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PLANT VARIETY PROTECTION

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

No. 59

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Geneva

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GAZETTE**ACCESSION TO THE REVISED ACT OF 1978
OF THE UPOV CONVENTION****Poland**

The Government of Poland deposited on October 11, 1989, its instrument of accession to 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.

The said Convention entered into force with respect to Poland one month after the date on which its Government deposited its instrument of accession, i.e. on November 11, 1989. On that date, Poland became a member of the International Union for the Protection of New Varieties of Plants.

The Seed Industry Law of October 10, 1987, and an extract from the Decree of the Minister for Agriculture, Forestry and Food Economy Concerning the Register of Varieties, the Roll of Exclusive Rights in Varieties and the Control of Seeds and Plants of April 14, 1988, will be published in the Legislation subsection of the next issue.

The list of taxa to which the said Law is applied both in respect of plant variety protection and variety listing is given below, starting overleaf.

NEWSLETTER**MEMBER STATES****Poland: Address of the Plant Variety Protection Office**

The Research Center for Varieties of Cultivated Plants in Slupia Wielka near Poznan has been appointed as the authority responsible for the administration of the plant variety protection system. Its address is as follows:

Centralny Ośrodek Badania Odmian Roslin Uprawnych (COBORU)
63-022 Slupia Wielka
Poland

Telephone: Sloda Wielkopolska 53 558 (Director of COBORU), 52 341
(switchboard)
Telex: 412 276 cobo pl

Poland: Appointment of Representatives to the Council

Prof. Eugeniusz Bilski, Director of COBORU, and Mr. Jan Virion, General Expert in the Department of Agricultural Production of the Ministry of Agriculture, Forestry and Food Economy have been appointed as representative and alternate representative, respectively, on the Council of UPOV.

List of the Crop Plants Whose Cultivars are Eligible
for Entry in the Register of Cultivars or the Book of Protection of Exclusive Rights in Cultivars

Liste des plantes cultivées dont les cultivars peuvent être inscrits
au Registre des cultivars ou au Livre de la protection des droits exclusifs sur les cultivars

Liste der Kulturpflanzen, deren Sorten in das Sortenregister
oder das Buch zum Schutz der ausschliesslichen Sortenrechte eingetragen werden können

AGRICULTURAL CROPS / PLANTES AGRICOLES / LANDWIRTSCHAFTLICHE ARTEN

Cereals / Céréales / Getreide

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Owies	Avena sativa L.	Oats	Avoine	Hafer
Gryka	Fagopyrum esculentum Moench	Buckwheat	Sarrasin, Blé noir	Buchweizen
Jeczmien	Hordeum vulgare L. sensu lato	Barley	Orge	Gerste
Proso	Panicum miliaceum L.	Common Millet	Millet commun, Panic millet, Panic faux millet	Rispenhirse
Zyto	Secale cereale L.	Rye	Seigle	Roggen
Pszenzyto	X Triticosecale Wittmack	Triticale	Triticale	Triticale
Pszenica zwyczajna	Triticum aestivum L. emend. Fiori et Paol.	Wheat, Soft Wheat, Bread Wheat	Blé tendre, Froment	Weichweizen
Kukurydza	Zea mays L.	Maize	Maïs	Mais

Pulses / Légumineuses à grosses graines / Mittel- und Grosskörnige Leguminosen

Soja	Glycine max (L.) Merrill	Soya Bean, Soybean	Soja	Sojabohne
Lubin biały	Lupinus albus L.	White Lupin	Lupin blanc	Weisslupine
Lubin wąskolistny	Lupinus angustifolius L.	Blue Lupin	Lupin bleu	Blaue Lupine
Lubin żółty	Lupinus luteus L.	Yellow Lupin	Lupin jaune	Gelbe Lupine
Groch siewny	Pisum sativum L. sensu lato	Pea	Pois	Erbse
Bobik	Vicia faba L. var. minor Harz	Field Bean, Tick Bean	Féverole	Ackerbohne
Wyka siewna	Vicia sativa L.	Common Vetch	Vesce commune	Saatwicke
Wyka kosmata	Vicia villosa Roth	Hairy Vetch	Vesce velue	Zottelwicke

Fodder Legumes / Légumineuses fourragères / Kleinkörnige Futterleguminosen

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Komonica zwyczajna (rozkowa)	<i>Lotus corniculatus</i> L.	Bird's Foot Trefoil	Lotier corniculé	Hornschotenklee
Komonica blotna	<i>Lotus uliginosus</i> Schkuhr	Major Bird's Foot Trefoil	Lotier velu, Lotier des marais	Sumpfschotenklee
Lucerna chmielowa	<i>Medicago lupulina</i> L.	Black Medick, Yellow Trefoil	Luzerne lupuline, Minette	Gelbklee (Hopfenklee)
Lucerna siewna	<i>Medicago sativa</i> L.	Lucerne, Alfalfa	Luzerne (cultivée)	Blaue Luzerne
Lucerna mieszańcowa	<i>Medicago X varia</i> Martyn	(Hybrid) Lucerne	Luzerne hybride	Bastardluzerne
Nostrzyk biały	<i>Melilotus albus</i> L.	White Sweet Clover	Mélilot blanc	Weisser Steinklee
Esparceta	<i>Onobrychis viciifolia</i> Scop.	Sainfoin	Sainfoin, Esparcette	Esparsette
Seradela	<i>Ornithopus sativus</i> Brot.	Serradella	Serradelle	Serradella
Koniczyna szwedzka	<i>Trifolium hybridum</i> L.	Alsike Clover	Trèfle hybride	Schwedenklee
Koniczyna krwistoczerwona (inkarnatka)	<i>Trifolium incarnatum</i> L.	Crimson Clover	Trèfle incarnat	Inkarnatklee
Koniczyna czerwona	<i>Trifolium pratense</i> L.	Red Clover	Trèfle violet	Rotklee
Koniczyna biała	<i>Trifolium repens</i> L.	White Clover	Trèfle blanc	Weissklee
Koniczyna perska	<i>Trifolium resupinatum</i> L.	Persian Clover	Trèfle de Perse	Persischer Klee

Fodder and Lawn Grasses / Graminées fourragères et à gazon / Futter- und Rasengräser

Mietlica psia	<i>Agrostis canina</i> L.	Velvet Bent	<i>Agrostis des chiens</i>	Hundsstraussgras
Mietlica biaława	<i>Agrostis gigantea</i> Roth	Red Top (Black Bent)	<i>Agrostide blanche, Agrostide géante</i>	Weisses Straussgras
Mietlica pośrednia	<i>Agrostis intermedia</i> Veb.	-	-	-
Mietlica rozłogowa	<i>Agrostis stolonifera</i> L.	Creeping Bent	<i>Agrostide blanche, Agrostide stolonifère</i>	Flechtstraussgras
Mietlica mieszańcowa	<i>Agrostis stolonifera</i> L. X <i>Agrostis canina</i> L. et <i>Agrostis tenuis</i> Sibth. X <i>Agrostis canina</i>	-	-	-

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Mietlica pospolita	Agrostis tenuis Sibth.	Brown Top, Common Bent	Agrostide commune	Rotes Straussgras
Wyczyniec czerwono-zółty	Alopecurus aequalis Sobol.	-	-	-
Wyczyniec lakowy	Alopecurus pratensis L.	Meadow Foxtail	Vulpin des prés	Wiesenfuchsschwanz
Rajgras wyniosły (francuski)	Arrhenatherum elatius (L.) P. Beauv. ex J.S et K.B. Presl	Tall Oatgrass, False Oatgrass	Fromental, Avoine élevée	Glatthafer
Stokłosa bezostna	Bromus inermis Leyss.	Smooth Brome (Awnless Brome)	Brome inerme	Wehrlose Trespe
Stokłosa uniolowata	Bromus unioloides H.B.K.	Rescue Grass	Brome de Schrader	Horntrespe
Kupkówka pospolita	Dactylis glomerata L.	Cocksfoot, Orchard Grass	Dactyle	Knaulgras
Kostrzewa trzciniowa	Festuca arundinacea Schreb.	Tall Fescue	Fétuque élevée	Rohrschwinkel
Kostrzewa różnolistna	Festuca heterophylla Lam.	Shade Fescue	Fétuque hétéro- phyllé	Borstenschwingel, Verschiedenblät- tiger Schwinkel
Kostrzewa owcza	Festuca ovina L. sensu lato	Hard Fescue, Sheep's Fescue	Fétuque durette, Fétuque ovine, Fétuque des moutons, Poil de chien	Schafschwingel
Kostrzewa lakowa	Festuca pratensis Huds.	Meadow Fescue	Fétuque des prés	Wiesenschwingel
Kostrzewa czerwona	Festuca rubra L. sensu lato	Red Fescue, Creeping Fescue	Fétuque rouge	Rotschwinkel
Zycica mieszańcowa (rajgras olden- burski)	Lolium X boucheanum Kunth	Hybrid Ryegrass	Ray-grass hybride	Bastardweidelgras, Oldenburgisches Weidelgras
Zycica wielok- wiatowa (rajgras włoski)	Lolium multiflorum Lam.	Italian Ryegrass, Westerwold Ryegrass	Ray-grass d'Italie	Welsches Weidel- gras, Italieni- sches Raygras
Zycica wielok- wiatowa wester- woldzka (rajgras holenderski)	Lolium multiflorum Lam. ssp. gaudini (Parl.) Schintz et Kell.	Westerwold Ryegrass	Ray-grass de Westerwold	Welsches Weidel- gras

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Zycica trwała (rajgras angielski)	<i>Lolium perenne</i> L.	Perennial Ryegrass	Ray-grass anglais	Deutsches Weidel- gras
Mozga trzcinowata	<i>Phalaris arundinacea</i> L.	Reed Canary Grass	Alpiste roseau	Rohrglanzgras
Tymotka dzika	<i>Phleum bertolonii</i> DC.	Timothy	Fléole diploïde, Petite fléole	Zwiebellieschgras
Tymotka lakowa	<i>Phleum pratense</i> L.	Timothy	Fléole des prés	Wiesenlieschgras
Wiechlina roczna	<i>Poa annua</i> L.	Annual Meadow- grass	Pâturin annuel	Einjähriges Rispengras
Wiechlina spłaszczona	<i>Poa compressa</i> L.	Canada Bluegrass, Flattened Meadow- grass	Pâturin comprimé	Flaches Rispengras
Wiechlina blotna	<i>Poa palustris</i> L.	Swamp Meadow- grass	Pâturin des marais	Sumpfrispengras
Wiechlina lakowa	<i>Poa pratensis</i> L.	Kentucky Blue- grass, Smooth Stalked Meadow- grass	Pâturin des prés	Wiesenrispengras

Root and Tuber Crops /Plantes à racines et tubercules / Wurzel- und Knollenpflanzen

Burak cukrowy	<i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>altissima</i> Doell	Sugar Beet	Betterave sucrière	Zuckerrübe
Burak pastewny	<i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>crassa</i> Alef.	Fodder Beet	Betterave fourragère	Runkelrübe
Brukiew pastewna	<i>Brassica napus</i> L. var. <i>napobrassica</i> (L.) Rchb.	Swede	Chou-navet, Rutabaga	Kohlrübe
Rzepa	<i>Brassica rapa</i> L. var. <i>rapa</i> (L.) Thell.	Turnip	Navet	Herbstrübe
Cykorcia korzeniowa	<i>Cichorium intybus</i> L. var. <i>sativum</i> DC.	Large-rooted Chicory	Chicorée à café	Wurzelzichorie
Marchew pastewna	<i>Daucus carota</i> L.	Fodder Carrot	Carotte fourragère	Futtermöhre
Ziemniak	<i>Solanum tuberosum</i> L. sensu lato	Potato	Pomme de terre	Kartoffel

Oil Crops / Plantes oléagineuses / Oelpflanzen

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Gorczyca sarepska	Brassica juncea (L.) Czern. et Coss. in Czern.	Brown Mustard	Moutarde brune	Sareptasenf
Rzepak	Brassica napus L. ssp. oleifera (Metzg.) Sinsk	Swede Rape, incl. Oilseed Rape	Colza	Raps
Rzepak	Brassica rapa L. var. silvestris (Lam.) Briggs	Turnip Rape	Navette	Rübsen
Slonecznik	Helianthus annuus L.	Common Sunflower	Tournesol, Soleil	Sonnenblume
Len oleisty	Linum usitatissimum L.	Flax, Linseed	Lin	Lein
Mak	Papaver somniferum L.	Opium Poppy	Oeillette, Pavot	Mohn
Rzodkiew oleista	Raphanus sativus L. var. oleiformis Pers.	Fodder Radish	Radis oléifère, Radis chinois	Oelrettich
Gorczyca biała	Sinapis alba L.	White Mustard	Moutarde blanche	Weisser Senf

Fibre Crops / Plantes à fibres / Faserpflanzen

Konopie	Cannabis sativa L.	Hemp	Chanvre	Hanf
Len włóknisty	Linum usitatissimum L.	Flax, Linseed	Lin	Lein

Special Industrial Crops / Plantes industrielles particulières / Besondere Industripflanzen

Chmiel	Humulus lupulus L.	Hop	Houblon	Hopfen
Machorka	Nicotiana rustica L.	Syrian Tobacco	Nicotiane rustique	Bauerntabak
Tyton szlachetny	Nicotiana tabacum L.	Tobacco (common)	Tabac	Tabak

Miscellaneous Crops / Plantes diverses / Verschiedene Pflanzen

Kapusta pastewna	Brassica oleracea L. convar. acephala (DC.) Alef. var. viridis L. + var. medullosa Thell.	Fodder Kale	Chou fourrager	Futterkohl
Rzepak (mieszance pastewne)	Brassica rapa L.	Turnip Rape (Fodder Hybrids)	Navette (hybrides fourragers)	Rübsen (Futterhybriden)
Facelia błękitna	Phacelia tanacetifolia Benth.	Scorpion Weed	Phacélie à feuilles de tanaïs	Phazelie

