, no one at all is likely to produce the variety again from the very start or to repeat the whole development work carried out by the breeder; he is much more likely to wish to propagate the finished material. The same applies to the level of inventiveness or inventive step. Under patent law, it is held that inventive level or inventive step is lacking if a person of ordinary skill in the art could have easily made the invention. This would not fit in at all with plant varieties. The same also applies to industrial applicability, whereas, on the other hand, the conditions that have been developed under plant variety protection, that is to say sufficient homogeneity and stability, are of essential significance for protection if that protection is to be of any use. A non-homogeneous variety can hardly be demarcated from any other population. As a result, there is no point in protecting it since no farmer who, for instance, has to rely on a fairly uniform ripening time, would buy such a variety. Without stability and homogeneity the system does not work and the patent offices are already plagued by this problem in the field of microorganisms that has been allocated to them.

It is also frequently said that we should not concern ourselves with this problem. Patent law and plant variety protection law should be simply left to coexist. The two systems would either come to terms--indeed lawyers and courts exist to correct errors--or one system would succeed in replacing the other. The stronger of the two would prevail. We in fact flatly refused such juridical Darwinism years ago already when the UPOV Convention was established and the European Patent Convention subsequently adapted to it. Various responsible quarters have stated that it is not possible to accept the coexistence of two differing legal systems, with differing requirements, administered by differing authorities, applying altogether different criteria and comprising a different scope of protection. For the holder of rights this may be useful or justifiable in the individual case, but the public, that is expected to respect the protection and to pay for rights, must be presented with a clear situation. Farmers cannot be subjected to two systems whose bases are so different. Indeed, it contradicts the very nature of industrial property protection as an exclusive right that there should suddenly be two systems of rights, not harmonized with each other, and which would overlap or be superimposed one upon the other, in whole or in part. It should not be forgotten that the State in this case is lending its sovereign powers to the assertion of private claims. It is the State that asserts these claims, if necessary even by penal law means. Such rights cannot therefore just coexist indiscriminately. The farmer or the horticulturist must be able to have confidence in the existence of a single system of rights. He is entitled to a degree of legal security. That must also be the case in future and developments will in no way affect that situation. Patents and plant breeders' rights cannot exist in parallel in respect of plant varieties. It is unthinkable that a farmer should be faced alternatively with plant variety protection and then again with patent law, with their varying scope of protection. A solution involving dual protection or alternative protection could only be found at the cost of the users of plant varieties. That could not be accepted, in the long term at least, by the parliaments, it could not be accepted by the general public, and if we did so we would devalue the system of protection. A clear demarcation must also continue to exist in the future.

However, we are also faced with a further aspect. When establishing plant variety protection--as clearly reflected in the preamble to the UPOV Convention--the Contracting States, and subsequently the national lawmakers, based themselves on the fact that plant varieties constituted a particularly strong public interest. To be precise, that of course applies only for the greater part of the significant food varieties and it was perhaps a mistake to apply the same standards to ornamental varieties. However that may be, the fact that public interest was taken into account led to certain restrictions being placed on plant breeders' rights. I have already mentioned the farmers exemption and research exemption. The Contracting States and the lawmakers further insisted that protection should only be granted for a finished variety and not for the individual expressions of characteristics of a variety. These restrictions are described as loopholes or as errors by the genetic engineering industry and even occasionally by breeders. They were, however, intentional on the part of the legislator. It is possible that one or another of these restrictions might need reviewing and UPOV is always quite open to such a review. However, these restrictions cannot simply be pushed aside by applying a different, unadapted system of protection that does not contain these restrictions for the good reason that it does not need them in its own field. Anyone who wishes to remove or reduce restrictions must first make the effort to look at the basic questions, that is to say consider whether general research and public research still require or not the research exemption, whether farmers should still enjoy farmers exemption or again whether subsequent developments have meant that a farmer may be reasonably deprived of that entitlement. He must also ask himself what the effects of an amendment would be for genetic resources or for the developing countries, or perhaps simply what effects this would have on the debate on genetic resources and developing countries. It is unthinkable to open wide the sluice-gates simply because a certain new development has taken place.

However, there also exists amongst patent law specialists another, more restrictive concept of the future interplay between patent law and plant variety protection law. This would seem to transpire from the Hibberd case and from the new implementing rules under the Swiss Patent Law. In neither case is it the claimed intention to grant patents for plant varieties within the meaning of the UPOV Convention. The new Swiss implementing rules continue to exclude plant varieties from patentability and the Hibberd decision would

seem to concern a case--although this is not altogether clear from the documentation available to us so far--that is not one of a plant variety in the true sense. What is intended is that patent protection should extend to a population or even to plants of a whole botanical genus and species. Protection would also be given to a non-homogeneous plant population on condition that it contained a quite specific expression of a characteristic, whereby this expression of the character in the population would be the result of a reproducible human intervention, e.g. genetic manipulation. It is thus intended that a patent should be grantable for such a plant population. In the Hibberd case, patent protection has been afforded to maize seed of any maize variety where the plants contain a specific inheritable characteristic. In all other respects, the plants within that population can be completely different as long as they simply contain this inheritable characteristic which, in the Hibberd case, is a specific minimum content of an amino-acid, or to be more precise, at least one-tenth milligram of endogenous free tryptophan per gram of dry seed--on condition that this enables seed having the same property to be produced. In practice, this signifies nothing more and nothing less than an industrial property right in a single expression of a characteristic. What is protected is not a sufficiently homogeneous variety--not a plant population that shows sufficiently identical essential features as a whole--but a single property possessed by this population, that is to say a minimum content of a specific new substance. What is acceptable for this property, this characteristic that is apparently attributable to a genetic engineering intervention, must logically also be acceptable for other properties. By the same process of thought, it must be possible, for example, to apply for patent protection for the propagating material of all strawberries that are of a specific size, far in excess of currently known standards, although on condition, of course, that this characteristic, this excessive size, can be transmitted by heredity and that the process used is reproducible and can be described to the high standards required by patent law.

Such broadly formulated patents as this could have great economic consequences. (In my view, they would not be at all acceptable under German patent law since a part of the problem to be solved is included in the claims. A similar case--"Acrylic fibers"--has already been decided by the Federal Patent Court in Munich.) Since the attraction of new varieties frequently depends on a very small number of properties, this means--if the Hibberd decision were to start a new trend--that a small number of patent owners, or even a single patent owner in the extreme case, could in this way dominate the worldwide market for an entire botanical species for the whole duration of the patent, that is to say for up to 20 years. Such patents would far exceed the scope of protection afforded to breeders in the field of plant breeding by the lawmakers of those States that grant protection to varieties. The situation under plant breeders' rights is of course that a breeder who develops a new variety containing a special new expression of a characteristic can obtain protection for that variety only, but in no event a monopoly in respect of that expression. If another breeder were to produce another variety that expressed this characteristic in the same way--for instance, unusually compact growth in the case of cereals--, the first breeder could in no way oppose marketing on the basis of his plant breeders' rights and could not even prevent the second breeder from obtaining protection.

