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# PLANT VARIETY PROTECTION

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

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## GAZETTE

ACCESSION TO THE REVISED ACT OF 1978  
OF THE UPOV CONVENTION

## Australia

The Government of Australia deposited on February 1, 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 Australia one month after the date on which its Government deposited its instrument of accession, i.e. on March 1, 1989.

It is recalled that the Plant Variety Rights Act 1987 of Australia has been published in Plant Variety Protection No. 55 (June 1988), together with information on its implementation, in particular on the list of genera and species to which the Act applies or will be applied in the near future.

## AMENDMENT OF LEGAL PROVISIONS

## Denmark

A new Plant Variety Protection Act was passed by Parliament on December 23, 1987, and published as No. 866 of 1987. It entered into force on January 1, 1988.

The main amendments introduced and on which information is to be published by the Secretary-General of UPOV pursuant to Article 35(2) of the Geneva Act of October 23, 1978, of the Convention are as follows.

Access of Foreigners to Protection.- Pursuant to Section 1(2) of the Act, the following persons shall be entitled to obtain protection:

- (i) persons being residents or having their registered office in Denmark or in a member State of the European Communities;
- (ii) nationals of member States of UPOV or persons being residents or having their registered office in one of those States.

Pursuant to Section 2(2) of the Act, protection may also be granted to a person having his residence or registered office in another State if a reciprocity agreement covering the species concerned has been concluded with that State, if equivalent protection is afforded by that State to Danish varieties or if the variety concerned is otherwise of economic interest to agriculture.

Scope of Protection.- Pursuant to Section 16(3) of the Act, the Minister of Agriculture may provide that any person propagating a protected variety of a specified species for commercial use in his own business shall pay a royalty to the holder of the plant breeder's right.

Pursuant to the Order of the Minister of Agriculture No. 670 of October 16, 1987, Concerning Plant Breeders' Royalties in Respect of Propagation of Certain Plant Novelties for Commercial Use in One's Own Business, which entered into force on November 1, 1987, breeders are entitled to a royalty where varieties of the following species are propagated with a view to producing fruit for sale or industrial use:

<u>Latine</u>	<u>Dansk</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Fragaria x ananassa Duch.	Havejordbaer	Strawberry	Fraisier	Erdbeere
Malus sylvestris Mill.	Aeble	Apple	Pommier	Apfel
Ribes nigrum L.	Solbaer	Black Currant	Cassis	Schwarze Johannisbeere
Rubus idaeus L.	Hindbaer	Raspberry	Framboisier	Himbeere

Breeders are also entitled to a royalty where varieties of the following genera and species are propagated with a view to producing cut flowers for sale:

<u>Latine</u>	<u>Dansk</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Euphorbia fulgens Karw.	Koralranke	Euphorbia fulgens	Euphorbia fulgens	Korallenranke
Euphorbia pulcherrima Willd. ex Klotzsch	Julestjerne (poinsettia)	Poinsettia	Poinsettia	Poinsettie, Weihnachtsstern
Rosa L.	Rose	Rose	Rosier	Rose

Novelty.- Section 1(1) provides that, to be eligible for protection, a variety may not have been offered for sale or sold with the consent of its owner in Denmark or for longer than four years in any other country (six years in the case of grapevines, trees and their rootstocks).

Provisional Protection.- Pursuant to Section 21, an applicant for a plant breeder's right may enjoy provisional protection in the period between the acceptance of his application for a right and the registration of the right. To this effect, he must notify the Board for Plant Novelty of his wish to enjoy such protection and comply with the provisions of Section 18 concerning the duty to supply plant material.

Royalties collected under the provisional protection scheme must be deposited in a blocked account in favor of the applicant. They are released if the right is granted; otherwise the royalties, and any interest accrued, are refunded to the producers.

Period of Protection.- Subject to payment of the annual renewal fees, the period of protection is 25 years from the date of issue of the plant breeder's right, pursuant to Section 12 of the Act. However, if use has been made of the provisions of Section 21 concerning provisional protection, the period is computed from the date of entry of the notification by the breeder of his wish to enjoy provisional protection in the journal of the Board for Plant Novelty.

EXTENSION OF PROTECTION TO FURTHER GENERA AND SPECIES
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#### Denmark

By virtue of the Order of the Minister of Agriculture No. 358 of June 3, 1987, Concerning Plant Novelty (List of Species), protection was extended to the following with effect from June 18, 1987:

<u>Latine</u>	<u>Dansk</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Brassica pekinensis (Lour.) Rupr.	Kinakål	Chinese Cabbage	Chou de Chine, Pé-tsai	Chinakohl
Fagopyrum esculentum Moench	Boghvede	Buckwheat	Sarrasin, Blé noir	Buchweizen

By virtue of the Order of the Minister of Agriculture No. 661 of October 13, 1987, Concerning Plant Novelty (List of Species), protection was extended to the following with effect from November 1, 1987:

<u>Latine</u>	<u>Dansk</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
<i>Avena nuda</i> L.	Nøgen havre	Naked Oats	Avoine nue	Nakthafer
<i>Gerbera</i> L.	Gerbera	Gerbera	Gerbera	Gerbera