Medicinal and Seasonal Plants / Plantes médicinales et aromatiques / Arznei- und Gewürzpflanzen

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Malwa czarna (prawosław wysoki)	<i>Althaea rosea</i> Cav. var. <i>nigra</i> hort.	Hollyhock	Rose trémière	Stockmalve, Stockrose
Rumianek rzymski	<i>Anthemis nobilis</i> L.	Roman Chamomile, English Chamomile	Anthémis noble, Camomille romaine	Römische Kamille, Edelkamille
Pokrzyk wilcza jagoda	<i>Atropa bella-donna</i> L.	Belladonna	Belladone	Tollkirsche
Pieprzowiec roczny	<i>Capsicum annuum</i> L.	Sweet Pepper, Capsicum, Chili	Poivron, Piment	Paprika
Kminek zwyczajny	<i>Carum carvi</i> L.	Caraway	Carvi, Cumin des prés	Kümmel
Glistnik jaskółcze zielo	<i>Chelidonium majus</i> L.	Celandine	Chélidoine, Herbe-aux-verrues	Schöllkraut
Kolendra siewna	<i>Coriandrum sativum</i> L.	Coriander	Coriandre	Koriander
Bielun indyjski	<i>Datura innoxia</i> Mill.	Datura, Thorn Apple	Datura	Stechapfel
Naparstnica wełnista	<i>Digitalis lanata</i> Ehrh.	Grecian Foxglove	Digitale laineuse	Wolliger Fingerhut
Naparstnica purpurowa	<i>Digitalis purpurea</i> L.	Common Foxglove, Purple Foxglove	Digitale pourpre	Roter Fingerhut
Koper włoski	<i>Foeniculum capillaceum</i> Gilib.	Fennel	Fenouil	Fenchel
Siwiec żółty	<i>Glaucium flavum</i> Crantz	Yellow Horn Poppy	Glaucie jaune	Gelber Hornmohn
Dziurawiec zwyczajny	<i>Hypericum perforatum</i> L.	Common Saint John's Wort	Millepertuis perforé	Johanniskraut
Rumianek pospolity	<i>Matricaria chamomilla</i> L.	German Chamomile, Wild Chamomile	Matricaire camomille	Echte Kamille
Mieta pieprzowa	<i>Mentha piperita</i> L.	Peppermint	Menthe poivrée	Pfefferminze
Majeranek ogrodowy	<i>Origanum majorana</i> L.	Sweet Marjoram	Marjolaine	Majoran
Rzewień chiński	<i>Rheum palmatum</i> L.	Sorrel Rhubarb, Chinese Rhubarb	Rhubarbe palmée, Rhubarbe de Chine	Medizinallrhabarber
Szałwia lekarska	<i>Salvia officinalis</i> L.	Common Sage	Sauge officinale	Echter Salbei
Czaber ogrodowy	<i>Satureja hortensis</i> L.	Summer Savory	Sarriette commune	Bohnenkraut, Pfefferkraut, Kölle

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Ostropest platmisty	Silybum marianum L.	Milk Thistle, Saint Mary's Thistle	Chardon-Marie	Mariendistel
Tymianek pospolity	Thymus vulgaris L.	Common Thyme	Thym ordinaire	Gartenthymian
Kozłek lekarski	Valeriana officinalis L.	Common Valerian	Valériane offici- nale	Gemeiner Baldrian

VEGETABLES / PLANTES POTAGERES / GEMUESEPFLANZENAlliums / Alliaceés / Lauch

Cebula	Allium cepa L.	Onion	Oignon	Zwiebel
Por	Allium porrum L.	Leek	Poireau	Porree
Czosnek pospolity	Allium sativum L.	Garlic	Ail	Knoblauch

Cucurbits / Cucurbitacées / Kürbisgewächse

Melon	Cucumis melo L.	Melon	Melon	Melone
Ogórek	Cucumis sativus L.	Cucumber, Gherkin	Concombre, Cornichon	Gurke
Dynia olbrzymia	Cucurbita maxima Duch.	Pumpkin	Potiron, Giraumon	Riesenkürbis
Dynia zwyczajna	Cucurbita pepo L.	Pumpkin, Marrow, Courgette, Vegetable Marrow	Courge, Courgette, Pâtisson, Citrouille	Gartenkürbis, Oelkürbis, Zucchini

Brassicas / Choux / Kohl

Kalarepa	Brassica oleracea L. convar. acephala (DC.) Alef. var. gongylodes L.	Kohlrabi	Chou-rave	Kohlrabi
Jarmuz	Brassica oleracea L. convar. acephala (DC.) Alef. var. sabellica L.	Curly Kale	Chou frisé	Grünkohl
Kalafior	Brassica oleracea L. convar. botrytis (L.) Alef. var. botrytis	Cauliflower	Chou-fleur	Blumenkohl

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Brokul	<i>Brassica oleracea</i> L. convar. <i>botrytis</i> (L.) Alef. var. <i>cymosa</i> Duch.	Sprouting Broccoli, Calabrese	Brocoli (à jets)	Brokkoli, Spargelkohl, Sprossenbrokkoli
Kapusta glowiasta biala	<i>Brassica oleracea</i> L. convar. <i>capitata</i> (L.) Alef. var. <i>capitata</i> L. f. <i>alba</i> DC.	White Cabbage	Chou cabus	Weisskohl
Kapusta glowiasta czerwona	<i>Brassica oleracea</i> L. convar. <i>capitata</i> (L.) Alef. var. <i>capitata</i> L. f. <i>rubra</i> L.	Red Cabbage	Chou rouge	Rotkohl
Kapusta wloska	<i>Brassica oleracea</i> L. convar. <i>capitata</i> (L.) Alef. var. <i>sabauda</i> L.	Savoy Cabbage	Chou de Milan	Wirsing
Kapusta brukselska	<i>Brassica oleracea</i> L. convar. <i>oleracea</i> var. <i>gemmifera</i> DC.	Brussels Sprouts	Chou de Bruxelles	Rosenkohl

Root Vegetables / Légumes-racines / Wurzelgemüse

Seler korzeniowy	<i>Apium graveolens</i> L. var. <i>rapaceum</i> (Mill.) Gaud.	Celeriac	Céleri-rave	Knollensellerie
Chrzan	<i>Armoracia rusticana</i> Gaertn., Mey. et Scherb.	Horse Radish	Raifort sauvage	Meerrettich
Burak cwiklowy	<i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>conditiva</i> Alef.	Garden Beet, Beetroot	Betterave rouge, Betterave potagère	Rote Rübe
Marchew jadalna	<i>Daucus carota</i> L.	Carrot	Carotte	Möhre
Pietruszka korzeniowa	<i>Petroselinum crispum</i> (Mill.) Nym. ex A.W. Hill ssp. <i>tuberosum</i> (Bernh. ex Rchb.) Soo.	Turnip-rooted Parsley	Persil à grosse racine	Wurzelpetersilie
Skorzonera	<i>Scorzonera hispanica</i> L.	Black Salsify	Scorsonère, Salsifis noir	Schwarzwurzel

Cruciferous Root Vegetables / Crucifères potagères à racines / Kreuzblütler-Wurzelgemüse

Brokiew jadalna	<i>Brassica napus</i> L. var. <i>napobrassica</i> (L.) Rchb.	Swede	Chou-navet, Rutabaga	Kohlrübe
Rzepa	<i>Brassica rapa</i> L. var. <i>rapa</i> (L.) Thell.	Turnip	Navet	Mairübe

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Rzodkiew	Raphanus sativus L. var. niger (Mill.) S. Kerner	Black Radish	Radis d'été, d'automne et d'hiver	Rettich
Rzodkiewka	Raphanus sativus L. var. sativus	Radish	Radis de tous les mois	Radieschen

Leaf Vegetables / Légumes-feuilles / Blattgemüse

Cykoria салатowa	Cichorium intybus L. var. foliosum Hegi	Salad Chicory	Chicorée amère	Salatzichorie
Salata	Lactuca sativa L.	Lettuce	Laitue	Salat
Rabarbar	Rheum rhabarbarum L.	Rhubarb	Rhubarbe	Krauser Rhabarber
Szczaw	Rumex acetosa L.	Garden Sorrel	Oseille	Gartensauerampfer
Szpinak	Spinacia oleracea L.	Spinach	Épinard	Spinat

Solanaceae / Solanacées / Nachtschattengewächse

Papryka	Capsicum annuum L.	Sweet Pepper, Capsicum, Chili	Poivron, Piment	Paprika
Pomidor	Lycopersicon lycopersicum (L.) Karst. ex Farwell	Tomato	Tomate	Tomate
Oberzyna	Solanum melongena L.	Eggplant, Aubergine	Aubergine	Eierfrucht, Aubergine

Edible Pulses / Légumineuses potagères / Gemüseleguminosen

Fasola wielok- wiatowa	Phaseolus coccineus L.	Runner Bean, Kidney Bean	Haricot d'Espagne	Prunkbohne
Fasola zwyczajna	Phaseolus vulgaris L.	French Bean	Haricot	Gartenbohne
Groch	Pisum sativum L. sensu lato	Pea	Pois	Erbse
Bób	Vicia faba L. var. major Harz	Broad Bean, Horse Bean	Fève	Dicke Bohne (Puffbohne)

Miscellaneous Vegetables / Plantes potagères diverses / Verschiedene Gemüsepflanzen

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Koper ogrodowy	<i>Anethum graveolens</i> L.	Dill	Aneth	Dill
Szparag	<i>Asparagus officinalis</i> L.	Asparagus	Asperge	Spargel
Kukurydza pekajaca	<i>Zea mays</i> L. ssp. <i>everta</i> Sturt.	Popcorn	Popcorn	Puffmais, Perlmais, "Popcorn"
Kukurydza cukrowa	<i>Zea mays</i> L. ssp. <i>saccharata</i> Koern.	Sweet Maize	Maïs sucré	Zuckermals

ORNAMENTAL PLANTS / PLANTES ORNEMENTALES / ZIERPFLANZENGARDEN PLANTS / PLANTES DE JARDIN / GARTENPFLANZENAnnual Plants / Plantes annuelles / Einjährige Pflanzen

Zeniszek meksykanski	<i>Ageratum houstonianum</i> Mill.	Ageratum, Flossflower	Ageratum du Mexique	Leberbalsam
Wyzlin wiekszy, Lwia paszcza	<i>Antirrhinum majus</i> L.	Common Snapdragon	Muflier, Gueule de loup, Gueule de lion	Löwenmaul
Begonia stale kwitnaca	<i>Begonia semperflorens-cultorum</i> Krauss	Perpetual Begonia	Bégonia semperflorens	Immerblühende Begonie
Nagietek lekarski	<i>Calendula officinalis</i> L.	Pot Marigold	Souci des jardins	Gartenringelblume
Aster chinski	<i>Callistephus chinensis</i> (L.) Nees	China Aster	Aster, Aster de Chine, Reine-marguerite	Sommeraster
Zlocien maruna	<i>Chrysanthemum parthenium</i> (L.) Bernh.	Feverfew	Grande camomille, Matricaire	Falsche Kamille
Koleus Blumego	<i>Coleus blumei</i> Benth.	Coleus, Flame Nettle	Coleus	Coleus, Buntnessel
Nachylek barwierski	<i>Coreopsis tinctoria</i> Nutt.	Plains Coreopsis	Coréopsis élégant	Zweifarbiges Mädchenauge
Gozdzik chinski	<i>Dianthus chinensis</i> L.	Chinese Pink, Indian Pink	Oeillet de Chine	Chinesische Nelke
Eszolcja kalifornijska	<i>Eschscholzia californica</i> Cham.	California Poppy	Eschscholtzie de Californie, Pavot de Californie	Schlafmützchen, Kappennohn

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Godecja wielkokwiatowa	Godetia grandiflora Lindl.	Godetia	Godétie	Godetie, Atlasblume
Kocanka ogrodowa	Helichrysum bracteatum (Vent.) Willd.	Everlasting	Immortelle à bractées	Gartenstrohblume
Niecierpek balsamina	Impatiens balsamina L.	Garden Balsam	Balsamine des jardins	Gartenbalsamine
Niecierpek waleriana	Impatiens wallerana Hook. f.	Busy Lizzie	Impatiente	Fleissiges Lieschen
Groszek pachnacy	Lathyrus odoratus L.	Sweet Pea	Pois de senteur, Gesse odorante	Wohlriehende Wicke
Lobelia przyładkowa	Lobelia erinus L.	True Lobelia of Gardens	Lobélie des jardins	Lobelia
Lobularia nadmorska, smagliczka	Lobularia maritima (L.) Desv.	Sweet Alyssum	Alysse maritime, Alysse odorante	Duftsteinrich
Lewkonia letnia	Matthiola incana (L.) R. Br.	Common Stock	Giroflée d'hiver	Levkoje
Petunia ogrodowa	Petunia X hybrida Vilm.	Petunia	Pétunia	Petunie
Szalwia blyszczaca	Salvia splendens Sello ex Nees	Scarlet Sage	Sauge éclatante du Brésil	Scharlachrote Salbei
Aksamitka wyniosla	Tagetes erecta L.	African Marigold, Aztec Marigold	Rose d'Inde	Aufrechte Studentenblume
Aksamitka rozpierzchla	Tagetes patula L.	French Marigold	Oeillet d'Inde	Ausgebreitete Studentenblume
Aksamitka waskolistna	Tagetes tenuifolia Cav.	Striped Mexican Marigold	Tagète taché, Tagète maculé	-
Werbena ogrodowa	Verbena X hybrida Voss	Common Garden Verbena, Florists' Verbena	Verveine hybride	Gartenverbene
Cynia wytworna	Zinnia elegans Jacq.	Youth-and-old-age, Youth and Age	Zinnia élégant	Zinnie