The justification put forward for such broadly formulated claims, which were held patentable in the Hibberd case and could become so in future in Switzerland, is that of promoting both research and the willingness to invest. Whether they in fact will have that effect is very doubtful. On the contrary, it is quite conceivable that this would hinder any further development since a whole area of the market would be lost for all other breeders or, in any event, would lose its attraction. Whether the possibility of obtaining patents for individual expressions of characteristics would really give positive results from the point of view of economic policy, that is to say whether it would be desirable in respect of patent policy, will therefore require in-depth study. The drafters of the UPOV Convention and of the European Patent Convention, as also the lawmakers in the European States that have adapted their domestic law to the European Patent Convention, would appear in any event to have thought otherwise, since plant breeders' rights do not afford such an extensive protection to plant varieties and it was the aim that plant variety protection, with its intentionally more restricted scope of protection, should not be undermined by patent law. Before giving in to the wishes of industry in the expectation of developments in genetic engineering, it would seem to me that the economic consequences should be thoroughly examined. That which is good for the United States of America, or at least tolerable, is not necessarily of benefit to other States.

However, these economic considerations are not the only arguments against the patenting of individual expressions of characteristics of plants. No one can deny that it is impossible to simply put onto the market maize seed that contains solely this one characteristic. In order to sell seed, the plant population must be treated in such a way that it is sufficiently homogeneous. Otherwise the user receives seed which, although producing plants with a specific high protein content, perhaps do not mature all at the same time. Thus, the breeder is still required in order to develop the material into a homogeneous variety and therefore sufficient incentive must still remain for a breeder who is to apply his art to the patented plant population. The alternative, and this is where the situation becomes worrying, is that the inventor himself inserts his genetic material into a variety that already exists--that is to say into material belonging to a traditional breeder. As a result of the research exemption in Article 5(3) of the UPOV Convention, nothing would prevent him from doing so. Whereas the use of a plant for the further development of a patented population to produce a marketable variety would require the consent of the patentee, a patent owner could insert his material into an already protected variety without having to pay anything to the owner of the rights in the variety, and he could even do this with a variety belonging to his own licensee in the event of such an act not being excluded by a special clause in the contract between them; in any event such clauses in licensing agreements also raise problems from a cartel law point of view. As you see, there exists a certain imbalance here, admittedly as a result of the research exemption, and this imbalance demonstrates that patent protection should not be allowed in such cases before the legal implications have been properly regulated. And in order to regulate the legal implications--and here I return once more to the point I have already made--the basic questions must be examined, the suitability of the restrictions that have been imposed for good reasons and which have no parallel under patent law.

I am frequently told that we should not dramatize the situation. To obtain patent protection it is indeed necessary to take the very high hurdles of patentability and that would only be possible in a few cases. However, I believe we should not let ourselves be lulled to sleep by such assurances. If the patenting of plant material was really to constitute such an exceptional case, then a whole, well-informed industry would not be fighting so fanatically to obtain a change in the existing legal situation. Indeed, legislation is like life; one can never be sure that things will not take a certain turn.

It is often heard in discussions that two-way protection, by means of patent and plant variety protection laws, whether in general or in line with the Hibberd case or the new Swiss administrative regulations, would not be such a bad thing for the breeder himself since both approaches would be open to him. He could use two systems of law to take action against infringers, that is to say he would have two cudgels instead of one to defend himself with, as the present speaker expressed it at the last FIS Congress. However, this simple logic tends to overlook a number of things. The possibility of obtaining protection under two different systems, whether cumulatively or as an alternative, would entail considerable drawbacks for the breeder himself. If cumulative protection were to be permitted, the breeder, in order to be sure, would have to apply for both types of rights, that is to say he would have to pay the large official fees for grant and maintenance of both rights and, in the case of patent law, also the not inconsiderable fees for legal assistance. Both rights would have to be monitored and where necessary defended in infringement actions. If alternative protection alone were to be admitted, the breeder would nevertheless still have to take a decision in each case as to which approach is the most appropriate for him and, as we know, some people will always take the wrong decisions in such cases.

Finally, I would like to mention one argument which, although perhaps marginal, is nevertheless repeatedly brought forward by the advocates of patenting. It is claimed that patent protection now extends, and that is the trend of recent years, to practically everything. Alone, the field of plant varieties is excluded. What is being suggested here is that the exclusion of plant varieties and of certain processes constitutes an obsolescent anachronism. However, this exclusion is indeed widespread, even in non-UPOV States, such as, for example, in the very recent patent law of China. It must also be quite clearly stated that patent protection cannot indeed be claimed for everything under the sun. Scientific results, for example, continue to be excluded from patentability. There are also other weighty exceptions.

An absolutely classical example of exclusion on the grounds of public interest are methods for the treatment of the human body by surgery or therapy. Most patent laws contain explicit provisions prohibiting the grant of patents in such cases. It is perfectly clear to everyone that a doctor may not claim an exclusive right in an operating method, however new it is, and thus prevent other doctors from also using such a new method of operation, or make the use of a surgical or therapeutical method by another doctor dependent on the payment of a high licensing fee. This has been clearly set out in a high court decision in Germany which bears the marvellous short title "Baldness Operation," and this principle is nowadays explicitly laid down both in German patent law and in European patent law. In the Baldness Operation case, the judges in Germany did not succumb to the temptation to restrict this significant exclusion from patentability in those cases in which the intervention is of a purely cosmetic nature. Neither patent law nor industrial property can take into sole account the interests of the inventors. They must, as this example shows, be based on the balance of interests and, in some cases, the public interest deserves to prevail. In our field therefore, the justification for the research exemption, for example, must also be examined in the light of other interests, such as the interests of the users of new varieties, the farmers, the consumers, agriculture in general, research, particularly in public institutes and universities, and finally also as regards the interests of less developed countries. Additionally, as in the case of any lifting of restrictions which the legislator held necessary at some earlier date, we must reflect whether the desired extension really corresponds to the objectives. That is to say, we must also consider whether this extension of protection of plant varieties creates an incentive in general and not only in some individual cases and whether, if such an incentive is indeed created, it is not possibly cancelled out by hefty drawbacks. As I have already said, I consider that to protect investments by means of a patent law system in respect of the individual characteristics of plant varieties goes too far and I ask myself whether this would not in fact prove more of an obstacle to development than an incentive. It must always be borne in mind, in my view, that the purpose of protecting intellectual property is to preserve the author of creative achievements from the imitations of parasites and to protect him during the difficult initial phase against competition from other less creative competitors, but not to rid him of any competition whatsoever.

As you see, there are a whole number of other aspects that have to be taken into consideration and which certainly deserve the same weighting as the inventor's wish to obtain protection or as the momentary wish of society to create an additional incentive for research and development. The whole problem could be abbreviated if one were to simply say that here are new possibilities, here considerable investments are needed, therefore incentives must be created and some type of insurance given that the investments would be worthwhile, and therefore the protection, or at least its scope, has to be extended. Obviously, the advocates of change put forward these arguments only. They are perfectly entitled to do so. A case based on these arguments alone, however, would not be accepted by parliaments and, in my opinion, in the Federal Republic of Germany they would not even get past the departmental level.

Please do not misunderstand me. I am not pleading in favor of immobility, no one in UPOV wishes that. On the contrary, we in UPOV have been open to the discussion of this question for years now. This is shown, for instance, by our UPOV symposiums, of which the first was held almost five years ago now already. We have invited to these symposiums not only the friends of plant variety protection but also the advocates of extended patent protection to enable them to speak as lecturers and we have applied ourselves to their arguments in the discussions. Indeed, we should continue to follow developments without prejudice and examine, for instance, whether developments do not call for some degree of adaptation of our system. And in this case, as far as I can see at present--even we are still in the midst of our reflections and have not yet discovered the philosophers' stone--the central role is played by Article 5(3) of the UPOV Convention. I personally believe that this principle is very important and cannot be simply relinquished. To do so would bring us into dispute with those circles that concern themselves with genetic resources, although I do not wish to approach that subject here in this lecture. One could nevertheless reflect whether certain restrictions would be appropriate in this case. One could perhaps consider whether the independence of research and development should be limited in those cases where a protected variety has been bred with the essential assistance of processes or the use of material for

which a valid patent exists. I may remind you that the principle laid down in Article 5(3) of the UPOV Convention is already excluded, as things stand, for the repeated use of protected parent varieties when creating hybrids. A further restriction in respect of material of varieties developed with the aid of patentable or patented processes and products would therefore not be completely alien to the system and could indeed be formulated without great difficulty. However, there are a number of snags.