By virtue of the Order of the Minister of Agriculture No. 302 of June 9, 1988, Concerning Plant Novelties (List of Species), protection was extended to the following with effect from July 1, 1988:

<u>Latine</u>	<u>Dansk</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
<i>Capsicum annum</i> L.	Spansk peber	Sweet Pepper, Capsicum, Chili	Poivron, Piment	Paprika
<i>Solanum melongena</i> L.	Aubergine	Eggplant, Aubergine	Aubergine	Eierfrucht, Aubergine
<i>Ulmus</i> L.	Elm	Elm	Orme	Ulme
<i>Valerianella locusta</i> (L.) Laterr.	Vårsalat	Cornsalad, Lamb's Lettuce	Mâche, Doucette	Feldsalat

By virtue of the Order of the Minister of Agriculture No. 714 of November 25, 1988, Concerning Plant Novelties (List of Species), protection was extended to the following with effect from January 1, 1989:

<u>Latine</u>	<u>Dansk</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
<i>Campanula</i> L.	Klokke	Campanula, Bellflower	Campanule	Glockenblume
<i>Clematis</i> L.	Klematis	Clematis	Clématite	Waldrebe

In addition to the extension of protection, the Order provides a consolidated list of the taxa covered by plant variety protection legislation and repeals the previous orders on the subject. Some minor amendments have also been made in the names of taxa in accordance with latest scientific knowledge. The list is given hereunder, starting on page 5 (the Danish and Latin names appear in the above-mentioned Order, whereas the English, French and German common names have been added, without guarantee of concordance, by the Office of the Union).

#### Federal Republic of Germany

By virtue of the Third Order Amending Orders Concerned with Seed Legislation of July 27, 1988 (Bundesgesetzblatt, Part I, of August 4, 1988, pp. 1192 - 1195), a new List of Species under the Plant Variety Protection Law was established with effect from August 5, 1988. Protection now extends to 102 botanical families and to any species resulting from a hybridization between species belonging to different families, of which one at least is mentioned in the List.

As regards the availability of protection to foreigners and the novelty condition, reference is made to Articles 15 and 6, respectively, of the Plant Variety Protection Law published in the "Legislation" subsection of Plant Variety Protection No. 51 (September 1986).

No amendment has been made to the tariff of fees. The tariff attached to the Order on the Procedure Before the Federal Office of Plant Varieties continues to apply to species heretofore protected (see Plant Variety Protection No. 50 (April 1986), page 31). The other species are included in Group 5.

The list of the families which are covered by plant variety protection legislation is given below, starting on page 14. The Latin and German names appear in the above-mentioned Order, whereas the English and French common names have been added, without guarantee of concordance, by the Office of the Union.

List of Taxa Covered by Plant Variety Protection Legislation in DenmarkListe des taxons couverts par la législation sur la protection des obtentions végétales au DanemarkListe der taxonomischen Einheiten, die in Dänemark der Sortenschutzgesetzgebung unterliegen

<u>Dansk</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Aeschynanthus	Aeschynanthus Jack	Aeschynanthus	Aeschynanthus	Aeschynanthus
Hvene	Agrostis spp.	Bentgrass	Agrostis	Straussgras
Allamanda	Allamanda cathartica L.	Allamanda	Allamanda	Allamanda
Skalotteløg	Allium ascalonicum L.	Shallot	Echalote	Schalotte
Kepaløg	Allium cepa L.	Onion	Oignon	Zwiebel
Porre	Allium porrum L.	Leek	Poireau	Porree
Purløg	Allium schoenoprasum L.	Chives, Asatsuki	Ciboulette, Civette	Schnittlauch
Inkalilje (alstroemeria)	Alstroemeria spp.	Alstroemeria, Herb Lily	Alstroemère, Lis des Incas	Inkalilie
Dild	Anethum graveolens L.	Dill	Aneth	Dill
Kørvel	Anthriscus cerefolium (L.) Hoffm.	Chervil	Cerfeuil	Kerbel
Selleri (knold- og bladselleri)	Apium graveolens L.	Celery, Celeriac	Céleri, Céleri-rave	Sellerie (Knollen- und Blattsellerie)
Peberrod	Armoracia rusticana Ph. Gaertn., B. Mey. et Scherb.	Horse Radish	Raifort sauvage	Meerrettich
Asparges	Asparagus officinalis L.	Asparagus	Asperge	Spargel
Slørasparges	Asparagus setaceus (Kunth) Jessop	"Asparagus Fern"	Asparagus	Asparagus, Federspargel
Nøgen havre	Avena nuda L.	Naked Oats	Avoine nue	Nakthafer
Havre	Avena sativa L., Avena byzantina K. Koch	Oats	Avoine	Hafer