Biennial Plants / Plantes bisannuelles / Zweijährige Pflanzen

<u>Polaki</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Prawosław różowy, malwa	<i>Althaea rosea</i> (L.) Cav.	Hollyhock	Rose trémière	Stockmalve, Stockrose
Stokrotka pospolita	<i>Bellis perennis</i> L.	True Daisy, English Daisy	Pâquerette	Gänseblümchen, Tausendschön
Gozdzik brodaty	<i>Dianthus barbatus</i> L.	Sweet William	Oeillet de poète	Bartnelke
Niezapominajka alpejska	<i>Myosotis alpestris</i> F.W. Schmidt	Alpine Forget- me-not	<i>Myosotis des Alpes</i>	Alpenvergiss- meinnicht
Bratek ogrodowy	<i>Viola X wittrockiana</i> Gams	Pansy	Pensée	Veilchen, Garten- stiefmütterchen

Non-winterhardy Perennial Plants / Plantes pérennes sensibles au froid /
Nichtwinterfeste ausdauernde Pflanzen

Begonia bulwiasta	<i>Begonia X tuberhybrida</i> Voss	Tuberous Begonia	<i>Bégonia tubéreux</i>	Knollenbegonie
Dalia	<i>Dahlia X cultorum</i> Thorsr. et Reis.	Dahlia	Dahlia	Dahlie
Mieczyk	<i>Gladiolus X hybridus</i> hort.	Gladiolus	Glaïeul	Gladiole
Pelargonium rabatowa	<i>Pelargonium X hortorum</i> L.H. Bailey	Zonal Pelargonium	Géranium, Pelargonium zonale	Zonalpelargonie
Pelargonium bluszczolistna	<i>Pelargonium peltatum</i> hort. non (L.) L'Hér. ex Ait.	Ivy-leaved Pelargonium	Géranium-lierre	Efeupelargonie

Perennial Plants / Plantes pérennes / Ausdauernde Pflanzen

Złocien	<i>Chrysanthemum</i> L.	Chrysanthemums, Daisies	Chrysanthèmes, Marguerites	Chrysanthemen, Margueriten
Krokus	<i>Crocus</i> L.	Crocus	Crocus	Krokus
Hiacynt wschodni	<i>Hyacinthus orientalis</i> L.	Common Hyacinth	Jacinthe	Hyazinthe
Kosaciec	<i>Iris</i> L.	Iris	Iris	Iris, Schwertlilie
Lilia	<i>Lilium</i> L.	Lily	Lis	Lillie
Narcyz	<i>Narcissus</i> L.	Narcissus, Daffo- dil, Jonquil	Narcisse, Jonquille	Narzisse
Piwonia chinska	<i>Paeonia albiflora</i> Pall.	Chinese Paeony	Pivoine de Chine	Chinesische Paeonie
Tulipan	<i>Tulipa</i> L.	Tulip	Tulipe	Tulpe

Shrubs / Buissons / Sträucher

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Forsycja	Forsythia Vahl	Forsythia, Golden Bell	Forsythia	Forsythie, Goldflieder, Goldglöckchen
Jasminowiec	Philadelphus L.	Mock Orange	Seringa	Pfeifenstrauch, Falscher Jasmin
Róża	Rosa L.	Rose	Rosier	Rose
Lilak	Syringa L.	Lilac	Lilas	Flieder
Krzewuszka	Weigela Thunb.	Diervilla	Weigela	Weigelia

GREENHOUSE PLANTS / PLANTES DE SERRE / GEWÄCHSHAUSPFLANZEN

Alstremeria	Alstroemeria L.	Alstroemeria, Herb Lily	Alstroemère, Lis des Incas	Inkalilie
Anturium uprawne	Anthurium X cultorum Birdsey	Anthurium, Tail Flower	Anthurium	Grosse Flamingo- blume
Anturium ogrodowe	Anthurium X hortulanum Birdsey	Anthurium, Tail Flower	Anthurium	Kleine Flamingo- blume
Begonia	Begonia L.	Begonia	Bégonia	Begonie
Pantofelnik ogrodowy	Calceolaria X herbeohybrida Voss	Slipperwort, Slipper Flower	Calcéolaire hybride	Pantoffelblume
Złocien ogrodowy	Chrysanthemum X hortorum L.H. Bailey	Chrysanthemum	Chrysanthème	Chrysanthème
Cykla men perski	Cyclamen persicum Mill.	Ivy-leaved Cyclamen, Persian Cyclamen	Cyclamen de Perse	Alpenveilchen
Gozdzik szklarniowy	Dianthus caryophyllus L. semper- florens fl. pl. hybridus hort.	Carnation	Oeillet	Nelke
Frezja	Freesia Eckl. ex Klatt	Freesia	Freesia	Freesie
Gerbera Jamesona	Gerbera jamesonii H. Bolus ex Hook. f.	Gerbera	Gerbera	Gerbera
Zwartnica posrednia	Hippeastrum X hortorum Maatsch	Amaryllis	Amaryllis	Ritterstern, Amaryllis

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Kalanchoe	Kalanchoë X hybrida hort.	Kalanchoë	Kalanchoë	Kalanchoë
Pierwiosnek zwyczajny	Primula vulgaris Huds.	Primrose	Primevère	Kissenprimel
Starzec popielny	Senecio cruentus (Masson ex L'Hér.) DC.	Florists' Cine- raria	Cinéraire hybride	Kreuzkraut
Skretnik ogrodowy	Streptocarpus X hybridus Voss	Streptocarpus, Cape Primrose	Streptocarpus	Streptocarpus, Drehfrucht

FRUIT TREES / ARBRES FRUITIERS / OBSTBAEUME

Leszczyna	Corylus L.	Hazelnut, Filbert	Noisetier, Coudrier	Haselnuss
Orzech włoski	Juglans regia L.	Walnut	Noyer	Walnuss
Jablon	Malus domestica Borkh.	Apple	Pommier	Apfel
Morela	Prunus armeniaca L.	Apricot	Abricotier	Aprikose
Czeresnia	Prunus avium (L.) L.	Sweet Cherry	Cerisier (cerises douces: guignes, bigarreaux)	Süsskirsche
Wisnia	Prunus cerasus L.	Morello, Sour Cherry	Cerisier (cerises acides: griottes, amarelles)	Sauerkirsche
Sliwa	Prunus domestica L.	Plum	Prunier	Pflaume
Brzoskwinia	Prunus persica (L.) Batsch	Peach	Pêcher	Pfirsich
Grusza	Pyrus communis L.	Pear	Poirier	Birne

SOFT FRUIT / PLANTES A BAIES / BEERENOBSTPFLANZEN

Shrubs / Buissons / Sträucher

Agrest	Ribes grossularia L.	Gooseberry	Groseillier à maquereau	Stachelbeere
Porzeczka czarna	Ribes nigrum L.	Black Currant	Cassis	Schwarze Johannisbeere
Porzeczka biala	Ribes niveum Lindl.	White Currant	Groseillier blanc	Weisse Johannisbeere

<u>Polski</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Porzeczka czerwona	Ribes sylvestre (Lam.) Mert. et W. Koch	Red Currant	Groseillier rouge	Rote Johannisbeere
Malina i jeżyna	Rubus L.	Raspberry, Bramble	Framboisier, Ronce	Himbeere, Brombeere
Borówka i zurawina	Vaccinium L.	Bilberry, Whortle- berry, Cranberry Cowberry	Airelle, Myrtille	Heidelbeere, Preiselbeere, Moosbeere
Winorośl	Vitis L.	Vine	Vigne	Rebe

Perennial Plants / Plantes vivaces / Ausdauernde Pflanzen

Poziomka	Fragaria x ananassa Duch.	Pine Strawberry	Fraisier des jardins	Gartenerdbeere
Truskawka	Fragaria vesca L.	Wild Strawberry	Fraisier des bois	Walderdbeere

OTHER PLANTS / AUTRES PLANTES / ANDERE PFLANZEN

Kanar	Phalaris canariensis L.	Canary Grass, Canary Seed	Alpiste des Cana- ries, Phalaris	Kanariengras
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UPOV

**Development of Plant Variety Protection
Throughout the World in 1988**

Following established practice, the representatives of the States and organizations having participated in the twenty-second ordinary session of the Council (October 18 and 19, 1988) reported on the development of plant variety protection and related matters in their country or at the international level.

A summary of the statements, as recorded in the report of the session, is given below.

1. **Statements by the Representatives of Member States**

South Africa.- There had been no changes during the past year from the legislative or administrative points of view.

From a technical point of view, the software for examination of distinctness by means of combined over-years analysis (COY analysis) had been converted and tested on existing data with excellent results. The program was also to be used for examining pineapple and banana. Additionally, in view of the interest currently shown in the use of biochemical tests for identifying varieties, work had been put in hand on electrophoresis and it was hoped that the technique would one day be used within UPOV.

Between October 1987 and September 1988, 105 applications for protection had been filed and 69 titles of protection issued, including 45 for local varieties.

Federal Republic of Germany.- The list of protected taxa had been extended to practically the whole of that part of the plant kingdom that was of economic interest in the Federal Republic of Germany. The list was now established at family level and no longer at genus or species level.

Cooperation in examination had been continued most satisfactorily with those States with which bilateral agreements had been concluded. Examination reports from other States, particularly from Japan, had also been used in some cases.

During the past year, 950 applications for protection had been filed. At present, 3,200 titles of protection were in force.

During the past year, the German Patent Office and the European Patent Office had issued a number of process patents, for example concerning brewing barley and lucerne, affording protection with effect extending to plant material not expressly defined as a variety. Since the Patent Law does not specify the effects of protection in detail, there was a possible risk of collision or overlapping with the protection afforded under the plant variety protection system to varieties possessing the same properties as the patented plant material. Such situations could increase in future as a result of the growing interest shown in patent protection for biotechnological processes. The Federal Republic of Germany held that the solution to such collisions or overlapping should not be left to the courts alone; on the contrary, it was necessary to insert an appropriate collision clause in the Convention. That

was also necessary, in the view of the Federal Republic of Germany, if one were to delete from the Convention the prohibition on double protection, although that country was not in favor of such deletion.

On the other hand, the Federal Republic of Germany was in favor of adjusting patent law and plant variety protection law in such a way that the interested circles could obtain protection for all subject matters that warranted protection and that no field would remain that was not covered by law. That was why the Federal Republic of Germany supported wholeheartedly the principle of joint discussions between UPOV and WIPO as regards the interface between the two legal systems and wished that they be put in hand as soon as possible.

The Federal Republic of Germany further welcomed the initiative taken by UPOV as regards improvement of the Convention. The items likely to be amended had been examined together with the professional organizations in Germany; those organizations felt it necessary that the work within UPOV should be brought to an early conclusion.

Belgium.- No changes had occurred in the legislative or administrative fields during the past year. However, extension of protection to new species was in preparation and maximum possible use would be made of cooperation in examination.

From the entry into force of the protection system up to August 30, 1988, 859 applications for protection had been filed and 547 titles issued, of which 332 were still in force.

Denmark.- At the close of 1987, Parliament adopted a new Law on the protection of plant varieties, which entered into force on January 1, 1988. The Law was adopted as proposed by the committee that had been entrusted with drafting the Bill.

Under the new Law, the Minister for Agriculture had set up a new Plant Novelty Board and two Expert Committees to assist the Board, one in respect of agricultural plants and lawn grasses and the other in respect of horticultural plants and forest trees.

Since the last session of the Council, protection had been extended to cornsalad, eggplant, elm, gerbera, naked oats and sweet pepper.

New cooperation agreements had been concluded with the Netherlands and the United Kingdom, which entered into force on January 1, 1988. A similar agreement had been applied with France as of the same date. Other agreements were foreseen, but had not yet been concluded for lack of time, mainly due to the reorganization of the examination services.

As regards the pilot project for the examination of varieties by breeders, reported at the last session of the Council, the initial results had been most promising, but experience had shown that it was necessary to give very precise directives to the breeders. This project would be pursued, but on the basis of improved examination guidelines.

The use of the plant variety protection system by breeders is summarized in the table below:

	1987	1988*
Number of applications for protection	229	204
including: - agricultural crops	54	
- fruit crops	8	
- ornamentals	167	
Number of certificates issued	163	68
including: - agricultural crops	52	
- fruit crops	1	
- ornamentals	110	

* Up to September 17

As in many other States, in-depth discussions had been held with the Patent Office on possible solutions for the interface between patent law and plant variety protection law. The interested circles in agriculture and industry participated in some of the discussions, and those may be considered very positive.

The creation of a post of Adviser to the Minister for Agriculture on Biotechnological Matters had been announced at the twentieth ordinary session of the Council. The post had now been opened and it had been decided that the incumbent's office would be on the same premises as the Plant Novelty Board, thus enabling close links to be established.

As regards the work of the study group on questions of biotechnology and intellectual property, set up by the Nordic Council, its report had now been drawn up and should be published very shortly. It contained proposals on the demarcation between patents and plant variety protection.

Finally, the twenty-fifth anniversary of plant variety protection legislation had been celebrated at the close of 1987. The anniversary had been marked by an exhibition and the publication of a brochure.

Spain.- During the past year, the work on revision of the law had progressed considerably. The Plant Variety Protection Board had drawn up a revised draft Law taking into account the comments made by the interested circles. Particular attention had been paid to the scope of protection and an endeavor had been made to devise solutions to certain problems that arose, in particular, in the field of ornamental plants. The draft had been submitted to the Legal Service of the Ministry.

Fees had been increased by 5% on January 1, 1988.

By ministerial decree of June 10, 1988, protection had been extended to almond, red clover, lentil, melon, ryegrass and watermelon. Extension to strawberry and to a number of other vegetable and ornamental species was under study.

During the past year, 292 applications for protection had been filed, that is to say 80% more than the preceding year. The total number of applications since entry into force of the Law amounted at the end of September to

2072. At that same date, 652 titles had been issued, of which 521 were still in force. The Plant Variety Protection Board was to meet during the coming month and add over 100 titles.