The first problem I can see is that we would be immediately confronted with the traditional breeders demanding to know the justification for introducing such a privilege exclusively for the benefit of preliminary work protected by patents. Indeed, there exist varieties produced by traditional breeding methods which, although they would still not be patentable if the patent option were to be provided, nevertheless constitute pioneering achievements of the first water. Should a variety produced by traditional crossing still remain freely usable by any other breeder despite the fact that it constitutes a quite remarkable step forwards, meaning that other breeders could profit from this achievement without particular effort on their part, whereas inventors in the genetic engineering field that had obtained a patent for a process or for material could make the use of any variety bred with the help of their invention dependent on their consent? Likewise, those involved in genetic engineering could ask themselves the question--I am not sure whether they would do so--whether such a privilege should only be established for genetic engineering developments that happen to satisfy the requirements of patentability; the outcome could be quite arbitrary since the satisfaction of the patentability requirements, as I mentioned earlier on, in the form in which they have been developed for inanimate matter, frequently has nothing to do with the value of the invention.

What I have said in respect of the research exemption also applies more or less to the farmers exemption. The situation is a little different, in my view, since the storage of seed is in fact not ideal from a number of points of view and not even from the cultivation and use aspects. On the other hand, the political aspects weigh all the heavier. It would be difficult to explain to the individual farmer, or indeed to his associations, that it should no longer be permitted to freely use seed for which a price had been paid, and not even a low one at that, in such a way that a part of the material propagated on the farmer's own land can be kept back for producing consumption material in the following year, again on the farmer's own land. Farmers have been doing this for thousands of years and it would be difficult for them to understand why they should not continue so doing for the next few thousand years. It is not at all sure that the concept of the protection of industrial property is all that well anchored in the understanding of the circles concerned as regards right and wrong for them to fully accept the restrictions of freedom bound up in this concept. We do not even need to point a finger at agriculture. Other fields of intellectual property show clearly, as in the widespread unauthorized use of new technical means of reproducing copyrighted works, that the need to respect intellectual property has not yet sunk very deep into the public's mind.

I am quite aware, of course, that the farmers exemption has been the subject of considerable criticism of late in breeding circles; however, I wonder whether this criticism is not directed more at the improper extension of the exemption. The limitation of the farmers exemption would depend from a legal point of view entirely on the judgment of the individual States. The UPOV Convention gives its member States the possibility of extending protection to the final product and it is therefore above all a question of political opportunity and instinct on the part of the national authorities in deciding whether it is possible or desirable to alter this principle.

I can do no more, I believe, at the present time than to contribute these general ideas to the debate. To conclude, however, perhaps I should summarize my ideas under four headings:

1. The system of protection that has been developed for plant varieties and has been adapted to self-reproducing material not only gives the breeders the protection they need, but also takes into account the desiderata of other professional circles with which the breeders must work and, finally, also certain irrefutable demands of other politically influential groups. On the one hand it provides the breeders with a secure and adequate basis for protecting their rights, but at the same time avoids tensions with other groups

within society. It is supported by a reliable, contractual basis that is law in every UPOV member State and not, as under the patent system, extensively on the uncertain footing of office practice and case law that is subject to rapid change.

2. The UPOV Convention possesses a large degree of flexibility, permitting the system to be adapted in the member States to new developments, generally by means of national legislative measures, without the need to amend the Convention. For instance, the scope of protection can be extended on the basis of the powers given by Article 5(4) without amending the Convention. This type of adaptation is preferable to experiments with patent law that would then not necessarily be accepted by the courts.

3. UPOV constitutes a forum for harmonizing those legislative measures that may become necessary. Where, exceptionally, it is not possible to carry out adaptations without an amendment to the Convention, there is nothing to oppose a revision of the Convention. Naturally, before undertaking the risk of revising the Convention, in-depth studies would have to be carried out. In any event, a revision of the UPOV Convention would be preferable to an extension of patent law. Sophisticated attempts to bypass the present provisions on demarcation, as frequently advocated in the patent sector, are open to doubt since the basic problems and possible implications have not been sufficiently studied. Breeders should be on their guard against such attempts.

4. Whatever might be changed, the unregulated coexistence of two types of rights is to be categorically rejected. Such a situation should be neither permitted by the legislator nor made possible by legal juggling. Coexistence means uncertainty and an extra burden for breeders as a whole. It is highly improbable that the uncontrolled disarray of two types of rights in the same field will promote research and development. Protection would extensively become a lottery in which someone may possibly win, but where the majority would go away with empty hands.

Before I close, I would like to deal with a final matter, that is to say the question: where do we go from here? To begin with, I believe that we should clearly recognize that a problem exists and not simply say that nothing should change in future. Nevertheless, I personally feel that one could well live with the current system for some time to come. Things are unlikely to develop as rapidly as we would be led to believe. Nevertheless, we must already now consider this problem, even if only because others are obliging us to do so. It would be neither right to postpone the discussion indefinitely nor of any use to suddenly look for instant solutions. UPOV is keeping this question on its agenda and indeed some of you have yourselves seen the promising developments that took place at the beginning of this year at the joint hearing organized by UPOV and WIPO; many of you were also present as observers, as I was myself, at the second meeting of the WIPO Committee of Experts at which this matter was discussed and I believe I may well claim that our voice had considerable weight in the discussions. The debates so far have done much to clarify matters, but have not yet led to concrete results. I feel it unlikely that the forthcoming meetings of this kind will already obtain clear results. Nevertheless, decisions will have to be taken at some point. I personally would be much happier if this happened at a time at which the direction taken by genetic engineering developments was clearer and its true significance for plant breeding could already be seen. The fact that UPOV and WIPO, that is to say the two organizations that possess irrefutable competence in the international discussion of these matters, work under the same roof will certainly be of advantage in the future. It is already obvious that the discussions within the framework of these two organizations are able to take place in a much more factual and detached manner than in other organizations. It was perhaps unfortunate that past discussions in the OECD were approached exclusively from the point of view of industry and commerce, that is to say certain industrial and commercial circles that, for example, did not include the plant breeding industry. This possibly led to a shift of emphasis from the very beginning which still affects the ongoing discussions. I personally also consider it unfortunate that the Executive Committee of the International Association for the Protection of Industrial Property (AIPPI) rather precipitately adopted such a one-sided and dogmatic stance.