<u>Dansk</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Begonie	Begonia spp.	Begonia	Bégonia	Begonie
Berberis	Berberis spp.	Berberis, Barberry	Berberis, Epine-vinette	Berberitze
Rødbede	Beta vulgaris L. var. conditiva Alef.	Garden Beet, Beetroot	Betterave rouge, Betterave potagère	Rote Rübe
Foderbede	Beta vulgaris L. var. crassa Mansf.	Fodder Beet	Betterave fourragère	Runkelrübe
Bladbede	Beta vulgaris L. var. vulgaris	Mangel, Leaf Beet, Spinach Beet	Bette commune, Poirée	Mangold
Bougainvillea	Bougainvillea spp.	Bougainvillea	Bougainvillier	Bougainvillea
Raps	Brassica napus L.	Swede Rape, incl. Oilseed Rape	Colza	Raps
Kålroe	Brassica napus L. var. napobrassica (L.) Rchb.	Swede	Chou-navet, Rutabaga	Kohlrübe
Knudekål	Brassica oleracea L. convar. acephala (DC.) Alef. var. gongylodes L.	Kohlrabi	Chou-rave	Kohlrabi
Fodermarvkål	Brassica oleracea L. convar. acephala (DC.) Alef. var. medullosa Thell.	Marrow-stem Kale	Chou moellier	Markkohl
Grønkål	Brassica oleracea L. convar. acephala (DC.) Alef. var. sabellica L.	Curly Kale	Chou frisé	Grünkohl
Blomkål	Brassica oleracea L. convar. botrytis (L.) Alef. var. botrytis L.	Cauliflower	Chou-fleur	Blumenkohl
Hvidkål	Brassica oleracea L. convar. capitata (L.) Alef. var. alba DC.	White Cabbage	Chou cabus	Weisskohl
Rødkål	Brassica oleracea L. convar. capitata (L.) Alef. var. rubra (L.) Thell.	Red Cabbage	Chou rouge	Rotkohl

<u>Dansk</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Savoykål	Brassica oleracea L. convar. capitata (L.) Alef. var. sabauda L.	Savoy Cabbage	Chou de Milan	Wirsing
Rosenkål	Brassica oleracea L. convar. oleracea var. gemmifera DC.	Brussels Sprouts	Chou de Bruxelles	Rosenkohl
Kinakål	Brassica pekinensis (Lour.) Rupr.	Chinese Cabbage	Chou de Chine, Pé-tsai	Chinakohl
Majroe	Brassica rapa L. var. rapa	[Spring] Turnip	Navet [de printemps]	Mairübe
Turnips	Brassica rapa L. var. rapa	[Autumn] Turnip	Nävet [d'automne]	Herbstrübe
Rybs	Brassica rapa L. var. silvestris (Lam.) Briggs	Turnip Rape	Navette	Rübsen
Klokke	Campanula L.	Campanula, Bellflower	Campanule	Glockenblume
Spansk peber	Capsicum annuum L.	Sweet Pepper, Capsicum, Chili	Poivron, Piment	Paprika
Kommen	Carum carvi L.	Caraway	Carvi, Cumin des prés	Kümmel
Dvaergcypres	Chamaecyparis spp.	Chamaecyparis	Chamaecyparis	Scheinzypresse
Krysanthemum	Chrysanthemum spp.	Chrysanthemum	Chrysanthème	Chrysantheme
Endivie	Cichorium endivia L.	Endive	Chicorée frisée, Scarole	Winterendivie
Cikorie	Cichorium intybus L.	Chicory	Chicorée, Endive	Wurzelzichorie, Salatzichorie
Klematis	Clematis L.	Clematis	Clématite	Waldrebe
Melon	Cucumis melo L.	Melon	Melon	Melone
Agurk	Cucumis sativus L.	Cucumber, Gherkin	Concombre, Cornichon	Gurke
Centnergraeskar	Cucurbita maxima Duch.	Pumpkin	Potiron, Giraumon	Riesenkürbis



<u>Dansk</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Mandelgraeskar	Cucurbita pepo L.	Pumpkin, Marrow, Courgette, Vegetable Marrow	Courge, Pâtisson, Citrouille	Gartenkürbis, Olkürbis
Kvaede	Cydonia spp.	Quince	Cognassier	Quitte
Almindelig kamgraes	Cynosurus cristatus L.	Crested Dog's-tail	Crételle	Kammgras
Hundegraes	Dactylis glomerata L.	Cocksfoot, Orchard Grass	Dactyle	Knaulgras
Gulerod	Daucus carota L.	Carrot	Carotte	Möhre
Havenellike	Dianthus caryophyllus L.	Carnation	Oeillet	Nelke
Dieffenbachia	Dieffenbachia Schott	Dieffenbachia, Tuft Root, Dumb Bane	Dieffenbachia	Dieffenbachia
Koralranke	Euphorbia fulgens Karw. ex Klotzsch	Euphorbia fulgens	Euphorbia fulgens	Korallenranke
Kristi tornekrone	Euphorbia milii Desm. et hybridae	Christ's Thorn, Crown of Thorns	Epine du Christ	Christusdorn
Julestjerne	Euphorbia pulcherrima Willd. ex Klotzsch	Poinsettia	Poinsettia	Poinsettie, Weihnachtsstern
Exacum	Exacum spp.	Exacum	Exacum	Blaues Lieschen
Almindelig boghvede	Fagopyrum esculentum Moench	Buckwheat	Sarrasin, Blé noir	Buchweizen
Svingel	Festuca spp.	Fescue	Fétuque	Schwingel
Havejordbaer	Fragaria x ananassa Duch.	Strawberry	Fraisier	Erdbeere
Freesia	Freesia spp.	Freesia	Freesia	Freesie
Fuchsia	Fuchsia spp.	Fuchsia	Fuchsia	Fuchsie
Gerbera	Gerbera L.	Gerbera	Gerbera	Gerbera
Julerose	Helleborus L.	Christmas Rose	Hellébore, Rose de Noël	Schneerose, Christusrose