United States of America.— Within the competence of the Patent and Trademark Office, three events stood out during the past year from the point of view of UPOV. Firstly, the draft Rules on the Deposit of Biological Materials--also applying to plant material--had been amended as a result of the numerous comments received and was to be republished during the coming months. It was hoped that the Rules would be promulgated next year.

Furthermore, the draft Rules on Variety Denominations had been published in order to solicit comments from the interested circles and it was hoped that those Rules could be finalized during the present year or at the beginning of next year.

Finally, as announced in the press, the Patent and Trademark Office issued on April 12, 1988, the first patent in respect of a transgenic animal. Further patents were to be issued in future in this field.

Within the competence of the Plant Variety Protection Office, the most significant event had been the fact that it was envisaged to set out in a regulation the implementing rules for the provision of the Law dealing with the right to save seed for the following year. The intention was basically that farm-saved seed may not exceed a certain proportion of the quantity needed for sowing in the normal course of growing practice. The aim of the regulation was to repress the abuses that had been committed in the name of the right to save seed and of the crop exemption (Section 113 of the Law).

A proposal to increase fees by approximately 20% was further before the Department of Agriculture.

As regards revision of the Convention, the Delegation of the United States of America preferred to speak of interface or overlapping between patents and plant breeders' rights, rather than of collision. It was willing to accept deletion of the prohibition on double protection, not only because overlapping was not unaccustomed in the field of intellectual property and did not have a negative effect, but also because the two systems involved covered differing fields and could both be necessary. It emphasized that the Convention should be revised in such a way as to adapt it to international developments in intellectual property and should not restrict the member States in the development of their laws. It therefore insisted that an open mind should be maintained when revising the Convention.

Replying to a question by the President, the Delegation of the United States of America explained that views were divided in the professional circles in the United States of America as regards revision of the Convention and, more particularly, the question of double protection, depending on the parameters to be found in other fields: those circles that were not very committed to research and development preferred the status quo, whereas the others wished for a strengthening of the protection afforded both by patents and by plant breeders' rights. In a general way, the breeders placed their hope in the revision of the Convention and in development of the patent system and the plant variety protection system without the fear of one replacing the other.

France.- From the legal point of view, it was case law that drew the most attention. Proceedings in respect of novelty of a maize line, referred to at the last session of the Council (see paragraph 40 of document C/XXI/13), had been submitted to the Court of Cassation, whose decision was still outstanding. As regards the "contract processing" case (processing by a cooperative of seed produced by a farmer for his own needs--see paragraph 39 of document C/XXI/13), the Appeals Court of Nancy upheld on September 13, 1988, the decision of the first-instance court given in May 1987. It held that farmers did not have the right to produce on their own holding seed of protected varieties. Discussions were now ongoing between the representatives of breeders and of farmers to define a new basis for their respective activities.

Extension of protection to some thirty vegetable, agricultural and ornamental species was under way. Account would be taken in that respect of the possibilities of cooperation with the breeders themselves.

Administratively, work was under way to provide GEVES, the Group for the Study and Control of Varieties and Seeds, greater flexibility in view of the development of its activities in respect of the catalogue of varieties admitted to marketing, of the examinations undertaken as part of plant variety protection and in respect of seed control.

The number of applications filed in 1987 amounted to 857, an increase of 18% over 1986. They were broken up as follows: ornamentals: 45%; maize: 20%; oil-seed plants: 12%; vegetables: 9%; straw cereals: 5%; fruit trees: 5%; industrial crops and potato: 4%. From 1972 to December 31, 1987, 7,340 applications had been filed and 3,928 titles issued, including 541 in 1987. As at December 31, 1987, 2,057 titles of protection were in force.

Hungary.- During the past year, there had been no amendment to the rules applying to the protection of plant varieties. It should be noted, however, that income derived from plant patents had been made subject to a reduced rate of income tax under the 1987 Law.

In March 1988, the Institute for Plant Production and Qualification and the Institute for Animal Breeding and Feed Control were merged to form the Institute for Agricultural Qualification. The activities of the first-mentioned Institute would be continued within the framework of the new Institute.

The UPOV Recommendations on Variety Denominations were published in a periodical entitled "Seed."

Under the aegis of the Hungarian Group of AIPPI, a conference was held in Budapest in September 1988 on recent phenomena in industrial property. The main lecture in the workshop dealing with relations between patents and agriculture was presented by the Vice Secretary-General.

During the past year, 65 patent applications had been filed for plant varieties, of which two thirds were of foreign origin and one third of domestic origin. Altogether, distinctness, homogeneity and stability tests had been carried out on varieties of 22 species.

Ireland.- The only change in the legislative field had been an extension of protection to *Potentilla* as from March 1, 1988. This was the first extension to a non-agricultural species.

During the past year, 32 applications for protection had been filed, 20 titles issued and 20 others abandoned. Up to present, 281 valid applications had been filed and 201 titles issued in total.

Israel.- At present, the Plant Variety Protection Law applied to over 90 taxa.

During the past year, protection had been afforded to 66 varieties, the majority of which were ornamentals.

Work was under way in Israel on new techniques, such as electrophoresis, and was to be intensified in the future.

Italy.- Protection had recently been afforded to 30 varieties, mainly French bean, carnation, wheat, maize, lettuce, potato, peach, tomato, rice and soya bean. A total of 519 plant variety patents had been granted to date.

Japan.- Extension of protection to nine species and one genus was under preparation and it was hoped that it could be applied before the end of the current year. The list of protected taxa would then comprise 430 entries.

In 1987, 441 applications were filed, that is to say twice as many as in 1980. The growth in the number of applications continued. In total, since introduction of the protection system in 1978, 3,255 applications had been filed and 1,733 titles issued.

New Zealand.- On June 16, 1988, the former law was replaced by amended and improved legislation, based on the Plant Variety Rights Act 1987 and the Plant Variety Rights Regulations 1988. The most important amendments were:

(i) The breeders of vegetatively propagated fruit and ornamental varieties enjoyed more extensive rights and could obtain royalties from producers who propagated a protected variety for their own purposes. They were also able to exercise better control over imports of the variety.

(ii) Provisional protection now applied automatically from the date of the application up to the date of the decision. During that period, the variety could be exploited. The former system of protective direction had therefore been abandoned.

(iii) The term of protection had been extended from 18 to 23 years in the case of woody plants and from 15 to 20 years for all other plants.

(iv) Breeders also enjoyed a three-year period as from the date of issue of the title of protection during which compulsory licenses could not be granted (period of sole rights).

An increase in fees, of some 106%, was applied at the same date. The effect had been to reduce the number of applications filed.

During the year ending September 30, 1988, the following use had been made of the system of protection:

	Applications received	Titles granted	Titles in force
Arable crops and vegetables	8	3	62
Fodder plants	10	4	20
Ornamentals	42	49	235
Fruit crops	21	3	32
TOTAL (preceding year)	81 (74)	59 (53)	349 (305)

Netherlands.- In April last, protection had been extended to 52 taxa. A further extension was under way.

During the past year, fees charged for plant variety protection had been increased. The examination fees were now at practically the same level as in the other member States participating in the system of cooperation. The renewal fees had also been raised in order to improve the rate of cost coverage under the protection system.

Revised agreements for cooperation in examination had been concluded with Denmark and the United Kingdom and entered into force on January 1, 1988. The principle of exchanging examination reports had proved to work without major problems.

Numerous State institutions were currently the subject of an evaluation in order to give them a more commercial outlook and thereby reduce costs. Consequently, the Government Institute for Research on Varieties of Cultivated Plants (RIVRO) and the Government Seed Testing Station (RPVZ) were to be merged to form a Central Seed Registration and Examination Institute. Examination would also be carried out in future on new sites, but still under the official supervision and responsibility of the Board for Plant Breeders' Rights.

During the past year, 1,345 applications were filed and 480 titles of protection issued. At the close of 1987, the number of titles in force was close to 2,800.

As regards the revision of the Convention, the Netherlands sincerely hoped that discussions could be concluded in 1990 and that solutions acceptable to all the countries and all the parties concerned could be found. The discussions that had taken place at national level as regards the demarcation between the patent system and the plant breeders' rights system had not yet been completed. It was not easy to strike an appropriate balance between the interests of the various participants in the economy. The possibility of granting patents for biotechnological inventions and the implications of such a possibility were also under study in the Netherlands. In view of the fact that such studies were being carried out in numerous countries and that it was necessary to reach an international agreement in such matters and to clarify the situation, the Netherlands welcomed the recommendation made by the Consultative Committee to convene a joint UPOV/WIPO meeting.

As far as the activities conducted at European Community level were concerned, the Netherlands was of the opinion that the European plant breeders' rights system should comply with the UPOV Convention. Furthermore, the proposed Council Directive on the Legal Protection of Biotechnological Inventions should, in the opinion of the Netherlands, achieve a balance with the protection of new plant varieties. Indeed, the intellectual property system as a whole had to be balanced.

Finally, the Netherlands welcomed the forthcoming accessions of Australia and Poland to UPOV. The Netherlands hoped that further countries would also soon introduce plant variety protection legislation and would be able to accede to UPOV.

United Kingdom.- Two extensions to protection, one concerning four species and the other concerning six species, were under study.

Revised bilateral agreements for cooperation in examination had been concluded with Denmark and the Netherlands and had entered into force on January 1, 1988. Discussions were ongoing with France.

As reported at the last ordinary session of the Council (see paragraph 69 of document C/XXI/13), the examination systems for varieties and seeds had been subjected to an evaluation. The report had been submitted to the interested circles and their comments had been examined. It was hoped that the ministers for agriculture would take a decision before the end of the current year. As regards the examinations undertaken as part of plant variety protection, it was clearly stated that they would continue to be based on the principles drawn up by UPOV.

During the year that ended on March 31, 1988, 427 applications were filed and 280 titles issued, that is to say 30% more than during the preceding year. During that same period, 241 titles had been abandoned, possibly as a result, in part, of the increase in renewal fees charged for maintaining the titles.

As in many other countries, discussions had been held with the Patent Office on the interface between patents and plant breeders' rights. Cooperation between the two services was good and talks were continuing towards drawing up a discussion document for transmission to the interested circles.

Finally, the United Kingdom hosted, on September 27 and 28, 1988, the UPOV Workshop on Variety Examination dealing with new techniques. Some 150 persons participated and the United Kingdom authorities hoped to have thereby contributed to work on the revision of the Convention.

Sweden.- There had been no changes in the legislative field during the past year.

In 1987, 73 applications had been filed (41 for agricultural crop varieties, 1 for a vegetable variety, 4 for fruit varieties and 27 for ornamental varieties). From January 1 to October 7, 1988, there had been 72 filings. At July 1, 1988, 260 varieties were protected (143 agricultural varieties, 15 vegetable varieties, 18 fruit varieties and 84 ornamental varieties). Turnover was particularly high in the field of ornamentals.

Cooperation agreements had been concluded with four States; a fifth was being negotiated.

Switzerland.- The list of protected taxa had been extended as of April 1, 1988; it now comprised 78 entries.

To present, 523 applications for protection had been filed, including 81 during the past year, and 324 titles had been issued.

Finally, Switzerland supported the idea of a joint UPOV/WIPO meeting.

2. Statements by the Representatives of Non-Member States

Argentina.- The principles of the legislation on seed and phylogenetic creations, on which plant variety protection was based, were very similar to those of the UPOV Convention. Ten years of practical application had shown its virtues. However, it was open to a general revision, including in the light of a comparative study with the established international procedures.

That was why the Delegation of Argentina was happy to be able to participate as an observer at UPOV and would follow the discussions with great interest.

Australia.- The Delegation of Australia thanked the Council for its positive decision concerning conformity of the Australian legislation with the UPOV Convention. Australia held accession to UPOV to be an essential element of its policy to establish a system of protection for new plant varieties that was in compliance with international standards.

The Plant Variety Rights Act introduced in March 1987 had been applied since April 1988. To date, 26 applications had been filed; they concerned various species and demonstrated the interest shown by breeders for the protection system. Numerous foreign breeders, particularly in the ornamental field, had requested information and it was expected that a large number of foreign varieties would be available in future to Australian users.

Australia had adopted a system under which the decision to grant protection was based on an examination made by the breeder himself on the basis of the UPOV Guidelines. The description of the variety was published in the Plant Varieties Journal in order to enable interested circles to determine whether it could be identical with an existing variety. This procedure would be closely monitored and UPOV informed of any problems. Close cooperation would also be set up with New Zealand, where the grant procedure was similar.

Canada.- A plant variety protection Bill based on the 1978 Act of the Convention had been submitted to Parliament in January of the current year. However, it had not been possible to adopt the Bill prior to the recent dissolution of Parliament and it would therefore have to be reintroduced following the elections.

In a general manner, Canada followed the work of UPOV with great interest.

Finland.- Finland was unable to be represented at the present session of Council, but a Delegation had participated at the twenty-third session of the Administrative and Legal Committee held the preceding week. On behalf of that Delegation, the Vice Secretary-General informed the Council that the development of the situation in Finland justified increased interest by the Finnish

authorities for the work of UPOV. In 1987, the Ministry of Agriculture had set up a working group to evaluate plant variety protection and to propose measures to promote plant breeding activities. The working group, composed of representatives of farmers' unions, the food industry, the seed trade, the breeders and the Patent Office, had also been required to examine the position of Finland as regards UPOV.

The working group had drawn up its report last spring. It held that it was necessary to maintain plant breeding activities at national level and proposed measures to promote such activities. In particular, it proposed that breeders' rights be recognized and that appropriate legislation be introduced that should also permit Finland to accede to UPOV. It was therefore expected that the Minister for Agriculture would soon set up a committee to prepare such legislation.