The discussions therefore continue and the next forum will be constituted by the FIS and ASSINSEL congresses in San Francisco and then the AIPPI congress in London in June. You in the Federal Republic of Germany have an indisputable

advantage, as I see it from the outside, in that the plant breeding industry is sufficiently well organized here for it to form an independent, balanced opinion of its own. It is not, as in other countries, dependent to the same extent on large-scale concerns that also operate in other fields. In this country, there exist both small and large enterprises that maintain a dialogue and the largest of them, it would seem to me, are nevertheless important enough to face the chemical industry, in which a part of the developments in genetic engineering are conducted, as equal partners, and indeed big enough themselves to conduct genetic engineering research and development and are therefore also familiar with the problem from their own experience. Here, you also have the Federal Office of Plant Varieties, a partner that attentively follows developments. Finally, and this is a decisive advantage, you are protected from rash and ill-considered developments by the clear provisions of the European Patent Convention and of domestic patent law, that cannot be interpreted away. No basic change can be made in my view without involving the Parliament. You cannot be confronted with a completely new situation overnight. At most, you must entertain the possibility of decisions by the two patent offices in Munich, the European Patent Office and the German Patent Office, and perhaps even decisions by the courts, which may strongly, much too strongly, restrict the scope of application of these exclusions. This is shown by the Swiss example. In other words, although you indeed have to follow the developments in patent law, you nevertheless also have experts in the larger-size enterprises who possess the necessary perspective. It was obvious to me in the discussions held so far within UPOV and within WIPO that the participants from your Association and from your country were altogether equal to the situation.

Although it is obviously necessary to remain alert, on the other hand, I at least believe that there are no grounds for exaggerated concern. What has been repeatedly said in the discussion so far continues to hold good. Biotechnology and genetic engineering constitute new challenges, but also represent new possibilities for promising developments that are also of interest to you. New approaches are being opened up and it is neither possible nor desirable to refuse the future. What we wish in UPOV, and this is equally important both for you and for us, is that you should keep us continuously informed of your views! It is important first to know what you want and what you consider to be right since we do not wish to support developments, to lend our influence to things which the beneficiaries have good reason, although unknown to us, not to want. I trust that we in UPOV have shown you in the past that we are willing to apply our full endeavors in this essential question in favor of the protection of plant varieties and its guaranteed continuation, and perhaps to a greater extent than this could be expected from such a small and recent organization. It is my impression that UPOV has so far remained in harmony with the plant breeders here present, and my wish for the future is that this should remain so.

COOPERATION IN EXAMINATION

CONCLUSION OF AGREEMENTS

Denmark and the Federal Republic of Germany

A new Administrative Agreement providing for cooperation in the examination of plant varieties for distinctness, homogeneity and stability has been concluded between the Plantenyhedssnaevnet (Board for Plant Novelties) of Denmark and the Bundessortenamt (BSA - Federal Office of Plant Varieties) of the Federal Republic of Germany.

The new agreement provides for a third category of taxa, for which each of the parties has agreed to base its decision on an application for protection of registration in the national list of varieties--unless an exception is made--on the results of the examination conducted by the other party following an earlier application.

The taxa covered by this agreement, which entered into force on February 1, 1987, are listed overleaf.

1. Taxa whose varieties will be examined by the Federal Republic of Germany on behalf of Denmark / Taxons dont les variétés seront examinées par la République fédérale d'Allemagne pour le compte du Danemark / Taxonomische Einheiten, deren Sorten durch die Bundesrepublik Deutschland für Dänemark geprüft werden

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Aeschynanthus Jack	Aeschynanthus	Aeschynanthus	Aeschynanthus
Allium cepa L.	Onion	Oignon	Zwiebel
Apium graveolens L.	Celeriac	Céleri-rave	Knollensellerie
Asparagus officinalis L.	Asparagus	Asperge	Spargel
Begonia-Elatior-Hybridi	Elatior Begonia	Bégonia elatior	Elatiorbegonie
Beta vulgaris L. ssp. vulgaris var. conditiva Alef.	Garden Beet	Betterave rouge	rote Rübe
Brassica oleracea L. convar. acephala (DC.) Alef. var. gongylodes L.	Kohlrabi	Chou-rave	Kohlrabi
Brassica oleracea L. convar. acephala (DC.) Alef. var. sabellica L.	Curly Kale	Chou frisé	Grünkohl
Brassica pekinensis (Lour.) Rupr.	Chinese Cabbage	Chou de Chine	Chinakohl
Chrysanthemum frutescens L.	Marguerite, Paris Daisy	Marguerite	Strauchmargerite
Cucumis sativus L.	Cucumber, Gherkin (outdoor varieties)	Concombre, cornichon (variétés de pleine terre)	Gurke (Freilandsorten)
Daucus carota L.	Carrot	Carotte	Möhre
Euphorbia-Milii-Hybridi	Christ's Thorn Hybrids	Epine du Christ	Christusdorn
Festuca ovina L. sensu lato	Sheep's Fescue	Fétuque ovine	Schafschwingel
Fragaria L.	Strawberry	Fraisier	Erdbeere
Impatiens-Neu-Guinea-Hybridi	New Guinea Impatiens	Impatiens de Nouvelle-Guinée	Neu-Guinea-Impatiens
Kalanchoë Adans.	Kalanchoë	Kalanchoë	Kalanchoë
Lupinus albus L.	White Lupin	Lupin blanc	Weisse Lupine
Lupinus angustifolius L.	Blue Lupin	Lupin bleu	Blaue Lupine
Lupinus luteus L.	Yellow Lupin	Lupin jaune	Gelbe Lupine
Pelargonium L'Hérit. ex Ait.	Show and Fancy Pelargoniums	Pelargonium des fleuristes	)
	Ivy-leaved Pelargonium	Géranium-lierre	)
	Zonal Pelargonium	Géranium, Pelargonium zonale	)Pelargonien
			)
Phaseolus vulgaris L.			
- var. nanus (L.) Aschers.	Dwarf French Bean	Haricot nain	Buschbohne
- var. vulgaris	Climbing French Bean	Haricot à rames	Stangenbohne
Raphanus sativus L. var. niger (Mill.) S. Kerner	Black Radish	Radis d'été, d'automne et d'hiver	Rettich

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Raphanus sativus L. var. oleiformis Pers.	Fodder Radish	Radis oléifère, Radis chinois	Oelrettich
Raphanus sativus L. var. sativus	Radish	Radis de tous les mois	Radieschen
Rhododendron L.	Rhododendron, Azalea (incl. pot Azaleas)	Rhododendron, Azalée (y compris azalées en pots)	Rhododendron, Azalee (einschl. Topfazalee)
Ribes L.	Currants, Gooseberry	Cassis, Groseilliers	Johannisbeere, Stachelbeere
Rosa L.	Rose	Rosier	Rose
Rubus L.	Blackberry, Raspberry	Ronce fruitière, Framboisier	Brombeere, Himbeere
Saintpaulia H. Wendl.	African Violet	Saintpaulia	Usambaraveilchen
Scorzonera hispanica L.	Black Salsify	Scorsonère, Salsifis noir	Schwarzwurzel
Secale cereale L.	Rye	Seigle	Roggen
Spinacia oleracea L.	Spinach	Epinard	Spinat
Streptocarpus Lindl. (Streptocarpus X hybridus Voss)	African Primrose	Streptocarpus	Streptocarpus
X Triticosecale Wittmack	Triticale	Triticale	Triticale
Vaccinium-Corymbosum-Hybridi	Blueberry	Myrtille	Kulturheidelbeere
Vicia sativa L.	Common Vetch	Vesce commune	Saatwicke
Zea mays L.	Maize	Maïs	Mais

2. Taxa whose varieties will be examined by Denmark on behalf of the Federal Republic of Germany /Taxons dont les variétés seront examinées par le Danemark pour le compte de la République fédérale d'Allemagne / Taxonomische Einheiten, deren Sorten durch Dänemark für die Bundesrepublik Deutschland geprüft werden