<u>Dansk</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Ridderstjerne (amaryllis)	Hippeastrum Herb.	Amaryllis	Amaryllis	Ritterstern, Amaryllis
Byg	Hordeum vulgare L.	Barley	Orge	Gerste
Hyacint	Hyacinthus orientalis L.	Common Hyacinth	Jacinthe	Hyazinthe
Balsamin	Impatiens spp.	Balsam, Busy Lizzie, Touch-me-not	Balsamine, Impatiente	Springkraut, Balsamine
Ene	Juniperus spp.	Juniper	Genévrier	Wacholder
Kalanchoë	Kalanchoë Adans.	Kalanchoë	Kalanchoë	Kalanchoë
Salat	Lactuca sativa L.	Lettuce	Laitue	Salat
Karse	Lepidium sativum L.	Cress	Cresson alénois	Gartenkresse
Hør	Linum usitatissimum L.	Flax, Linseed	Lin	Lein
Rajgraes	Lolium spp.	Ryegrass	Ray-grass	Weidelgras
Hvid lupin	Lupinus albus L.	White Lupin	Lupin blanc	Weisslupine
Smalblad et lupin	Lupinus angustifolius L.	Blue Lupin	Lupin bleu	Blaue Lupine
Gul lupin	Lupinus luteus L.	Yellow Lupin	Lupin jaune	Gelbe Lupine
Tomat	Lycopersicon lycopersicum (L.) Karst. ex Farw.	Tomato	Tomate	Tomate
Aeble*	Malus sylvestris Mill.	Apple	Pommier	Apfel
Katost	Malva spp.	Mallow	Mauve	Malve
Levkøj	Matthiola spp.	Stock	Giroflée	Levkoje
Humlesneglebaelg	Medicago lupulina L.	Black Medick, Yellow Trefoil	Luzerne lupuline, Minette	Gelbklee (Hopfenklee)
Lucerne	Medicago sativa L.	Lucerne, Alfalfa	Luzerne	Luzerne

\* Inclusive grundstammer / Including rootstocks / Y compris les porte-greffes / Einschliesslich Unterlagen

<u>Dansk</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Sandlucerne	Medicago x varia Martyn	(Hybrid) Lucerne	Luzerne hybride	Bastardluzerne
Narcis	Narcissus L.	Narcissus, Daffodil, Jonquil	Narcisse, Jonquille	Narzisse
Opiatvalmue	Papaver somniferum L.	Opium Poppy	Oeillette, Pavot	Mohn
Pastinak	Pastinaca sativa L.	Parsnip	Panais	Pastinak
Pelargonie	Pelargonium L'Hérit. ex Ait. (incl. hybrids of P. grandiflorum, P. Zonale and P. peltatum)	Geranium, Pelargonium, Stork's Bill	Géranium, Pelargonium	Pelargonie
Rodpersille	Petroselinum crispum (Mill.) Nym. ex A.W. Hill ssp. tuberosum (Bernh. ex Rchb.) Soó.	Turnip-rooted Parsley	Persil à grosse racine	Wurzelpetersilie
Kruspersille	Petroselinum crispum (Mill.) Nym. ex A.W. Hill ssp. crispum	Parsley	Persil	Blattpetersilie
Pralbønne	Phaseolus coccineus L.	Runner Bean, Kidney Bean	Haricot d'Espagne	Prunkbohne
Bønne	Phaseolus vulgaris L.	French Bean	Haricot	Gartenbohne
Knoldrottehale	Phleum bertolonii DC.	Timothy	Fléole diploïde, Petite fléole	Zwiebellieschgras
Timothe	Phleum pratense L.	Timothy	Fléole des prés	Wiesenlieschgras
Aert	Pisum sativum L.	Pea	Pois	Erbse
Rapgræs	Poa spp.	Meadow-grass	Pâturin	Rispengras
Buskpotentil	Potentilla fruticosa L.	Shrubby Cinquefoil	Potentille ligneuse	Strauchfingerkraut
Sødkirsebaer*	Prunus avium (L.) L.	Sweet Cherry	Cerisier (cerises douces: guignes, bigarreaux)	Süsskirsche

\* Inclusive grundstammer / Including rootstocks / Y compris les porte-greffes / Einschliesslich Unterlagen