Morocco.- The official services responsible for variety control were aware of the importance of plant variety protection as a means of promoting investment in plant breeding and of improving the well-being of the population through the development of agriculture; consequently, they were currently establishing contacts with the various interested parties to examine the possibility of acceding to the UPOV Convention. It was hoped that those activities would progress rapidly.

Within its activities in relation to the catalogue of varieties authorized for marketing, the Seed and Seedlings Control Service was applying the UPOV Guidelines for examining distinctness, homogeneity and stability of the varieties. The Service was therefore able to also carry out the examination for the purposes of protection.

Morocco had further devoted considerable effort to training and facilities in the field of variety control. The services already used procedures that complied with the UPOV Guidelines.

Mexico.- Mexico was aware of the importance of acceding to UPOV. However, there was widespread reservation in the country within technical circles to the fact that genetic material originating in Mexico, in Central America or in certain countries of South America had been developed in developing countries and that countries such as Mexico had then to pay royalties for using the bred material. The Delegation of Mexico wished to hear the views of the members of UPOV on that matter.

The President did not wish to enter into a detailed discussion in such a complex and controversial matter. The members of the Council were aware of the problem and knew the points of view that had been expressed, particularly within the Commission on Plant Genetic Resources of FAO. Most of the member States of UPOV, and UPOV as such, participated in the work of that Commission; UPOV had also made a contribution to drawing up the concerted interpretation of the International Undertaking on Plant Genetic Resources.

Both the UPOV Convention and the International Undertaking gave free access to genetic material for plant breeding purposes in order to provide optimum conditions for creative activity, for the development of agriculture and for the improvement of food. The general aim of the UPOV Convention was to encourage such activities, both in the developed countries and the developing countries. In the more special case of Mexico, the President pointed out that the country had done a lot of useful work in the past, that it continued to produce acknowledged results that were appreciated throughout the world and

that it could usefully cooperate, in a constructive manner, with UPOV. In that respect, he expressed the hope that Mexico would be able to ratify the Convention soon and become a member of UPOV.

Finally, the President pointed out that the Office of the Union was available to the States for any additional information.

The Delegation of Mexico thanked the President. It added that Mexico had still to develop all its potential and that the question had not so far received all the attention it deserved. It finally requested that additional information, particularly the texts of plant variety protection laws, be supplied to it.

Norway.— Norway had a system of fees levied on marketed seed. That system applied to agricultural species. At present, the fee was laid down by regulation and had been reviewed during the past year. The fee levied by the National Seed Council was distributed amongst the breeders.

Nevertheless, the National Seed Council had recently been requested by the Ministry of Agriculture to draw up a report on the interest for Norway of a plant variety protection system in compliance with the UPOV Convention. Norway would contact the Office of the Union in due time as regards the measures to be taken towards accession by Norway to the Convention.

Poland.— As announced at the last ordinary session of the Council, Parliament had adopted the Seed Industry Law on October 10, 1987, and the Law had entered into force on January 1, 1988. It governed all aspects of seed activity and, based on the principles of the UPOV Convention, the protection of new plant varieties. The Law had been supplemented by three Decrees issued by the Minister for Agriculture, Forestry and Food Economy. The Decree of April 14, 1988, concerned protection and contained a list of 225 taxa of which the varieties might be protected in Poland. That list comprised practically all taxa of importance for the national economy grown in Poland; it might be supplemented in future.

Up to present, 33 applications for protection had been filed (21 for agricultural varieties, 3 for vegetable varieties and 9 for ornamental varieties). Two thirds of those applications were of Polish origin.

In accordance with the procedure laid down in Article 32(3) of the Convention, the Minister for Agriculture, Forestry and Food Economy had requested the Council to advise it on the conformity of Polish legislation with the provisions of the Convention. It had also invited a UPOV delegation to visit Poland for discussions and visits in the region of Poznan and Warsaw. The Delegation of Poland wished to thank the members of the delegation for the work they had carried out.

The Delegation of Poland also wished to thank the Council for its positive opinion on conformity of the Polish legislation with the provisions of the Convention and for the confidence it had shown in Poland. The Polish authorities would do all possible to cooperate with the authorities of the other member States within the framework of UPOV for the good of farmers and also for the development of international cooperation in the field of varieties and seed.

Portugal.— Portugal continued to follow with great interest the work and development of UPOV. The authorities were at present finalizing a draft Law on the Protection of New Plant Varieties based on the general principles given

in the UPOV Model Law. Once the drafting was finished, the text would be submitted to the Office of the Union for its comments and then to the Government. The Delegation hoped that Portugal would soon be able to undertake the necessary steps for accession to UPOV; it was convinced that such accession would be of mutual benefit.

Turkey.— Turkey was participating for the first time in a session of the Council. The Turkish authorities were following with great interest the work of UPOV, but had unfortunately been unable to be represented other than by the Permanent Mission to the United Nations Office and the specialized agencies in Geneva.

3. Statements by Representatives of Organizations

European Communities (EC).— During the past year, significant progress had been achieved on two initiatives taken by the Commission of the European Communities in the field of concern to UPOV, particularly with a view to the 1992 deadline for achieving the single internal market and in view of the Community action program for biotechnology.

The first initiative aimed at establishing a compulsory Community interpretation of the European Patent Convention in order to promote development of biotechnology within the Community. That initiative would normally lead to a Directive of the Council of the European Communities on the Legal Protection of Biotechnological Inventions. A draft had been adopted on October 5, 1988, following a long period of preparation, particularly due to the discussions on the scope of patentability of living matter. It was soon to be published in nine languages in the Official Journal of the European Communities.

Basically, the initiative extended the patent system to biological material in its widest sense, or facilitated that extension. It provided that new plants and new plant products resulting from new biotechnological processes would be patentable and that any use of the process or the product would be subject to licensing; a new plant or a new plant product derived from a known biotechnological process would not be patentable, however. Thus, double protection would be possible. The provisions governing the interface between the two protection arrangements remained to be drafted.

The aim of the second initiative was to set up a Community breeders' right with a view to the establishment of the single market in 1992, to make available to breeders a system enabling them to obtain, on the basis of a single application and a single decision, uniform protection throughout the Communities. The adoption of the first initiative had opened up the way to the second initiative, which was finally likely to take the form of a Regulation. After final drafting, that was to say in a few weeks' time, the text of the draft Regulation would be communicated to the Community Member States and to the professional organizations concerned for consultation.

Replying to a question put by the Secretary-General, the Representative of the European Communities confirmed that it was intended to set up a Community Plant Variety Protection Office. As far as maintaining in being the national services--and national laws--was concerned, it had been foreseen at the start to follow the example of the Community patent. However, the Commission of the European Communities was to take, at the appropriate time, an important policy decision on the compatibility of the coexistence of Community law and national laws with the objective of a single market.

GENERAL STUDIES

Industrial Property Rights
and Their Impact on Industry and agriculture*

Henning Kunhardt**

The Background

As soon as he became sedentary, man began to select from among the plants he found in nature those that were the most suitable to satisfy his needs, and in particular to improve his diet. Over the last 200 years this process of selection has been considerably accelerated and systematized.

In the 18th and 19th centuries, plant breeding developed through crossing and back-crossing of plants to obtain, in the second half of the 19th century, significant empirical results. Gregor Mendel used this knowledge as the basis for formulating his laws of inheritance in 1865. Following the rediscovery of these laws in 1900, the breeding of plants began to assume a scientific nature.

These developments were accompanied by research into biotechnological methods and their application. For instance, Haberlandt already laid down in 1902 the scientific bases for in-vitro culture of plants, that is to say the regeneration of whole plants from individual parts. Admittedly, some decades were to pass before this method became usable in practice.

As a result of the increasing amount of work involved in modern plant breeding, demands were voiced during the initial decades of the 20th century for property rights for plant breeders such as those that had already long existed for the inventors of technical subject matter in the form of patents. The purpose of such property rights is to reserve commercial exploitation exclusively for the creator of an innovation and thus provide him with the possibility of recovering his investments and give him an incentive to create further innovations. Since the actual patent had been designed for technical inventions, it was generally held to be unsuitable for living matter such as plant varieties. It was therefore felt necessary to draw up special provisions for the protection of plant breeders. Some indirect protection resulted in a number of States from the public law provisions on the marketing of seed. They required, for example, that a variety had to be registered before its seed could be marketed and reserved the right to apply for registration or the right to use certain designations in marketing seed for the breeder.¹

The Early Laws on Plant Variety Protection

The first country to adopt a specific law on the protection of new plant varieties was the United States of America. It promulgated the Plant Patent Act² in 1930. That Act applies only to asexually reproduced plant varieties.

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Titles of protection under this law have been granted so far for roses, other ornamentals and for fruit trees, in particular. The Act combines elements of the traditional utility patent with those of plant variety protection that were later to become the general rule. The plant patent is subject to the general provisions on patents, but with the following amendments. As conditions of protection, it is required that the new variety be distinct and new. Distinctness is assessed on the basis of the biologically determined characteristics of the variety. In practice, those characteristics are used that are of significance for the utilization of the plants, such as immunity from disease, color, flavor, storage qualities or form. Likewise, the non-obviousness required for both utility patents and plant patents--which corresponds in its principle to the inventive step of European patent law--is assessed on the basis of the significance of the differences in the characteristics of the variety in comparison with other varieties, irrespective of the way in which these differences are produced.³

As far as the conditions for application are concerned, it is laid down, contrary to the general provisions on the specification (disclosure), that the description must be only as complete as is reasonably possible. For the effects of protection it is stated that the owner of the right is entitled to exclude others from asexually reproducing the plant or selling or using the plant so reproduced. Thus, contrary to the rest of patent law, the scope of protection is definitively described in the law. That means that there is no free formulation of claims. Only the variety as such may be claimed and, in each case, only one specific variety⁴; thus, principles, such as certain properties, which may apply to a number of varieties, cannot be the subject of an exclusive right.

The US Plant Patent Act does not contain all aspects of plant variety protection as subsequently set out in the International Convention for the Protection of New Varieties of Plants (UPOV Convention) and in the national laws of the States that acceded to that Convention; but it already contains precisely those elements in respect of which the protective right for plant varieties must be designed in a way that deviates from general patent law if it is to work at all. The impact of this Act on plant breeding was indeed correspondingly impressive in the United States. It provided a strong incentive to plant breeding in the field of asexually reproduced plants and led to the granting of some 5,000 titles between 1931 and 1987.⁵

The second important law in the field of industrial property for plant varieties was the Dutch Ordinance on Plant Breeders' Rights and Trade in Seed (Plant Breeders' Ordinance) of 1941. This was the first independent and complete industrial property statute for plant varieties. Under this instrument, the person who first obtained a distinct and homogeneous variety (the breeder) enjoyed the exclusive right to market seed of that variety.

A further significant law of the period prior to the founding of the International Union for the Protection of New Varieties of Plants (UPOV) that we may mention is the German Law on Variety Protection and Seed of Cultivated Plants (Seed Law) of 1953. It contains more detailed provisions than the above-mentioned instruments from the USA and the Netherlands. In addition to distinctness, the conditions for protection included stability of the variety, a variety name and also, as a type of inventive step, a value for cultivation and use (e.g. an improvement of the quality, the yield or the resistance to pests or diseases). The compliance with the biological requirements was to be checked by means of an official trial (growing and examination). The effect of the title of protection was that its owner alone was authorized to commercially produce seed of the protected variety for trade in seed, to offer it or

to put it on the market. The drafters of this Law already recognized that a problem could arise if both special plant variety protection and a patent were to be granted for a variety since the differing effects of these two titles were liable to collide. They therefore held it necessary to insert a provision on collision, reading as follows: "Where a variety of cultivated plant for which plant variety protection has been granted under this Law or seed of such variety is protected under other statutory provisions, the rights deriving from such provisions may only be asserted to the extent that they do not conflict with the provisions of this Law." The Law contained practically all the elements which were soon thereafter to form the basis for the UPOV Convention, although the latter contains differing rulings in certain points.

The UPOV Convention

The need to provide special protection for plant varieties adapted to the characteristics of biological material was acknowledged as from the fifties in practically all those countries in which advanced private plant breeding existed. This applied also to those countries in which the grant of patents for plants was not excluded (e.g. in Belgium, France, the Federal Republic of Germany, Italy and Spain). Already in 1938, plant breeders of various countries had founded ASSINSEL, the International Association of Plant Breeders for the Protection of New Plant Varieties. This Association proposed at its Congress held in Austria in 1956 that France should convene an International Conference on the Protection of New Plant Varieties. The French Government accepted this proposal and issued invitations in 1957 to a Diplomatic Conference that was to lead, in 1961, to the adoption of the UPOV Convention.

The protection afforded under this Convention is characterized by the following elements:

- The subject matter of protection is the variety as such, and not an inventive idea for the breeding of a variety. In line with the need for protection in the field of living matter, plant variety protection begins at the point where a patent ends.⁶ In view of the biological particularities, a variety must meet the following requirements:

Its plants must be distinguishable from those of other varieties in the expression of their characteristics.

It must be homogeneous, i.e. its plants must be sufficiently similar in those characteristics that determine the distinctness.

It must be stable, i.e. the expressions of characteristics of the plants resulting from each reproduction or propagation must correspond to those of the plants of the preceding generation.

- The variety must be new, i.e. material thereof may not have been marketed or may only have been marketed within specific time limits.

- Since the genetic potential for expressing specific characteristics cannot be seen in the propagating material of a variety, the variety must be designated by means of a denomination to assist users in identifying it.

After thorough reflection, the drafters of the UPOV Convention decided not to add the requirement for a specific value of the variety as a further requirement for protection, although they had assumed that the purpose of plant variety protection could only be to promote the breeding of valuable varieties. The fact was, however, that there was no internationally feasible definition for this value in the plant variety area since the criteria for the value depended on individual needs that differed, not only from region to region, but even within one region at differing times.⁷

The effects of variety protection do not currently cover every use of a variety, but only the commercial marketing of propagating material (e.g. seed and seedlings, plantlets, cuttings), and their production (that is to say propagation) for the purposes of commercial marketing (with a special provision on ornamentals).