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Chamaecyparis Spach	Chamaecyparis	Chamaecyparis	Scheinzypresse
Euphorbia fulgens Karw.	Euphorbia fulgens	Euphorbia fulgens	Korallenranke
Euphorbia pulcherrima Willd. ex Klotzsch	Poinsettia	Poinsettia	Poinsettie
Exacum L.	Exacum	Exacum	Exacum
Juniperus L.	Juniper	Genévrier	Wacholder
Medicago lupulina L.	Black Medick	Luzerne lupuline	Gelbklee
Petroselinum crispum (Mill.) Nym. ex A.W. Hill	Parsley	Persil	Petersilie
Phleum bertolonii DC.	Timothy	Fléole diploïde	Zwiebellieschgras
Phleum pratense L.	Timothy	Fléole des prés	Wiesenlieschgras

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
<i>Prunus cerasus</i> L.	Morello, Sour Cherry	Cerisier (cerises acides; griottes, amarelles)	Sauerkirsche
<i>Rhipsalidopsis</i> Britt. et Rose	Easter Cactus	Cactus de Pâques	Osterkaktus
<i>Schlumbergera</i> Lem.	Christmas Cactus	Cactus de Noël	Weihnachtskaktus
<i>Spathiphyllum</i> Schott	Spathiphyllum	Spathiphyllum	Spathiphyllum
<i>Thuja</i> L.	Thuja	Thuja	Lebensbaum
<i>Trifolium hybridum</i> L.	Alsike Clover	Trèfle hybride	Schwedenklee
<i>Trifolium pratense</i> L.	Red Clover	Trèfle violet	Rotklee
<i>Trifolium repens</i> L.	White Clover	Trèfle blanc	Weissklee

3. Taxa for which the parties have agreed to take over examination results (unless an exception is made) / Taxons pour lesquels les parties sont convenues de reprendre les résultats des examens (sauf exception) / Taxonomische Einheiten, für die die Parteien vereinbart haben (von Ausnahmen abgesehen), die Prüfungsergebnisse zu übernehmen

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
<i>Avena sativa</i> L.	Oat	Avoine	Hafer
<i>Beta vulgaris</i> L. ssp. vulgaris var. alba DC.	Fodder Beet	Betterave fourragère	Runkelrübe
<i>Brassica napus</i> L. ssp. oleifera (Metzger) Sinsk	Rape	Colza	Raps
<i>Dactylis glomerata</i> L.	Cocksfoot	Dactyle	Knautgras
<i>Festuca pratensis</i> Hudson	Meadow Fescue	Fétuque des prés	Wiesenschwingel
<i>Festuca rubra</i> L. sensu lato	Red Fescue	Fétuque rouge	Rotschwingel
<i>Hordeum vulgare</i> L. sensu lato	Barley	Orge	Gerste
<i>Lolium X boucheanum</i> Kunth	Hybrid Ryegrass	Ray-grass hybride	Bastardweidelgras
<i>Lolium multiflorum</i> Lam.	Italian Ryegrass	Ray-grass d'Italie	Einjähriges und Welsches Weidelgras
<i>Lolium perenne</i> L.	Perennial Ryegrass	Ray-grass anglais	Deutsches Weidelgras
<i>Pisum sativum</i> L. (partim)	Field Pea	Pois fourrager	Futtererbse
<i>Poa pratensis</i> L.	Kentucky Bluegrass, Smooth Stalked Meadow-grass	Pâturin des prés	Wiesenrispengras
<i>Poa trivialis</i> L.	Rough Stalked Meadow-grass	Pâturin commun	Gemeines Rispengras
<i>Sinapis alba</i> L.	White Mustard	Moutarde blanche	Weisser Senf
<i>Triticum aestivum</i> L. emend. Fiori et Paol.	Wheat	Blé tendre, Froment	Weichweizen
<i>Vicia faba</i> L. (partim)	Field Bean	Féverole	Ackerbohne

[Subsection continued on page 47]

ITALY

Implementing Regulations of the Decree of the President of the Republic
No. 974 of August 12, 1975, on the Protection
of New Plant Varieties*

Consolidated Text of the Decree of October 22, 1976, as Amended
by Decree of February 26, 1986**

CHAPTER I

APPLICATION FOR AND GRANT OF THE PATENT FOR A NEW PLANT VARIETY

Article 1

The application for a patent for a new plant variety shall be filed in two copies, the original on the prescribed stamped paper.

The application shall be filed, together with the enclosures referred to in Article 3, with the Provincial Chamber of Industry, Commerce and Handicrafts of Rome, which is competent to receive filings, in accordance with the Ministerial Decree of September 25, 1972,¹ of documents which may be filed directly with the Central Patent Office.

The application may also be sent directly to the Central Patent Office by registered mail, in accordance with Article 2 of Decree of the President of the Republic No. 540 of June 30, 1972.²

The other documents, if any, relating to the application, the filing of which is prescribed by Article 1, first paragraph, of the said Decree of the President of the Republic No. 540 of 1972 may also be filed with the Chamber of Industry, Commerce and Handicrafts in other capital towns of Provinces.

Article 2

The application shall include:

(1) the name, first name, nationality and residence of the applicant and the name of his representative, if any;

* Italian title (of the Decree of October 22, 1976): Decreto Ministeriale 22 ottobre 1976 - Norme di esecuzione del decreto del Presidente della Repubblica 12 agosto 1975, n. 974, concernente la protezione delle nuove varietà vegetali. The Decree of the President of the Republic was amended by Articles 76 to 78 of Decree No. 338 of June 22, 1979, and Law No. 620 of October 14, 1985

** Consolidated text prepared by the Office of the Union from the texts published in the Gazzetta Ufficiale della Repubblica Italiana:

Decree of October 22, 1976: GU of January 18, 1977;

Decree of February 26, 1986: GU of May 7, 1986.

1 Determination of the Offices with Which Applications and Documents Concerning Patents for Inventions, Utility Models, Industrial Designs and Trademarks Must Be Filed (GU of October 4, 1972).

2 On the Simplification of Administrative Procedures in the Field of Patents for Inventions, Utility Models, Industrial Designs and Trademarks (GU of September 22, 1972 - as amended by Decree of the President of the Republic No. 338 of June 22, 1979 - GU of August 7, 1979).

(2) the indication, in the form of a title, of the botanical name in Italian and Latin of the genus and/or species to which the plant variety belongs, and, in brief and concise terms, of its essential distinctive botanical characteristics;

(3) the indication of the denomination that the applicant proposes to give the variety in order to distinguish it from other known varieties;

(4) the indication of the breeder or breeders of the new plant variety;

(5) other indications that, in accordance with the legislative provisions concerning patents for industrial inventions, the applicant may include in the application, concerning any priority rights that may be claimed, or any rights of third parties;

(6) a list of the documents enclosed.

The indication referred to in (4) above may be given in a separate document, subject to observance of the provisions relating to stamps, within two months from the filing of the application.

Article 3

The following shall be enclosed with the application for a patent:

(a) a description of the plant variety, in three copies, drafted in accordance with the provisions of Article 4, first and second paragraphs;

(b) a photographic representation of the variety, in three copies measuring 21 x 30 centimeters for the better identification of the variety and, in particular, of its specific characteristics;

(c) the information referred to in Article 4, third paragraph, in three copies;

(d) a statement in conformity with the provisions of Article 5, signed by the applicant, in two copies;

(e) proof of payment of the application fee, the fee for the first three-year period, the fee for publication of the description and, where applicable, the fee for the power of attorney;

(f) the power of attorney or other authority where there is a representative; the possibility of filing such a document within the months from the date of filing of the application is reserved, however;

(g) documents evidencing any priority that may be claimed; the possibility of filing them within an absolute time limit of six months following the filing of the application is reserved, however.