<u>Dansk</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Surkirsebaer*	Prunus cerasus L.	Morello, Sour Cherry	Cerisier (cerises acides: griottes, amarelles)	Sauerkirsche
Blomme*	Prunus domestica L.	Plum	Prunier	Pflaume
Paere	Pyrus communis L.	Pear	Poirier	Birne
Raeddike	Raphanus sativus L. var. niger (Mill.) S. Kerner	Black Radish	Radis d'été, d'automne et d'hiver	Rettich
Olieraeddike	Raphanus sativus L. var. oleiformis Pers.	Fodder Radish	Radis oléifère, Radis chinois	Oelrettich
Radis	Raphanus sativus L. var. sativus	Radish	Radis de tous les mois	Radieschen
Rabarber	Rheum rhabarbarum L.	Rhubarb	Rnubarbe	Krauser Rhabarber
Ledkaktus, herunder paske- og pinsekaktus	Rhipsalidopsis Britt. et Rose et hybridae	Cactus with jointed stems, including Easter and Whitsun Cactus	Cactus à articles, y compris les cactus de Pâques et de la Pentecôte	Gliederkaktus, einschliessend Oster- und Pfingstkaktus
Rhododendron, herunder azalea	Rhododendron spp.	Rhododendron, including Azalea	Rhododendron, y compris Azalée	Rhododendron, einschl. Azalee
Solbaer	Ribes nigrum L.	Black Currant	Cassis	Schwarze Johannisbeere
Ribs	Ribes niveum Lindley Ribes sylvestre (Lam.) Mert. et W.D.J. Koch	White and Red Currant	Groseillier à grappes	Weisse und Rote Johannisbeere
Stikkelsbaer	Ribes uva-crispa L.	Gooseberry	Groseillier à maquereau	Stachelbeere
Rose	Rosa L.	Rose	Rosier	Rose
Brombaer	Rubus fruticosus L.	Blackberry	Ronce fruitière	Brombeere

\* Inclusive grundstammer / Including rootstocks / Y compris les porte-greffes / Einschliesslich Unterlagen

<u>Dansk</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Hindbaer	Rubus idaeus L.	Raspberry	Framboisier	Himbeere
Saintpaulia	Saintpaulia ionantha H. Wendl.	African Violet	Saintpaulia	Usambaraveilchen
Skorzoner	Scorzonera hispanica L.	Black Salsify	Scorsonère, Salsifis noir	Schwarzwurzel
Ledkaktus, herunder november- og julekaktus	Schlumbergera Lem. et hybridae	Cactus with jointed stems, including November and Christmas Cactus	Cactus à articles, y compris les cactus de novembre et de Noël	Gliederkaktus, einschliessend November- und Weihnachtskaktus
Rug	Secale cereale L.	Rye	Seigle	Roggen
Gul sennep	Sinapis alba L.	White Mustard	Moutarde blanche	Weisser Senf
Aubergine	Solanum melongena L.	Eggplant, Aubergine	Aubergine	Eierfrucht, Aubergine
Kartoffel	Solanum tuberosum L.	Potato	Pomme de terre	Kartoffel
Fredslilje (spathiphyllum)	Spathiphyllum spp.	Spathiphyllum	Spathiphyllum	Spathiphyllum
Spinat	Spinacia oleracea L.	Spinach	Epinard	Spinat
Streptocarpus	Streptocarpus x hybridus Voss	Streptocarpus, Cape Primrose	Streptocarpus	Drehfrucht
Thuja	Thuja spp.	Thuya	Thuya	Lebensbaum
Alsikekløver	Trifolium hybridum L.	Alsike Clover	Trèfle hybride	Schwedenklee
Rødkløver	Trifolium pratense L.	Red Clover	Trèfle violet	Rotklee
Hvidkløver	Trifolium repens L.	White Clover	Trèfle blanc	Weissklee
Triticale	x Triticosecale Wittmack	Triticale	Triticale	Triticale
Almindelig hvede	Triticum aestivum L. emend. Fiori et Paoletti	Wheat, Soft Wheat, Bread Wheat	Blé tendre, Froment	Weichweizen
Durumhvede	Triticum durum Desf.	Durum Wheat, Macaroni Wheat, Hard Wheat	Blé dur	Hartweizen

<u>Dansk</u>	<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Tulipan	Tulipa L.	Tulip	Tulipe	Tulpe
Elm	Ulmus L.	Elm	Orme	Ulme
Amerikansk blåbaer	Vaccinium corymbosum L. et hybridae	Blueberry	Myrtille	Kulturheidelbeere
Blåbaer	Vaccinium myrtillus L.	Bilberry, Whortle- berry, Blueberry	Myrtille	Heidelbeere
Vårsalat	Valerianella locusta (L.) Laterr.	Cornsalad, Lamb's Lettuce	Mâche, Doucette	Feldsalat
Valsk bønne	Vicia faba L.	Broad Bean, Horse Bean	Fève	Dicke Bohne (Puffbohne)
Hestebønne	Vicia faba L.	Field Bean, Tick Bean	Féverole	Ackerbohne
Fodervikke	Vicia sativa L.	Common Vetch	Vesce commune	Saatwicke
Majs	Zea mays L.	Maize	Maïs	Mais

List of Families Covered by Plant Variety Protection Legislation  
in the Federal Republic of Germany\*

Liste des familles couvertes par la législation sur la protection  
des obtentions végétales en République fédérale d'Allemagne\*

Liste der Familien, die in der Bundesrepublik Deutschland  
der Sortenschutzgesetzgebung unterliegen\*