In other words, this means that protection does not extend, in particular, to the following acts: growing for the purposes of obtaining produce for consumption (e.g. bread grains, vegetables, fruit, cut flowers) and the use of the variety as a genetic resource for breeding other varieties and their commercial exploitation.

On the one hand, the breeder has no possibility of influencing the scope of protection, as is possible under patent law by formulating the claims, since the scope of that protection derives directly from the law; on the other hand, the protection concerns the whole variety as such, irrespective of whether it is new in only one property (e.g. a certain resistance), whether this is true of several properties or whether the variety simply differs in that known properties are combined in a way that is different from the combination of such properties in other varieties.

This protection is revived each time propagating material is produced for the purposes of commercial marketing and is exhausted in each case only, but always, if the crop serves purposes other than obtaining and marketing propagating material. It is therefore the user's intent that decides whether his acts in respect of the variety fall within the scope of protection or not. If, for example, a farmer grows a cereal variety and sells the crop (the grain), the question whether he is authorized to do so in respect of the variety owner depends solely on the purpose for which he intends the harvested material. If he sells it as produce for consumption (for baking or for fodder), this is not covered by variety protection. On the other hand, if he declares it as seed, he will require the authorization of the owner of protection. Only one protective right exists for each variety, and it is not possible to obtain a number of rights in one variety (e.g. special rights in individual properties) under variety protection law.

These principles mean that plant variety protection law is characterized by a high degree of legal security. The owner of protection has a right in a variety that comprehends the whole variety and that cannot be encroached on by other variety protection rights, i.e. is indeed exclusive. Whether the requirements for protection have been fulfilled is determined by means of an official trial. This means that the owners of variety rights, contrary to patentees in many cases, are not faced with the need to defend their rights against others who either contest their effectiveness or claim that use of the protected variety interferes with other rights protected.

On the other hand, the grower, particularly therefore the farmer and the gardener, can clearly recognize if and to what extent his acts may interfere with a title of protection. If he produces no propagating material, he can be sure that he can do as he please with material of the variety without having to worry about plant variety protection matters. The same applies to his customers who use the harvested material or process it.

The propagator, who has to obtain the authorization of the owner of protection, has only to deal with one owner. He can therefore be sure that all his activities related to propagation are legal if they are covered by a propagation contract with the owner of protection and also that no other liabilities exist for him.

This legal clarity is particularly important for crop production and marketing. Technical inventions are normally utilized by a restricted number of undertakings that use the device, the substance or the process constituting the subject matter of the patented invention for the manufacture of their products. Propagating material, on the other hand, is used by practically all undertakings in agriculture, horticulture, vine-growing and forestry, that is to say in the primary food production. They would hardly be able to carry out their activities if in every single case they had to determine whether rights in a variety existed that could possibly make it illegal in whole or in part to grow them.

In view of the above-mentioned advantages, this system has been adopted by States in all the developed economic regions of the world. Even the United States of America have not regulated protection for sexually reproduced species under the above-mentioned Plant Patent Act, but have promulgated the Plant Variety Protection Act of 1970 as a separate law. The share of the UPOV member States in seed trade throughout all market-economy countries is estimated at 70%.⁸

The Economic Effects of Plant Variety Protection

The economic effects of the plant variety protection system can be demonstrated with impressive figures. In the Federal Republic of Germany, during the period in which patents were granted for plant varieties (practically for a small number of asexually reproduced plant species only), a total of something over 100 patents were granted.⁹ Under the Plant Variety Protection Law, however, over 7,000 titles of protection were granted during the 35 years following its promulgation although its field of application has only been extended to all important plant species in recent time. For instance, the majority of ornamental species have only become protectable, one after the other, as from 1974 onwards. This has meant that varieties of ornamental plants have achieved a growing proportion in the overall number of titles of protection, presently over 40%, and that the number of rights for ornamentals has tripled over the last ten years. This is an example of how the provision of effective legal protection in the form of plant variety protection can give an extraordinary impetus to breeding activities. The same effects can be witnessed in other countries. In the United States of America, some 1,600 titles of protection were granted during the first 16 years following promulgation of the Plant Variety Protection Act.¹⁰ Previously, breeding, particularly of soya beans and cereals, had been extensively carried out by public institutes, particularly the US Department of Agriculture and the Universities. In the meantime, these institutes restrict themselves basically to breeding research, whereas breeding itself is undertaken by private companies.¹¹ Both investments in breeding and the number of varieties already grew in the first decade following promulgation of the Plant Variety Protection Act, by more than twice in some cases.¹² Similar effects have been reported from other countries, for instance from the United Kingdom for the period following promulgation of the Plant Varieties and Seeds Act 1964.¹³

This growth in the number of varieties also leads in most cases to strong competition between them. Only those varieties that meet best the requirements of the user, that is to say both of the farmer and of the subsequent processor and user, can survive this competition. The result is that, despite the fact that a specific value for cultivation and use is not an explicit requirement for protection, the protected varieties nevertheless generally satisfy such a requirement. The value can only be assessed, however, in relation to the

growing conditions (e.g. the agro-climatical conditions and the farming practices) and the final utilization (e.g. regional eating habits) that vary in each case. Both this fact and the principle of plant variety protection that each new combination of properties can qualify for the grant of a title of protection have led to a broad offer of varieties suitable for the varying special requirements for production and use. Farmers are therefore able in most cases to obtain varieties that are particularly suited for their undertakings in view of their suitability for growing and their marketing possibilities. This provides a possibility for the smaller agricultural and, in particular, horticultural holdings to assert themselves against the large-scale undertakings by growing varieties that require more work but are of a higher quality, and thus to preserve their position on the market.¹⁴ Additionally, this serves to maintain genetic diversity.

In all those countries in which plant breeding has been furthered by the introduction of a plant variety protection system, the result has been considerable increases in agricultural production. This trend emerges irrespective of how breeding and agricultural production are structured in the various countries. In a number of countries, breeding is exclusively or extensively carried out by State institutions. In other countries, private plant breeding dominates. In this latter case, there are also considerable differences in structure. Whereas in some countries the majority of varieties are bred by large firms, the focus of breeding lies in the Federal Republic of Germany, for instance, with medium-size and small breeding concerns. All breeding facilities, whether State or private, whether large or small, have been able to significantly improve the economic basis of their work through plant variety protection and have produced a large number of valuable varieties. This has had an advantageous effect on the agricultural production in all countries possessing such a protection system, irrespective of whether large-scale or small farm holdings dominate in the given country.

Since the increases in production are naturally influenced by other factors also, such as the improvement of crop husbandry and farming practices or by fertilization and the control of pests and diseases, it is not possible to give a generally valid figure for the share of plant breeding in the overall advance in production, but only to determine it, or in many cases estimate it, separately for individual plant species and regions. The estimates of this share generally vary in respect of agricultural species from one third¹⁵ to one half¹⁶ of the increase in productivity. In those cases where more accurate individual statistics have been established, the resultant values have been considerably higher in some instances. For example, in England and Wales, the increases in yield attributable to new varieties, without the influence of other factors, for the years 1947 to 1978, are 60% for wheat, 40% for barley and 30% for oats. It transpires, however, that the figures for the years following 1967--that is to say following the introduction of the Plant Varieties and Seeds Act 1964--assumed a proportionally larger place in these average values. In those years, the corresponding shares were 85%, 55% and 50%, respectively. A similar acceleration of increases in recent years is also shown by studies of the same kind made in France, the Federal Republic of Germany and the Netherlands.¹⁷ Although it cannot be quantified in the same way, it is also just as important that the new varieties have not only brought progress in yield but also, in particular, in their quality, e.g. in those ingredient substances that are important for human and animal nutrition and determine resistance to pests and diseases, in other agronomical properties and in those properties that determine processing into quality food products. No such studies are known for vegetables, ornamentals, forest trees and vine, but one may nevertheless assume that breeding has led to economic increases in value that are just as great for these species.

Industry has also an increasing need for raw materials from plant production, e.g. fibers, certain kinds of oil, the fermentable mass of special starches, etc. Significant scientific knowledge already exists for the exploitation of such raw materials; the problems of their large-scale use are more likely to be found in the area of profitability. This is impaired by the fact that most of the plant species considered for industrial use do not contain the important substances in the quantity or composition that would justify their exploitation in competition with other sources of raw materials. This is a challenge to breeding to produce varieties of those plants that can take this hurdle of profitability. The present situation in this field shows clearly that breeding secured by plant variety protection law constitutes an essential requirement for opening up new production and marketing possibilities for farmers under our new circumstances.

The Resurgence of the Discussion on Patents

The development of plant variety protection, as described above, seemed to have provided the appropriate solution to the question of industrial property protection for plants and there was little debate on the suitability of the system. Nevertheless, this matter has reappeared in a very intensive form most recently.

The success of plant breeding, the size of the seed market and its growing internationalization¹⁸ have made this area attractive for branches of industry outside the traditional breeding industry. This has been caused, in particular, by the fact that recent scientific progress in the field of biotechnology and genetic engineering made it appear possible to achieve breeding objectives more rapidly (for instance by incorporating in-vitro propagation into the breeding strategy), to work towards them with greater security and more precision (e.g. by transfer of resistance genes instead of the traditional breeding for resistance) or to achieve breeding results that cannot be obtained by conventional sexual crossings (e.g. by somatic hybridization of plants of differing species by means of protoplast fusion).

Since the development of such technologies has been dominated by firms in the chemical industry or by specialized biotechnological undertakings, rather than by pure breeding firms, it appeared for a while that a considerable part of breeding work was likely to fall into the hands of such concerns. This led the economic circles involved to voice their interest, in many differing ways, in obtaining industrial property protection in the form of a patent for their developments. Plant variety protection with its effects that were exhaustively regulated by the law appeared to them to provide insufficient rights when compared with patent law that permitted inventors to determine the scope of protection themselves by freely formulating the claims.

In the meantime, the prevailing view is indeed that it will not be possible to produce complete varieties by biotechnological or genetic engineering means. These technologies aim above all at obtaining specific properties in specific species and thereby mostly cover a multiplicity of varieties of the species concerned. For a variety to exist, however, the breeders' work must concern all the properties of a plant population. In the creation of varieties, genetic engineering only supplies bricks, but not a building.¹⁹ These technologies will therefore facilitate and improve the work of the breeding firms by means of specific contributions, but will not be able to replace them.²⁰ Various models are applied for the interplay between biotechnological and genetic engineering and plant breeding. Some concerns combine all these activities in their own hand. Other companies involved in

biotechnology and genetic engineering have the breeding of varieties carried out by subsidiaries, which are frequently previously independent breeding firms that have been taken over. Others sell to independent breeding firms certain genetically or biotechnologically engineered material or carry out certain biotechnological or genetic engineering services in respect of material made available by the breeding firms. Thus, the breeding firms continue to undertake the breeding and marketing of the varieties. This type of collaboration may well assume increasing significance in future.

But even in such a case, certain problems in respect of industrial property remain for the biotechnological and genetic engineering companies. Indisputably, these firms can obtain patents for biotechnological or genetic engineering processes or for biologically active substances. However, under the existing principles of patent law, patents for a process can only be asserted in respect of the process, when it is applied, or of the product obtained with such process and patents for a product in respect of the product. But once the process has been applied or the product has been marketed with the consent of the patentee, the patent is exhausted and the user of the product can do what he likes with it. This creates no problems with technical inventions. Since technical products can only be obtained by repeated application of the process for their manufacture, the subject matter of the invention must be used each time the corresponding process is applied or the corresponding products are manufactured. This ensures that the inventor receives continuing remuneration for as long as the products involved can be marketed. The case is different for living matter. In the case of a plant variety bred with the help of a biotechnological or genetic engineering process, plants may be obtained by normal biological propagation without it being necessary to repeat the corresponding breeding process. In other words, after it has been used once, this process is no longer necessary for further use of the variety. The same applies to genetically active substances, e.g. a gene defined as a chemical substance (DNA sequence) or plant material with specific properties. Following the incorporation of such gene or such material into a variety, the corresponding properties participate in the biological replicability of the plants of the variety concerned. Therefore, to obtain plants with those properties, there is no need to repeatedly produce or use the patented material.

Since it would appear difficult under such circumstances for the inventor to obtain appropriate remuneration, it is feared that subsequent biotechnological and genetic engineering development will be hindered. Proposals to overcome these obstacles have therefore been put up for discussion.²¹ They propose, inter alia the following.

- A patent for a process should extend to all material deriving from material obtained with the help of the process. That is to say, if plant material has been processed or altered with the help of a biotechnological or genetic engineering process, the effects of the patent would not only extend to all generations of plants produced by propagation of the first plant regenerated from the altered material, but also to all varieties that have been bred with the use of such plants.
- Further, a patent for genetic information (i.e. a gene) should extend to all material containing that genetic information. In practice, this could mean that individual properties would be patented and that the patents would extend to all plants possessing those properties.

The above-mentioned proposals would not just mean modifying the principle of the exhaustion of rights, but would remove it altogether.

The scope of possible claim formulations can be demonstrated with the example of a patent granted in 1986 in the Federal Republic of Germany for a variety of chamomile. It covers²⁵ the chamomile--in other words the variety, the plant itself--, the propagating material, the process for manufacture (tetraploidization of a diploid chamomile variety) of such new varieties of chamomile--in other words the breeding process--, the use of the chamomile and, finally, the chamomile drug. Applied to another species, for instance wheat, the patent could contain the following claims: process for breeding the variety by the use of specific initial varieties (meaning that protection would even be extended to these varieties), the wheat variety as such (including its use for breeding subsequent varieties), the seed of such wheat (i.e. its use for cultivation by the farmer²⁶), use of the wheat to manufacture bakers' wares and, finally, the bakers' wares as such. The cumulation of the various types of claim possible under patent law would thus lead to the very degree of monopoly of plants that plant variety protection law was indeed designed to prevent.