The application for a patent shall not be admissible if it is not accompanied by at least one copy of the description of the plant variety, with at least one copy of the photographs, where referred to in the description, and proof of payment of the prescribed fees; in this respect the relevant provisions of Decree of the President of the Republic No. 540 of June 30, 1972, shall apply.

Article 4

The variety shall be described in such a way as to make it clear how it was obtained and what the morphological or physiological characteristics are that distinguish it from other known similar varieties. The description shall mention the denomination proposed by the applicant.

If the repeated use of another variety is necessary for the commercial production of the variety, the characteristics of such other variety shall also be described.

The description may be supplemented with any information and documentation that is considered to be useful for the purposes of the examination of the application and with respect to the results of any growing tests that may have

been carried out in Italy or abroad, particularly with respect to the homogeneity and stability of the characteristics. If the documentation is written in a foreign language, a translation in Italian, certified by the applicant or his representative, shall be enclosed.

Article 5

In the statement referred to in Article 3, under (d), the applicant shall indicate:

(1) that the variety in respect of which protection is applied for is, to his knowledge, a new plant variety within the meaning of Article 1 of Decree of the President of the Republic No. 974 of August 12, 1975;

(2) that the variety and its reproductive or vegetative propagating material have not been, with the agreement of the breeder or his successor in title, the subject of commercial acts for longer than one year in Italy, or for longer than six years in the case of grapevine, forest trees, fruit trees and ornamental trees, including, in each case, their rootstocks, or for longer than four years in the case of the other plants in the territory of any other State;

(3) whether the repeated use of any other protected variety is required for the commercial production of the variety; if so, the written authorization of the owner of the patent to use that other variety shall be enclosed;

(4) that he undertakes to furnish, at the request of the competent bodies of the Ministry of Agriculture and Forestry, within the time limit fixed by those bodies, the reproductive or vegetative propagating material of the variety for the purposes of the examination of the variety;

(5) whether an application for protection has been filed for the same variety in other States; if so, the applicant shall indicate the fate of the application or applications in the various States;

(6) that he renounces the trademark that he may be using if it is identical with the denomination proposed for the variety, and that he undertakes to sign an official instrument of renunciation of the registered mark prior to the grant of the patent.

In the event of failure to comply with the obligation referred to under (4), the application for a patent shall, after notice has been given and a reasonable period allowed for compliance, be considered to have been withdrawn.

Article 6

Appropriate forms may be prescribed by the Central Patent Office for the application for a patent, the description of the variety, the statement under Article 5 and the record of the filing of the application.

Article 7

The denomination of the variety proposed by the applicant must comply with the provisions of Articles 5 and 6 of the Decree of the President of the Republic No. 974 of August 12, 1975.

Where the variety has already been the subject of an application for protection in another State of the International Union for the Protection of New Varieties of Plants, and where its denomination has already been accepted by that State, that denomination shall also be used in Italy, subject to the right of the Central Patent Office to request an Italian translation of the original denomination.

Where a variety, together with its denomination, is in the process of being entered or has already been entered in an official Italian register of plant varieties, the same denomination shall be proposed in the application for a patent.

Article 8

The record of the filing of the application for a patent shall contain the indications referred to in Article 1 of Decree of the President of the Republic No. 540 of June 30, 1972, as well as the other indications provided for in the form that may have been prescribed in accordance with Article 6; a copy of the filing record shall be transmitted to the Ministry of Agriculture and Forestry.

The Central Patent Office shall keep copies of the filing records in bound volumes; these volumes shall constitute the "Register of Applications for Patents for New Plant Varieties."

The date of posting of the notice referred to in the second paragraph of Article 9 of Decree of the President of the Republic No. 974 of August 12, 1975, and the transcriptions and annotations provided for in the legislative and regulatory provisions on patents for inventions shall be recorded in the said Register.

Article 9

The notice to be posted on the notice board of the Office pursuant to Article 9, second paragraph, of Decree of the President of the Republic No. 974 of August 12, 1975, shall indicate the date of filing of the application for a patent, the name and address of the applicant and the name of the breeder, if the latter is not the applicant, the proposed denomination and the genus or species to which the variety belongs, and the essential distinctive characteristics of the latter.

Article 10

The observations to which the examination of the application gives rise shall be communicated to the interested party in accordance with the provisions of Article 9 of Decree of the President of the Republic No. 540 of June 30, 1972.

The advice referred to in Article 11 of Decree of the President of the Republic No. 974 of August 12, 1975, shall be communicated to the interested party only if it is not, or is only partly, in favor of the acceptance of the application for a patent. In such a case, any counter-statements that the interested party may make shall be communicated to the Ministry of Agriculture and Forestry for the formulation of the final advice on which the Office has to act in accordance with Article 12, first paragraph, of the aforementioned Decree. The aforementioned advices shall be accompanied by the indication of adequate grounds.

Where the application for a patent cannot be accepted or is considered to have been withdrawn, the Office shall inform the interested party accordingly and shall proceed to refund the fees paid, with the exception of the application fee. The compensation paid pursuant to the provisions of Article 22bis of Decree of the President of the Republic No. 974 of August 12, 1975, shall only be reimbursed if the technical control tests provided by Articles 11 and 12 of the said Decree of the President of the Republic No. 974/75 have not been started.

Article 11

The applicant shall be invited to propose a new denomination if, in the opinion of the Ministry of Agriculture and Forestry or according to observations presented by offices of other member States of the Union for the Protection of New Varieties of Plants (UPOV), the denomination originally proposed is not in conformity with the provisions of Articles 5 and 6 of Decree of the President of the Republic No. 974 of August 12, 1975.

The proposal for a new denomination shall be submitted within two months from the date of the communication from the Central Patent Office and shall contain a complementary declaration with respect to item (6) of Article 5 above.

If the applicant does not propose a new denomination within the time limit mentioned above, the application for a patent shall be considered to have been withdrawn.

If the rejected denomination is in the process of being entered or has already been entered in an official Italian register of plant varieties, the applicant shall, prior to the grant of the patent, submit appropriate documentation proving that the earlier denomination has been replaced by the approved one.

Article 12

Patents for new plant varieties shall be given serial numbers according to their date of grant, in a manner different from that of patents for inventions. They shall include the indications provided for in Article 13 of Ministerial Decree of February 22, 1973,¹ and shall mention the denomination of the variety.

The patents shall be drawn up in one original and two certified copies; one of the copies shall be remitted to the interested party with the description and the drawings or photographs, and the other shall be retained in the application file.

The originals of the patents shall be kept in separate bound collections, which to all intents and purposes shall constitute the "Register of Patents for New Plant Varieties" and in which the prescribed transcriptions and annotations shall be made in respect of each patent.

The Central Patent Office shall inform the Minister of Agriculture and Forestry of the grant of patents concerning new plant varieties.

Article 13

After the grant of the patent, the description shall be published.

Article 14

The "Register of Denominations of New Plant Varieties" provided for in Article 5, fourth paragraph, of Decree of the President of the Republic No. 974 of August 12, 1975, shall be composed of loose leaves in the alphabetical order of the final denomination given to each patented variety.

All data contained in the corresponding granted patent shall be transcribed on the loose leaf.

Article 14bis

The information of the public provided by Article 30 of the Paris Convention for the Protection of New Varieties of Plants of December 2, 1961, shall be made through the publication of an "Official New Plant Varieties Gazette," edited under the responsibility of the Central Patent Office.

The Bulletin shall be published at least at six months intervals and shall contain:

¹ Implementing Regulations of Decree of the President of the Republic No. 540 of June 30, 1972, in the Field of Patents for Inventions, Utility Models, Industrial Designs and Trademarks (GU of March 15, 1973).