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Acanthaceae	Acanthaceae	Acanthacées	Bärenklaugewächse
Aceraceae	Acéraceae	Acéracées	Ahorngewächse
Acrostichaceae	Acrostichaceae	Acrostichacées	Saumfarne
Actinidiaceae	Actinidiaceae	Actinidiacées	Strahlengriffelgewächse
Adiantaceae	Adiantaceae	Adiantacées	Frauenhaarfarn
Agaricaceae	Agaricaceae	Agaricacées	Blätterpilze
Agavaceae	Agavaceae	Agavacées	Agavengewächse
Amaranthaceae	Amaranthaceae	Amarantacées	Fuchsschwanzgewächse
Amaryllidaceae	Amaryllidaceae	Amaryllidacées	Narzissengewächse
Apiaceae (Umbelliferae)	Umbelliferae	Ombellifères	Doldenblütler
Apocynaceae	Apocynaceae	Apocynacées	Hundsgiftgewächse
Aquifoliaceae	Aquifoliaceae	Aquifoliacées (Ilicacées)	Stechpalmengewächse
Araceae	Araceae	Aracées (Aroïdées)	Aronstabgewächse
Araliaceae	Araliaceae	Araliacées	Araliengewächse
Araucariaceae	Araucariaceae	Araucariacées	Araukariengewächse
Asclepiadaceae	Asclepiadaceae	Asclépiadacées	Seidenpflanzengewächse
Asteraceae (Compositae)	Compositae	Composées (Composacées)	Korbblütler
Balsaminaceae	Balsaminaceae	Balsaminacées	Springkrautgewächse
Begoniaceae	Begoniaceae	Bégoniacées	Schiefblattgewächse
Berberidaceae	Berberidaceae	Berbéridacées	Sauerdorngewächse
Betulaceae	Betulaceae	Bétulacées	Birkengewächse
Boraginaceae	Boraginaceae	Borraginacées	Rauhblattgewächse

\* Protection also extends to any species resulting from a hybridization between species belonging to different families, of which one at least is mentioned in the List.

La protection porte aussi sur toute espèce produite par hybridation d'espèces appartenant à des familles différentes dont l'une au moins est mentionnée dans la liste.

Der Schutz erstreckt sich auch auf alle aus einer Arthybridisation hervorgegangenen Arten, die verschiedenen Familien angehören, von denen mindestens eine in der Liste aufgeführt ist.

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Bromeliaceae	Bromeliaceae	Broméliacées	Ananasgewächse
Brassicaceae (Cruciferae)	Crucifers	Crucifères	Kreuzblütler
Buddlejaceae	Buddlejaceae	Buddléiacées	Buddlejagewächse
Buxaceae	Buxaceae	Buxacées	Buchsbaumgewächse
Cactaceae	Cactaceae	Cactacées	Kaktusgewächse
Campanulaceae	Campanulaceae	Campanulacées	Glockenblumengewächse
Cannaceae	Cannaceae	Cannacées	Cannagewächse
Caprifoliaceae	Caprifoliaceae	Caprifoliacées	Geissblattgewächse
Caryophyllaceae	Caryophyllaceae	Caryophyllacées	Nelkengewächse
Celastraceae	Celastraceae	Célastracées	Baumwürgergewächse
Chenopodiaceae	Chenopodiaceae	Chénopodiacées (Salsolacées)	Gänsefussgewächse
Convolvulaceae	Convolvulaceae	Convolvulacées	Windengewächse
Cornaceae	Cornaceae	Cornacées	Hartriegelgewächse
Crassulaceae	Crassulaceae	Crassulacées	Dickblattgewächse
Cucurbitaceae	Cucurbits	Cucurbitacées	Kürbisgewächse
Cupressaceae	Cupressaceae	Cupressacées	Zypressengewächse
Droseraceae	Droseraceae	Droséracées	Sonnentaugewächse
Elaeagnaceae	Elaeagnaceae	Eléagnacées	Oelweidengewächse
Ericaceae	Ericaceae	Ericacées	Heidekrautgewächse
Euphorbiaceae	Euphorbiaceae	Euphorbiacées	Wolfsmilchgewächse
Fabaceae (Leguminosae)	Leguminosae, Legumes	Légumineuses	Hülsenfrüchtler
Fagaceae	Fagaceae	Fagacées (Cupulifères)	Buchengewächse
Gentianaceae	Gentianaceae	Gentianacées	Enziangewächse
Geraniaceae	Geraniaceae	Géraniacées	Storchschnabelgewächse
Gesneriaceae	Gesneriaceae	Gesnériacées	Gesneriengewächse
Ginkgoaceae	Ginkgoaceae	Ginkgoacées	Ginkgogewächse
Goodeniaceae	Goodeniaceae	Goodéniacées	Goodeniengewächse
Haemodoraceae	Haemodoraceae	Hémodoracées	Haemodoragewächse
Hamamelidaceae	Hamamelidaceae	Hamamélidacées	Zaubernussgewächse
Hippocastanaceae	Hippocastanaceae	Hippocastanacées	Rosskastaniengewächse
Hydrophyllaceae	Hydrophyllaceae	Hydrophyllacées	Wasserblattgewächse
Hypericaceae (Guttiferae)	Guttiferae (Hypericaceae)	Hypéricacées (Guttifères)	Johanniskrautgewächse
Iridaceae	Iridaceae	Iridacées	Schwertliliengewächse
Juglandaceae	Juglandaceae	Juglandacées	Walnussgewächse