A further patent granted in the Federal Republic of Germany in 1986 concerns a "process for the breeding of somatic hybrids of potatoes and tomatoes" together with the hybrids bred by means of that process. Again applied to another type of plant, a patent granted in the same way for a "process for crossing wheat and rye" would cover the whole species of triticale. All triticale varieties would then fall under the scope of just one such patent. Crosses between various plant species play an increasing part in many areas (e.g. vegetables, ornamentals). Such patents could have a decisive effect on the conditions for breeding and use of the varieties of such new species.

It is further proposed, amongst other things, that the use of plants should also be the possible subject matter of an independent process patent even where plants as such are excluded from patent protection. This could mean that, in the case of a variety for which plant variety protection had been granted, all those acts not covered by plant variety protection (use of the material of the variety to breed further varieties, use of the harvested material to produce goods for consumption, e.g. food) would be covered by a patent. Again in this case an example can be given: a patent applied for in the Federal Republic of Germany for a process for brewing beer with improved stability by the use of barley with genetically conditioned inhibition of anthocyanogene synthesis. This broad formulation of the claim would seem to betray the applicant's intention of obtaining protection for the property "low anthocyanogene synthesis" in order to subject to his rights under the patent all the varieties that possess that property. The result of such a patent could be that the farmer who has lawfully grown a variety with that property may be unable to sell his harvest since the right of prohibition under the patent would become effective at the level of the subsequent user.

If the above-mentioned proposals were to become reality, this could have considerable consequences for the way in which plant variety protection works. The principles of plant variety protection described above would be overlaid with the quite different principles of the patent. A plant population could then be subject, in addition to the plant breeders' rights, to further individual patents that take effect at the level of the grower or subsequent user and make certain acts that are authorized under variety protection law subject to the right of prohibition under a patent. Some possible consequences of such a practice are described below.

No longer would all plant varieties continue to be available as genetic resources for the breeding of new varieties and constitute a freely accessible pool of genes. In such case, the genetic diversity could be restricted and

the objective adopted within FAO²⁷ to ensure that plant genetic resources of interest particularly to agriculture would be made available for plant breeding would be impaired.

Where the effects of a patent extended to the level of the grower or subsequent user, the choice of varieties for cultivation would not depend on their specific suitability for the particular agricultural undertaking, but also on the extent to which use of the variety is subject to a patent-law right of prohibition.

In their practical scope, patents could therefore extend to areas that have never so far been subject to rights of prohibition, namely the production of conventional food (e.g. bakers' wares, vegetables, beverages).

In the event of extensive interpretation of the above-mentioned proposals, in particular, they could have considerable implications for the situation of agriculture and of the consumer, as a result of the complete freedom to formulate claims, in a way that would be expressly excluded by the clear provisions of plant variety protection law. To prevent the economical and ecological effects of protection in the field of plants, intended by the legislator, from becoming ineffective, it would therefore seem necessary to establish explicit provisions limiting the effects of patents in this area where they run contrary to the objectives of plant variety protection. Corresponding provisions have been formulated for discussion in the proposals of UPOV²⁸ and of the EC Commission.²⁹ It would appear certain, in any event, that the defense of the interests of both growers and consumers aimed at under plant variety protection law can only be ensured if the effects of patents in the area of plant material is clearly restricted by statutory provisions.

The Interests of the Developing Countries

In Europe, the success of plant breeding has made a significant contribution to removing the deficit situation that previously existed in the food sector. For the biggest part of the world, however, this task still remains to be fulfilled. It is also certain that with the plant production conditions that existed 50 years ago, today's considerably increased population could no longer be properly fed. Without intensive progress in plant breeding feeding the population properly will not be possible in future in the Third World.³⁰ In view of the situation, it is unthinkable to limit agriculture in those regions to the continued exclusive cultivation of obsolete land race varieties. In those countries where it has been possible to make a considerable improvement to the food situation (e.g. in India), this has been the result, above all, of the breeding of new varieties particularly adapted to the region concerned. Various international plant breeding centers devote themselves to this task (e.g. CIMMYT).³¹ Although this "green revolution" is still basically dependent on breeding work and breeding material from the developed regions of the world, this in no way means that the further development of varieties must necessarily make the agricultural production of the countries of the Third World dependent on the developed countries. There is no reason that they should not follow a path similar to that already taken earlier by those States that are now developed, that is to say to use native plant material as a basis for breeding advanced varieties that are particularly suited to the conditions in the country concerned. The essential factor is to encourage them towards such developments by providing appropriate assistance.³² Within the framework of such a development, the introduction of plant variety protection laws in these countries could help to promote the progress of agricultural production in the same way as it did in today's industrial regions of the world. It

is indeed the case that States in the process of developing their agricultural production have as a rule also recognized plant variety protection as the appropriate instrument for this purpose (such as Argentina, Brazil and Morocco). The question also arises for the developing countries, as it did in the same way in earlier times for those regions of the world that are now developed, as to how the implications of plant variety protection for agriculture and for the population can be kept under control.³³ For the same reasons that prompted the developed countries to prefer it to utility patents, the plant variety protection system also represents the more suitable form of protection for the developing countries.

Conclusions

The effects of the plant variety protection system observed so far do not permit the conclusion that this system of law contains any drawbacks of principle. Adaptation to recent developments remains possible, just as hitherto, without any particular problem through continued development within the system. It is a fact, on the other hand, that as regards the protection of living matter, including strains of microorganisms, for which patents can be granted in almost all industrial countries, problems are being discussed that constituted the reason for the creation of the special plant variety protection system. Various proposed solutions come close to the principles of plant variety protection. However, they do not achieve the latter's systematic logic, since the attempt is made to solve the problems within the principles of general patent law instead of striving towards a logical sui generis solution. This is a further pointer to the fact that plant variety protection law is not simply a somewhat inadequate copy of patent law, but a sui generis legal system that is particularly adapted to the conditions of living matter. It provides solutions in its special area of application whose progressivity could hardly be accommodated in the traditional structures of patent law and which would constitute a far better model, for instance for the protection of animal varieties, than would patent law.

This justifies the forecast that it is not the patent but the special protection system, as provided for plant varieties under the UPOV Convention, that constitutes the most suitable form of protection to ensure effective protection for populations of living individuals even under the circumstances of accelerated development in the field of biotechnology and genetic engineering and that is able to reconcile the interests of the breeders, the growers, the consumers and the society at large in a particularly balanced way.

Footnotes

- 1 Cf. for Czechoslovakia: Law of March 17, 1921, on the recognition of originality of varieties and of seed and plant material and of the testing of fruit tree varieties; for Austria: Federal Law on the designation of seed of bred varieties of agricultural plants, BGBl. No. 260/1934.
- 2 The Townsend-Purnell Act, 46 Stat. 376, amended September 3, 1954, now codified as 35 U.S.C. 161-164 (Patent Laws).
- 3 Williams S.B., Intellectual Property Aspects of Plant Variety Genetic Engineering: View of an American Lawyer in: Records of a UPOV Symposium on Genetic Engineering and Plant Breeding, 1982, UPOV Publication No. 340, Geneva, 1983.
- 4 Schlosser S.D., Legal Protection for Plants in the United States of America in: FAO Plant Production and Protection Paper, No. 82, Rome, 1987, p. 351.
- 5 Schlosser S.D., see footnote 4.
- 6 Mast H., The Relationship Between Plant Variety Protection and Patent Protection in the Light of Developments in Biotechnology in: Plant Variety Protection (UPOV Gazette and Newsletter) No. 52 (1987), p. 13.

B E L G I U M

Law on the Protection of New Plant Varieties*

of May 20, 1975**

CHAPTER I

GENERAL PROVISIONS

Article 1

This Law governs the protection of new plant varieties.

Without prejudice to the provisions of the Law of July 11, 1969, on Pesticides and Raw Materials for Agriculture, Horticulture, Forestry and Animal Husbandry, or to the provisions of the rules made under that Law, a new plant variety certificate, which confers on its owner the exclusive right to produce and commercialize the protected plant variety, may be granted for new plant species and varieties specified by the King which meet the conditions laid down in this Law.

The protection provided for in this Law excludes any protection provided for in the legislation on patents.

Article 2

For the purposes of the implementation of this Law:

- (a) (i) "variety" means any clone, line, stock or hybrid that is susceptible of cultivation, and any cultivar;
- (ii) "reproductive or vegetative propagating material" means seeds, seedlings, plants or parts of plants that are intended for the reproduction of plants;
- (iii) "breeder" means the natural or legal person who has bred or discovered a new variety, or his successor in title;
- (iv) "applicant" means the natural or legal person who has filed an application for the recognition of the breeder's right;
- (v) "commercialize" means to offer for sale, place on sale, stock for sale or delivery, exchange, sell, supply gratuitously or for a consideration, import or export.

* Titles in the National Official Languages: Loi sur la protection des obtentions végétales; Wet tot bescherming van kweekprodukten.

** Source: Moniteur belge - Belgisch staatsblad of September 5, 1975.

- (b) (i) "Convention" means the Paris Convention for the Protection of New Varieties of Plants, signed on December 2, 1961;
- (ii) "member State of the Union" means a State party to the Convention.
- (c) (i) "Service" means the Service for the Protection of New Plant Varieties;
- (ii) "Council" means the Council referred to in Article 14;
- (iii) "Minister" means the Minister with responsibility for agriculture.

Article 3

(1) New plant variety certificates shall be granted only in respect of varieties that are new, sufficiently homogeneous and stable and have a denomination complying with the provisions of Articles 7 and 8, and provided that the applicant meets the obligations arising under this Law.

(2) A new plant variety certificate shall be granted in respect of a variety only if an examination has shown that the conditions laid down in Articles 3 to 8 are fulfilled.

Article 4

(1) A variety shall be deemed new when, whatever the origin, artificial or natural, of the initial variation from which it has resulted, it is clearly distinguishable by one or more important characteristics from any other variety whose existence is a matter of common knowledge at the time when protection is applied for. Common knowledge may be established by reference to various factors such as: cultivation or marketing already in progress; entry, or an application for entry, in an official register of varieties; inclusion in a reference collection; precise description in a publication.

A new variety may be defined and distinguished by morphological or physiological characteristics. In all cases, such characteristics must be susceptible of precise description and recognition.

(2) The fact that a variety has been entered in trials, or has been submitted for registration or entered in an official register, shall not prejudice the breeder of such variety or his successor in title.

(3) With the exception of the varieties referred to in Article 49, a variety shall not be deemed new if, at the time of the application, it is commercialized in Belgium or has been commercialized abroad for more than four years, with the agreement of the breeder or his successor in title.

Article 5

The new variety must be sufficiently homogeneous, having regard to the particular features of its sexual reproduction or vegetative propagation.

Article 6

The new variety must be stable in its essential characteristics, that is to say, it must remain true to the description given of it at the time of the grant of the new plant variety certificate after repeated reproduction or multiplication or, where the breeder has defined a particular cycle of reproduction or multiplication, at the end of each such cycle.

Article 7

The applicant shall give the variety a denomination.

Article 8

The King shall specify, taking due account of the provisions of the Convention, the conditions to be fulfilled by the variety denomination and the conditions governing its use.

Article 9

(1) If the variety has been bred outside Belgium, the new plant variety certificate shall be granted when Belgium is bound to do so under the Convention or any other international convention.

(2) If the variety has been bred outside Belgium and paragraph (1) is not applicable, the new plant variety certificate shall be granted when the State in which it was bred grants equivalent protection to similar new varieties bred in Belgium.

(3) If the variety has been bred outside Belgium without there being the obligation referred to in paragraph (1) or the reciprocity referred to in paragraph (2), the Minister may, on the advice of the Service, and after the Council has been heard, specify the conditions for the grant of a new plant variety certificate in respect of a variety bred outside Belgium which he considers to be beneficial to Belgian agriculture, horticulture or forestry. The Minister may impose limitations that are not provided for in the Convention.

Article 10

An applicant who has filed an application for the recognition of the breeder's right in another member State of the Union in accordance with the provisions in force in that State shall enjoy a right of priority with respect to the grant in Belgium of a new plant variety certificate for the same variety, provided that he:

(a) files a request for the protection of the new variety and claims the priority of the first application within twelve months following the filing of that application;

(b) submits, within three months from the filing of the request referred to under (a), copies, certified by the competent authority of the member

State of the Union that received the first application, of the documents that were filed in relation to that application; and

(c) submits, within four years following the expiration of the period referred to under (a), the additional documents and material in compliance with the conditions specified by the King.

Article 11

The King shall specify the duration of protection to be granted in respect of each species or group of species subject to this Law.

The duration of protection shall not be less than fifteen years, or eighteen years in the case of fruit trees and their rootstocks, vines, forest trees and ornamental trees. The maximum duration shall not exceed twenty-five years.

The period of protection shall commence on the date of the grant of the new plant variety certificate.

CHAPTER II

GRANT OF THE NEW PLANT VARIETY CERTIFICATE

Article 12

A special service for the grant of new plant variety certificates, called the Service for the Protection of New Plant Varieties, shall be created by the King at the Ministry of Agriculture.

Article 13

The Service shall maintain a register of applications for new plant variety certificates, and a register of new plant variety certificates granted, called the Register of Varieties.

Article 14

The Service shall be assisted by a Scientific Council composed of persons specially qualified in law, genetics, botany and plant science.

The tasks, composition and functioning of the Council and of its sections shall be specified by the King. The members of the Council shall be appointed and dismissed by the King.

Article 15

Applications for new plant variety certificates shall be filed with the Service. The King shall specify the conditions which shall govern their entry in the Register of Applications and determine the order in which they are

entered. He shall lay down the procedure for publication of the entries and fix the period during which any person giving evidence of a legitimate interest may submit observations.

The applicant may at any time renounce his application. He shall inform the Service of such renunciation in compliance with the conditions specified by the King. Fees paid under Article 45 shall remain the property of the Service.