(a) the list of the applications for patents, arranged by varieties and giving, in addition to the number and date of the filing of the application, the name and address of the applicant and the name of the breeder, if the latter is not the applicant, the proposed denomination and a short description of the variety for which protection is applied for;

(b) the list of the patents granted, grouped by genera and species and giving the number and the date of the grant of the patent, the number and the date of filing of the corresponding application, the name and the address of the owner and the variety denomination finally established;

(c) any other information of interest to the public.

The Bulletin shall be sent free of charge, on the basis of exchange, to the competent offices of the other member States of UPOV.

CHAPTER II

VERIFICATION OF THE FEATURES OF PLANT VARIETIES

Article 15

The Advisory Commission established under Article 18 of Decree of the President of the Republic No. 974 of August 12, 1975, shall have its seat at the Ministry of Agriculture and Forestry.

The Chairman, members and alternates referred to in the said Article 18, under (7) to (10), shall be appointed, on a proposal by the competent administration, by a decree issued by the Minister of Agriculture and Forestry.

The same shall apply, in the case of vacancy of a post, to the replacement of the Chairman, members and alternates referred to in the preceding paragraph.

Article 16

The request for an advice submitted to the Commission shall be accompanied by a report from the competent office of the Ministry of Agriculture and Forestry, indicating the required experiments, methodology and inspections, as well as the results obtained and any reports and observations that may have been made by the applicant. The Commission may hear the functionaries who performed the aforementioned acts.

Article 17

The Advisory Commission shall be convened whenever its Chairman considers this necessary.

Convocation shall be by registered letter sent at least ten days prior to the date fixed for the meeting.

The convocation shall indicate the date and time of the meeting and the items on the agenda.

Any member of the Commission may ask the Chairman to include matters of a general nature in the agenda; members may also, prior to the meeting, acquaint themselves with the facts and documents relating to the business to be dealt with.

Article 18

The Commission shall have a quorum when, in addition to its Chairman, the majority of its members are present.

Decisions shall be taken by an absolute majority of the members; in the case of equally divided votes, the Chairman's vote shall prevail.

Article 19

The convocation of parties in the cases provided for in Article 18, last paragraph, of the Decree of the President of the Republic No. 974 of August 12, 1975, shall take place at the discretion of the Chairman, who may set a time limit for the submission of documents and memoranda.

Article 20

Every meeting of the Advisory Commission shall be recorded in minutes drawn up by the Secretary, indicating the agenda, the names of the members present, the summary of the discussion and the decisions taken, with details of the votes.

The minutes shall be signed by the Chairman and by the Secretary and shall be transmitted to all the members of the Commission; in the absence of any observations within 30 days following the date of transmittal, the minutes shall be regarded as approved.

Article 21

The Secretariat of the Commission shall keep the collection of minutes and the protocol register, in which all instruments received and transmitted by the Commission are recorded, and shall keep the files of processed applications for patents.

Article 22

The Ministry of Agriculture and Forestry shall, if this is necessary for the examinations referred to in Article 17 of the Decree of the President of the Republic No. 974 of August 12, 1975, invite the applicant to submit reproductive or vegetative propagating material of the variety.

In the case of hybrid varieties, the Ministry of Agriculture and Forestry may also request, if necessary, the provision of reproductive material of the genealogical components.

Article 23

The institutions and services designated by the Ministry of Agriculture and Forestry to carry out the tests must do so within the time limits and according to the procedure laid down by the Ministry. They shall give a receipt for the material provided and, if the material reaches them in an insufficient quantity or is defective on account of the way in which it has been stored or transported, they shall state the fact in a report, a copy of which they shall transmit to the Ministry.

If the tests do not produce results, or if the results are unreliable, repetition of the tests may be ordered.

Article 24

The applicant may follow the tests; to this end, he may request authorization from the Ministry of Agriculture and Forestry to inspect the growings.

On completion of the tests, the designated institution shall submit to the said Ministry, which shall send a copy to the applicant, a detailed report of the results obtained; the applicant may submit his observations or comments within 30 days following receipt of the copy of the report.

Article 25

In order to ascertain whether the conditions required for the grant of the patent are maintained in the new plant variety being the subject of the patent, the Ministry of Agriculture and Forestry may request, of the owner or his successor in title, the reproductive or vegetative propagating material necessary for the carrying out of the check.

Where a lack of permanency of the conditions is established, or where the material referred to above is not submitted within the time limit set by the Ministry, the documents shall be transmitted to the Advisory Commission for an advice.

The Ministry of Agriculture and Forestry shall communicate the results of its verification to the Central Patent Office.

Federal Republic of Germany and the Netherlands

A new Administrative Agreement providing for cooperation in the examination of plant varieties for distinctness, homogeneity and stability has been concluded between the Bundessortenamt (BSA - Federal Office of Plant Varieties) of the Federal Republic of Germany and the Ministry of Agriculture and Fisheries of the Netherlands.

The new agreement provides for a third category of taxa, for which each of the parties has agreed to base its decision on an application for protection of registration in the national list of varieties--unless an exception is made--on the results of the examination conducted by the other party following an earlier application.

The taxa covered by this agreement, which entered into force on June 1, 1986, are listed below.

1. Taxa whose varieties will be examined by the Federal Republic of Germany on behalf of the Netherlands / Taxons dont les variétés seront examinées par la République fédérale d'Allemagne pour le compte des Pays-Bas / Taxonomische Einheiten, deren Sorten durch die Bundesrepublik Deutschland für die Niederlande geprüft werden

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Achimenes Pers.	Achimenes	Achimenes	Achimenes
Apium graveolens L.	Celeriac	Céleri-rave	Knollensellerie
Arrhenatherum elatius (L.) P. Beauv. ex J.S. et K.B. Presl	Tall Oatgrass	Fromental, Avoine élevée	Glatthafer
Begonia-Elatior-Hybridi	Elatior Begonia	Bégonia elatior	Elatiorbegonie
Brassica napus L. ssp. oleifera (Metzg.) Sinsk	Rape	Colza	Raps
Brassica oleracea L. convar. acephala (DC.) Alef. var. gongylodes	Kohlrabi	Chou-rave	Kohlrabi
Chrysanthemum frutescens L.	Marguerite, Paris Daisy	Marguerite	Strauchmargerite
Euphorbia-Milii-Hybridi	Christ's Thorn Hybrids	Epine du Christ	Christusdorn
Festuca ovina L. sensu lato	Sheep's Fescue	Fétuque ovine	Schafschwingel
Festuca pratensis Hudson	Meadow Fescue	Fétuque des prés	Wiesenschwingel
Fragaria L.	Strawberry	Fraisier	Erdbeere
Impatiens-Hybridi	New Guinea Impatiens	Impatiente de Nouvelle-Guinée	Neu-Guinea-Impatiens
Kalanchoë Adans.	Kalanchoë	Kalanchoë	Kalanchoë
Leptospermum	Leptospermum	Leptospermum	Südseemyrte
Lupinus albus L.	White Lupin	Lupin blanc	Weisse Lupine
Lupinus angustifolius L.	Blue Lupin	Lupin bleu	Blaue Lupine
Lupinus luteus L.	Yellow Lupin	Lupin jaune	Gelbe Lupine
Pelargonium L'Hérit. ex Ait.	Pelargonium	Pelargonium	Pelargonien
Populus L.	Poplar	Peuplier	Pappel
Raphanus sativus L. var. oleiformis Pers.	Fodder Radish	Radis oléifère, Radis chinois	Oelrettich