<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Lamiaceae (Labiatae)	Labiatae	Labiatacées (Labiées)	Lippenblütler
Liliaceae	Liliaceae	Liliacées	Liliengewächse
Linaceae	Linaceae	Linacées	Leingewächse
Lythraceae	Lythraceae	Lythracées	Weiderichgewächse
Magnoliaceae	Magnoliaceae	Magnoliacées	Tulpenbaumgewächse
Malvaceae	Malvaceae	Malvacées	Malvengewächse
Marantaceae	Marantaceae	Marantacées	Marantengewächse
Moraceae	Moraceae	Moracées	Maulbeergewächse
Myrsinaceae	Myrsinaceae	Myrsinacées	Myrsinegewächse
Myrtaceae	Myrtaceae	Myrtacées	Myrtengewächse
Nephrolepidaceae	Nephrolepidaceae	Nephrolépidacées	Schwertfarne
Oleaceae	Oleaceae	Oléacées	Oelbaumgewächse
Onagraceae	Onagraceae	Onagracées	Nachtkerzengewächse
Orchidaceae	Orchids	Orchidées	Orchideen
Paeoniaceae	Paeoniaceae	Paeoniacées	Pfingstrosengewächse
Papaveraceae	Papaveraceae	Papavéracées	Mohngewächse
Passifloraceae	Passifloraceae	Passifloracées	Passionsblumengewächse
Pinaceae	Pinaceae	Pinacées	Kieferngewächse
Platanaceae	Platanaceae	Platanacées	Platanengewächse
Plumbaginaceae	Plumbaginaceae	Plombaginées	Bleiwurzwächse
Poaceae (Gramineae)	Graminaceae	Graminées	Süßgräser
Polemoniaceae	Polemoniaceae	Polémoniacées	Sperrkrautgewächse
Polygonaceae	Polygonaceae	Polygonacées	Knöterichgewächse
Polyporaceae	Polyporaceae	Polyporacées	Löcherpilze
Portulacaceae	Portulacaceae	Portulacacées	Portulakgewächse
Primulaceae	Primulaceae	Primulacées	Primelgewächse
Ranunculaceae	Ranunculaceae	Renonculacées	Hahnenfussgewächse
Rosaceae	Rosaceae	Rosacées	Rosengewächse
Rubiaceae	Rubiaceae	Rubiacées	Rötegewächse
Rutaceae	Rutaceae	Rutacées	Rautengewächse
Salicaceae	Salicaceae	Salicacées	Weidengewächse
Saxifragaceae	Saxifragaceae	Saxifragacées	Steinbrechgewächse
Scrophulariaceae	Scrophulariaceae	Scrophulariacées	Rachenblütler
Solanaceae	Solanaceae	Solanacées	Nachtschattengewächse
Strophariaceae	Strophariaceae	Strophariacées	Träuschlinge

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Taxaceae	Taxaceae	Taxacées	Eibengewächse
Taxodiaceae	Taxodiaceae	Taxodiacées	Sumpfyypressengewächse
Theaceae	Theaceae	Théacées	Teestrauchgewächse
Thymelaeaceae	Thymelaeaceae	Thymélacées	Seidelbastgewächse
Tiliaceae	Tiliaceae	Tiliacées	Lindengewächse
Tropaeolaceae	Tropaeolaceae	Tropaeolacées	Kapuzinerkressegewächse
Ulmaceae	Ulmaceae	Ulmacées	Ulmengewächse
Valerianaceae	Valerianaceae	Valérienacées	Baldriangewächse
Verbenaceae	Verbenaceae	Verbénacées	Eisenkrautgewächse
Violaceae	Violaceae	Violacées	Veilchengewächse
Vitaceae	Vitaceae	Vitacées (Ampélidées)	Weinrebengewächse

#### Ireland

By virtue of the Plant Varieties (Proprietary Rights) (Amendment) Regulations 1988, issued on March 24, 1988 (Statutory Instrument No. 46 of 1988), protection was extended to *Potentilla fruticosa* L. (shrubby cinquefoil).

The duration of protection was set at 20 years.

Pursuant to Section 5(1)(c) of the Plant Varieties (Proprietary Rights) Act, 1980 (see Plant Variety Protection No. 32 (February 1983), page 25), applicants who are citizens or nationals of or are resident or have a place of business (being a business whose activities consist of or include the sale or propagation of plants) in a UPOV member State may obtain protection in Ireland under the same conditions as Irish citizens.

The list of the genera and species which are covered by plant variety protection legislation is given below, with the relevant duration of protection. The Latin and English names appear in the Plant Varieties (Proprietary Rights) Regulations, whereas the French and German common names have been added, without guarantee of concordance, by the Office of the Union.