Article 16

Any alteration of the application entered in the Register of Applications shall be treated as a new application.

Incomplete applications shall be treated as not having been received. The respective applicant shall be responsible for the storage and return, where applicable, of material and documents.

Article 17

New plant variety certificates shall be granted after verification of the existence of the conditions laid down in Articles 3 to 8 and after examination of any observations that may have been submitted.

The variety for which a new plant variety certificate has been granted shall be entered by the Service in the Register of Varieties.

Article 18

(1) Examinations shall be carried out under the direction of the Service; the Service may seek the assistance of the Council referred to in Article 14.

The findings of the Service and the Council shall be communicated to the applicant. The applicant may inspect the examination file and submit observations.

Any person having submitted observations shall be sent the results of the examination concerning them. The Service may authorize that person, at his request, to inspect the part of the examination file that relates to his observations. He shall be entitled to enlarge upon those observations.

The King shall specify the periods during which the observations referred to in this Article have to be submitted.

(2) The decision of the Service to reject the application for a new plant variety certificate or to disregard observations shall state the reasons on which it is based.

Article 19

The applicant and the party having submitted observations shall be obliged to provide the Service with all information, documents, propagating material and seeds that are considered necessary for the examination.

Article 20

The King shall have power to conclude agreements with foreign scientific institutions with a view to the examination of new plant varieties and to take all such executive measures as are required to that end.

CHAPTER III

RIGHTS AND OBLIGATIONS OF THE OWNER OF A NEW PLANT VARIETY CERTIFICATE

Section 1: Licenses and Compulsory Licenses

Article 21

The owner of a new plant variety certificate shall have the exclusive right to make the production for commercial purposes and the commercialization of reproductive or vegetative propagating material of the respective variety subject to his prior authorization and to conditions specified by him. He may grant licenses.

Vegetative propagating material shall be deemed to include whole plants.

The right of the owner shall extend to ornamental plants or parts thereof that are normally marketed for purposes other than propagation when they are used commercially as propagating material in the production of ornamental plants or cut flowers.

Article 22

The provisions of Article 21 shall not apply in so far as the production and maintenance of propagating material of a variety take place only with a view to scientific research or the production of new varieties.

The authorization of the owner of the new plant variety certificate shall be required, however, when the repeated use of the new variety is necessary for the commercial production of another variety.

Article 23

The owner of the new plant variety certificate shall inform the Service without delay, in the manner specified by the King, of licenses granted by him in Belgium. Such licenses shall be entered in the Register of Varieties.

Article 24

The owner of a new plant variety certificate must grant such licenses as are necessary to supply the market with propagating material and to provide the licensee with the material necessary for the exercise of his license.

Such licenses shall be granted at fair prices and shall not contain provisions liable to disrupt the normal conditions of competition.

Article 25

The exclusive right of the owner of a new plant variety certificate may only be subject to limitation for reasons of public interest and only by means of a compulsory license granted by the Service in compliance with conditions specified by the King.

Such compulsory licenses shall be granted when the Minister considers, on the advice of the Service, and after the Council has been heard, that the provisions of Article 24 have not been fulfilled.

The compulsory license may only be granted to one or more natural or legal persons offering the required scientific, professional and material guarantees. It shall be entered in the Register of Varieties.

The owner of the new plant variety certificate shall be entitled to fair remuneration to be paid by the grantee of the compulsory license, except where there is reason to make such remuneration payable by the Treasury.

Section 2: Entitlement

Article 26

The breeder's right shall belong to the person who has bred or discovered the new variety or to his successor in title.

If the breeder is working for an employer, the right shall belong to that employer, unless otherwise agreed.

If two or more natural or legal persons have bred the same new variety independently, the breeder's right shall belong to the first applicant.

Article 27

Actions claiming breeders' rights in their entirety or an indivisible part thereof shall be brought within five years following the grant of the new plant variety certificate.

The Service shall be informed by the claimant of the action brought, according to the procedure specified by the King.

Article 28

Licenses acquired in good faith before an action claiming a breeder's right was brought shall remain valid in relation to the new owner of the new plant variety certificate.

Section 3: Renunciation and Assignment**Article 29**

The owner of a new plant variety certificate may renounce his right.

Renunciation shall be effective only as from its entry in the Register of Varieties.

Article 30

Renunciation may not be entered if, according to the entries in the Register of Varieties, there are persons who, in relation to the breeder's right, possess rights or have obtained licenses, or who have initiated an action claiming the breeder's right, except where those persons consent to the renunciation.

Article 31

The King shall specify the formalities and the time limits to be observed for the implementation of Articles 29 and 30.

Article 32

The owner of the new plant variety certificate may assign his rights in whole or in part.

Such assignment shall be evidenced in writing and notified to the Service according to the formalities and within the time limits specified by the King.

It shall not be binding on third parties until it has been entered in the Register of Varieties.

CHAPTER IV**FORFEITURE AND NULLITY****Section 1: Forfeiture****Article 33**

(1) The Service shall declare the forfeiture of the right to the new plant variety certificate, in the manner specified by the King, when the owner of the certificate or the licensee is no longer able to provide, on being requested to do so by the Service, reproductive or vegetative propagating material capable of producing the new variety with the morphological and physiological characteristics defined at the time of the grant of the new plant variety certificate.

(2) The owner of a new plant variety certificate may be deprived of his right by the Service when he:

(a) fails to provide the Service, on being requested to do so and within the prescribed period, with the reproductive or vegetative propagating material, the documents and the information deemed necessary for checking the new variety, or opposes the examination of the measures taken for the maintenance breeding of the variety;

(b) has not complied with the obligation referred to in item 2 of Article 44 after expiration of the periods specified by the King.

(3) Forfeiture shall be entered in the Register of Varieties.

Section 2: Nullity

Article 34

The new plant variety certificate shall be declared null and void by the Service if it appears that the conditions laid down in Article 4 were not fulfilled at the time when it was granted.

Nullity shall be pronounced either at the request of any interested party or ex officio; it shall be notified to the owner of the certificate.

Nullity shall be entered in the Register of Varieties.

CHAPTER V

INFRINGEMENT

Article 35

Either of the following acts, committed knowingly and without the authorization of the owner of the new plant variety certificate, shall be considered acts of infringement:

(a) the commercial production and commercialization of reproductive or vegetative propagating material of a variety protected by a new plant variety certificate, including ornamental plants or parts thereof that are normally marketed for purposes other than propagation;

(b) the repeated use in each reproduction cycle of the reproductive or propagating components of a variety protected by a new plant variety certificate in order to produce another variety for the purposes of commercialization.

Article 36

An infringement action may be brought after the grant of the new plant variety certificate.

The purpose of the action may be:

1. confiscation of the objects produced by means of the infringement;
2. cessation of the infringement;
3. payment of compensation for the loss caused by the infringement.

Notwithstanding the first paragraph of this Article, an action for restraining injunctions may be brought as soon as the application for a new plant variety certificate has been entered in the Register of Applications provided for in Article 15.

Article 37

Until such time as the Service has ruled on the application for the grant of a new plant variety certificate, the Court may order the cessation of acts of infringement.

It may require the plaintiff to deposit security.

If the decision of the Service is favorable, the security shall be returned on presentation of the new plant variety certificate.

If the Service rejects the application for the grant of a new plant variety certificate, the party having sought the restraining injunction shall indemnify the other party.

CHAPTER VI

DISPUTES

Article 38

(1) Disputes relating to civil rights which arise out of this Law shall be within the jurisdiction of the Court of first instance.

Disputes relating to the validity of applications for new plant variety certificates and to the refusal, grant, forfeiture and nullity of such certificates shall also be within the jurisdiction of the said Court. Actions shall not stay the procedure. However, if the dispute arises in the course of the administrative processing of the application for a certificate, the Service may, at the request of one of the parties to the Court proceeding, suspend the grant of the certificate until the Court has delivered its decision.

In cases where the action concerns intellectual property rights and is not directed against the State, the plaintiff shall be obliged to call upon the State to take part in the proceedings.

(2) Any action referred to in paragraph (1) and any decision delivered on such an action shall be entered in the Register of Applications or the Register of Varieties, as the case may be.

Article 39

Article 569(1) of the Civil Procedure Code is hereby completed by the following provision:

"20. Actions referred to in Article 38 of the Law of May 20, 1975, on the Protection of New Plant Varieties."

Article 40

Article 627, item 5, of the same Code is hereby replaced by the following provision:

"5. the Court of the place where the infringement occurred in the case of actions brought in matters of infringement of copyright, patents for inventions and plant variety protection."

Article 41

Article 1481(1) of the same Code is hereby replaced by the following provision:

"Holders of patents, owners of new plant variety certificates or of applications therefor, successors in title and owners of copyright may, with the judge's authorization, obtained on application, cause a description to be made, by one or more experts appointed by the judge, of the apparatus, machines, works, varieties, reproductive or vegetative propagating material and all other articles and processes alleged to constitute infringement, together with any plans, documents, calculations, writings, plants or parts of plants which may prove the infringement alleged, and any instruments which have served directly in the manufacture proceeded against."

Article 42

In Article 1482 of the same Code, the words "The patent" are hereby replaced by the words "The patent, the new plant variety certificate or a copy of the registered application, certified by the Service for the Protection of New Plant Varieties."

Article 43

The registrar shall communicate free of charge to the Service, within a month of their being delivered, copies of Court rulings on the disputes referred to in Article 38(1), without prejudice to the application of Article 792 of the Civil Procedure Code to the other disputes referred to in Article 38.

CHAPTER VII

FINAL AND TRANSITIONAL PROVISIONS

Article 44

The King shall specify, according to the genus, species or variety:

1. the fee to be paid by the applicant for the filing of his application;
2. the annual fee payable by the owner of the breeder's right.

Article 45

The King shall also specify:

1. the fees payable for the entries made by the Service under Articles 15, 17, 23, 25, 29 and 32;
2. the fees payable for the issue of extracts and copies by the Service.

Advance payment of the fees provided for in this Article may be demanded.

Article 46

The income generated by fees shall be applied to the expenditure incurred by the Service.

Income and expenditure shall be credited and debited to a special fund created in the special section of the budget of the Ministry of Agriculture.

The special fund shall be managed by the Minister of Agriculture; the accountant who collected the income shall have direct access to the assets of the special fund.

At the close of every fiscal year, any surplus of receipts over expenditure in excess of 250,000 francs shall be paid to the Treasury. This amount may be amended by the King.

Article 47

Applications for the grant of new plant variety certificates and all instruments, requests and documents relating to the implementation of this Law or the rules made thereunder shall, when they issue from a person residing abroad, be written in French or Dutch or be accompanied by a translation into one of those languages.

Article 48

The entries and observations required by Articles 15, 16, 17, 23, 25, 27, 29, 32, 33 and 34 shall be published by the Service in the manner specified by the King.

Article 49

(1) Where, prior to the entry into force of this Law, a variety has been the subject:

- (a) of a patent acquired in Belgium;
- (b) of a patent or title of protection acquired in one of the member States of the Union;
- (c) of an entry in a Belgian list of varieties established under the Royal Decree of March 25, 1952, Organizing the Control of Agricultural and Horticultural Seeds and Seedlings, or under the Royal Decree of May 17, 1968, Organizing the Control of Basic Materials and Reproductive Materials for Forest Trees, or of an entry in the National Catalogue of Varieties of Agricultural Plant Species established under the Royal Decree of May 12, 1972, on the National Catalogue of Varieties of Agricultural Plant Species, or of an entry in the Catalogue of Varieties of Vegetables established under the Royal Decree of June 13, 1973, on the Commercialization of Vegetable Seeds, or of an entry in the register of a Belgian professional association that fulfills the conditions specified by the King;

the breeder may, within one year following the entry into force of this Law with respect to the species and varieties specified by the King under Article 1, request application of this Law without the common knowledge within the meaning of Article 4 arising from facts subsequent to the date of the grant of the said patents or title or of the entries referred to in paragraph (c) above being held against such application.

(2) Where the provisions of this Article are applied, and subject to the examination for novelty, stability, homogeneity and of the denomination:

- 1. the variety in question must have fulfilled these conditions at the time of the filing of the application for a patent or title of protection, or at the time of the entry in an official Belgian list of varieties or in a national catalogue or in the register of a Belgian professional association;
- 2. the duration of the protection granted under the provisions of Article 11 of this Law shall be reduced by the time that has elapsed between the date of the initial entry, as defined above, and that of the entry in the Register of Varieties.

This provision shall apply also to varieties which, prior to the entry into force of this Law, have enjoyed the protection provided for in the Convention in one or more member States of the Union.

Article 50

This Law shall enter into force on the date set by the King and at the latest one year after its publication in the Moniteur Belge.

[Cont'd from page 40]

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CALENDAR

UPOV Meetings in 1990

March 5 to 7	Subgroup of the Technical Committee on Dependency and Minimum Distances
April 23 to 27	First Preparatory Meeting for the Revision of the Convention
April 27	Consultative Committee
May 15 to 18 Wageningen (Netherlands)	Technical Working Party for Agricultural Crops
June 6 to 8 Belfast (United Kingdom)	Technical Working Party on Automation and Computer Programs
June 25 to 29	Second Preparatory Meeting for the Revision of the Convention
July 2 to 6 Avignon (France)	Technical Working Party for Vegetables
September 10 to 17 Tsukuba (Japan)	Technical Working Party for Fruit Crops
September 16 to 24 Tokyo (Japan)	Technical Working Party for Ornamental Plants and Forest Trees
September 19 to 21 Budapest (Hungary)	UPOV Seminar
October 11 and 12	Technical Committee
October 15 and 16	Third Preparatory Meeting for the Revision of the Convention
October 17	Consultative Committee
October 18 and 19	Council

UPOV Meetings in 1991

March 4 to 19	Diplomatic Conference for the Revision of the Convention
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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.

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