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Raphanus sativus L. var. niger (Mill.) S. Kerner	Black Radish	Radis d'été, d'automne et d'hiver	Rettich
Rhododendron L.	Rhododendron	Rhododendron	Rhododendron
Ribes L.	Red Currant Black Currant White Currant Gooseberry	Groseillier rouge Cassis Groseillier blanc Groseillier à maquereau	Rote Johannisbeere Schwarze Johannisbeere Weiße Johannisbeere Stachelbeere
Rubus L.	Blackberry Raspberry	Ronce fruitière Framboisier	Brombeere Himbeere
Saintpaulia H. Wendl.	African Violet	Saintpaulia	Usambaraveilchen
Salix L.	Willow	Saule	Weide
Scorzonera hispanica L.	Black Salsify	Scorsonère, Salsifis noir	Schwarzwurzel
Secale cereale L.	Rye	Seigle	Roggen
Streptocarpus Lindl.	African Primrose	Streptocarpus	Streptocarpus

2. Taxa whose varieties will be examined by the Netherlands on behalf of the Netherlands / Taxons dont les variétés seront examinées par les Pays-Bas pour le compte de la République fédérale d'Allemagne / Taxonomische Einheiten, deren Sorten durch die Niederlande für die Bundesrepublik Deutschland geprüft werden

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Aechmea Ruiz et Pav.	Aechmea	Aechmea	Aechmea
Agrostis L.	Bent	Agrostis, Agrostide	Straussgräser
Alstroemeria L.	Alstroemeria	Alstroèmère	Inkalilie
Anthurium Schott	Anthurium	Anthurium	Flamingoblume
Brassica rapa L. emend. Metzger var. rapa	Turnip	Navet	Herbstrübe, Mairübe
Cichorium intybus L.	Chicory Witloof Chicory	Chicorée amère Endive	Wurzelzichorie Salatzichorie
Cotoneaster Medik.	Cotoneaster	Cotoneaster	Cotoneaster
Cynosurus cristatus L.	Crested Dog's-tail	Crételle	Kammgras
Dianthus L.	Carnation	Oeillet	Nelke
Freesia Eckl. ex Klatt	Freesia	Freesia	Freesie
Gerbera L.	Gerbera	Gerbera	Gerbera
Iris L.	Iris	Iris	Iris
Orchidaceae	Orchids	Orchidées	Orchideen
Ulmus L.	Elm	Orme	Ulme
Vriesea splendens (Brongn.) Vriesea Lem.		Vriesea	Vriesea

3. Taxa for which the parties have agreed to take over examination results (unless an exception is made) / Taxons pour lesquels les parties sont convenues de reprendre les résultats des examens (sauf exception) / Taxonomische Einheiten, für die die Parteien vereinbart haben (von Ausnahmen abgesehen), die Prüfungsergebnisse zu übernehmen

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
<i>Allium porrum</i> L.	Leek	Poireau	Porree
<i>Asparagus officinalis</i> L.	Asparagus	Asperge	Spargel
<i>Avena sativa</i> L.	Oat	Avoine	Hafer
<i>Beta vulgaris</i> L. ssp. vulgaris var. alba	Fodder Beet	Betterave fourragère	Runkelrübe
<i>Beta vulgaris</i> L. ssp. vulgaris var. conditiva Alef.	Garden Beet	Betterave rouge, Betterave potagère	Rote Rübe
<i>Brassica oleracea</i> L. convar. acephala (DC.) Alef. var. sabellica L.	Curly Kale	Chou frisé	Grünkohl
<i>Brassica oleracea</i> L. convar. capitata (L.) Alef. var. capitata	Red Cabbage White Cabbage	Chou rouge Chou cabus	Rotkohl Weisskohl
<i>Brassica oleracea</i> L. convar. capitata (L.) Alef. var. sabauda L.	Savoy Cabbage	Chou de Milan	Wirsing
<i>Brassica pekinensis</i> (Lour.) Rupr.	Chinese Cabbage	Chou de Chine, Pé-tsai	Chinakohl
<i>Cucumis sativus</i> L.	Cucumber, Gherkin	Concombre, cornichon	Gurke
<i>Daucus carota</i> L.	Carrot	Carotte	Möhre
<i>Festuca rubra</i> L. sensu lato	Red Fescue	Fétuque rouge	Ausläuferrotschwingel, Horstrotschwingel
<i>Hordeum vulgare</i> L. sensu lato	Barley	Orge	Gerste
<i>Lactuca sativa</i> L.	Lettuce	Laitue	Salat
<i>Lolium X boucheanum</i> Kunth	Hybrid Ryegrass	Ray-grass hybride	Bastardweidelgras
<i>Lolium multiflorum</i> Lam.	Italian Ryegrass	Ray-grass d'Italie	Einjähriges und Welsches Weidelgras
<i>Lolium perenne</i> L.	Perennial Ryegrass	Ray-grass anglais	Deutsches Weidelgras
<i>Phaseolus vulgaris</i> L.	Dwarf French Bean Climbing French Bean	Haricot nain Haricot à rames	Buschbohne Stangenbohne
<i>Pisum sativum</i> L. (partim)	Field Pea	Pois fourrager	Futtererbse
<i>Pisum sativum</i> L. (partim)	Pea	Pois, sauf pois fourrager	Erbse ausser Futtererbse
<i>Raphanus sativus</i> L. var. sativus	Radish	Radis de tous les mois	Radieschen
<i>Rosa</i> L.	Rose	Rosier	Rose
<i>Spinacia oleracea</i> L.	Spinach	Epinard	Spinat
<i>Triticum aestivum</i> L. emend. Fiori et Paol.	Wheat	Blé tendre, Froment	Weichweizen
<i>Vicia faba</i> L. (partim)	Field Bean	Féverole	Ackerbohne
<i>Vicia faba</i> L. (partim)	Broad Bean	Fève	Dicke Bohne

CALENDAR

UPOV Meetings

June 2 to 4 Bamberg (Federal Republic of Germany)	Technical Working Party for Vegetables
June 10 to 12 Copenhagen (Denmark)	Technical Working Party on Automation and Computer Programs
June 17 and 18	Administrative and Legal Committee
June 23 to 25	Technical Working Party for Agricultural Crops
October 13 and 14	Technical Committee
October 15 and 16	Administrative and Legal Committee
October 19	Consultative Committee
October 20 and 23	Council
October 21 and 22	Meeting with International Organizations

Meetings of Other International Organizations

June 4 and 5 Ithaca, New York (United States of America)	WIPO and Cornell University - Symposium on the Protection of Biotechnological Inventions
June 29 to July 3	WIPO - Committee of Experts on Biotechnological Inventions and Industrial Property
September 10 and 11 Washington D.C. (United States of America)	CIOFORA - Fifth Colloquium an Plant Breeders' Rights
October 26 and 27 Brussels (Belgium)	COMASSO - General Assembly
November 14 to 18 Christchurch (New Zealand)	FIS Congress
November 20 Christchurch (New Zealand)	ASSINSEL Congress

The International Union for the Protection of New Varieties of Plants (UPOV)--an international organization established by the International Convention for the Protection of New Varieties of Plants--is the international forum for States interested in plant variety protection. Its main objective is to promote the protection of the interests of plant breeders--for their benefit and for the benefit of agriculture and thus also of the community at large--in accordance with uniform and clearly defined principles.

"Plant Variety Protection" is a UPOV publication that reports on national and international events in its field of competence and in related areas. It is published in English only--although some items are trilingual (English, French and German)--at irregular intervals, usually at a rate of four issues a year. Subscription orders may be placed with:

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