#### Plant Variety Protection in Ireland / Protection des obtentions végétales en Irlande / Sortenschutz in Irland

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>	<u>Period of Protection (in Years)</u>
<i>Agrostis tenuis</i> Sibth.	Brown Top	Agrostide commune	Rotes Straussgras	20
<i>Avena sativa</i> L.	Oats	Avoine	Hafer	15
<i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>alba</i> DC.	Fodder Beet	Betterave fourragère	Runkelrübe	20
<i>Brassica napus</i> L. var. <i>napobrassica</i> Peterm.	Swede	Chou-navet, Rutabaga	Kohlrübe	20
<i>Brassica napus</i> L. ssp. <i>oleifera</i> (Metzg.) Sinsk	Swede Rape	Colza	Raps	20
<i>Brassica oleracea</i> L. convar. <i>acephala</i> (DC.)	Fodder Kale	Chou fourrager	Futterkohl	20

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>	<u>Protection (in Years)</u>
Dactylis glomerata L.	Cocksfoot	Dactyle	Knautgras	20
Festuca rubra L.	Red Fescue	Fétuque rouge	Rotschwingel	20
Hordeum vulgare L.	Barley	Orge	Gerste	15
Linum usitatissimum L.	Flax, Linseed	Lin	Lein	20
Lolium x hybridum Hausskn.	Hybrid Ryegrass	Ray-grass hybride	Bastardweidelgras, Oldenburgisches Weidelgras	20
Lolium multiflorum Lam.	Italian Ryegrass	Ray-grass d'Italie	Welsches Weidel- gras, Italieni- sches Raygras	20
Lolium perenne L.	Perennial Ryegrass	Ray-grass anglais	Deutsches Weidelgras	20
Lupinus albus L.	White Lupin	Lupin blanc	Weisse Lupine	20
Lupinus angustifolius L.	Blue Lupin	Lupin bleu	Blaue Lupine	20
Lupinus luteus L.	Yellow Lupin	Lupin jaune	Gelbe Lupine	20
Phleum pratense L.	Timothy	Fléole des prés	Wiesenlieschgras	20
Pisum sativum L. (partim)	Field Pea	Pois fourrager	Futtererbse	20
Potentilla fruticosa L.	Shrubby Cinquefoil	Potentille ligneuse	Strauchfingerkraut	20
Solanum tuberosum L.	Potatoes	Pomme de terre	Kartoffel	20
Trifolium pratense L.	Red Clover	Trèfle violet	Rotklee	20
Trifolium repens	White Clover	Trèfle blanc	Weissklee	20
x Triticosecale Wittmack	Triticale	Triticale	Triticale	15
Triticum aestivum L. emend. Fiori et Paol.	Wheat	Blé	Weizen	15
Vicia faba L. (partim)	Field Bean	Féverole	Ackerbohne	20

### Israel

By virtue of the Plant Breeders' Rights Order (Amendment of Schedule), of 28 Tevet, Hatashmat (5749-1989) published in Kovetz Hatakanot 5157, of January 5, 1989, the list of species to which the Law on the Rights of the Breeders of Plant Varieties applies has been extended to the following (the Latin names appear in the Order, whereas the English, French and German common names have been added, without guarantee of concordance, by the Office of the Union):

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Dahlia Cav.	Dahlia	Dahlia	Dahlie
Lachenalia Jacq. f. ex Murray	Lachenalia, Cape Cowslip	Lachenalia, Coucou du Cap	Lachenalia
Lisianthus L.	Lisianthus	Lisianthus	Lisianthus
Piqueria Cav.	Piqueria	Piqueria	Piqueria
Portulacaria Jacq.	Portulacaria, Purslane Tree	Portulacaria	Strauchportulak, Speckbaum

By virtue of the Plant Breeders' Rights Order (Amendment of Schedule), of 18 Adar Alef, Hatashmat (5749-1989) published in Kovetz Hatakanot 5166, of February 23, 1989, the list of species to which the Law on the Rights of the Breeders of Plant Varieties applies has been extended to the following:

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Hibiscus L.	Hibiscus	Hibiscus	Eibisch

By virtue of the Plant Breeders' Rights Order (Amendment of Schedule), of 8 Sivan, Hatashmat (5749-1989) published in Kovetz Hatakanot 5189, of June 11, 1989, the list of species to which the Law on the Rights of the Breeders of Plant Varieties applies has further been extended to the following:

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Chamelaucium Desf.	Geraldton Wax	-	-
Origanum L.	Sweet Marjoram	Origan	Dost
Ornithogalum spp.	Chinkerinchee, Star of Bethlehem	Ornithogale, Dame d'onze heures	Milchstern, Vogelmilch, Stern von Bethlehem
Salvia L.	Sage	Sauge	Salbei

As regards the availability of protection to foreigners and the novelty condition, reference is made to Sections 3 and 71, and Section 7, respectively, of the Law on the Rights of the Breeders of Plant Varieties published in the "Legislation" subsection of Plant Variety Protection No. 47 (October 1985).

The list of taxa covered by plant variety protection legislation is given in the "Legislation" subsection of this issue, starting on page 36.

### Spain

By Order No. 17785 of June 10, 1988 (Boletín Oficial del Estado No. 170 of July 16, 1988, p. 22003), Establishing Protection for New Varieties of Almond, Lentil, Melon, Watermelon, Ryegrass and Red Clover, protection was extended to the crops mentioned in the title of the Order, with effect from July 17, 1988.

By Order No. 6277 of March 3, 1989 (Boletín Oficial del Estado No. 65 of March 17, 1989, p. 22003), Establishing Protection for New Varieties of Strawberry, protection was extended to strawberry with effect from March 18, 1989.

The duration of protection was set at 20 years for almond and 16 years for the other species.

In the case of almond, lentil, melon, strawberry and watermelon, which are not listed in the Annex to the International Convention for the Protection of New Varieties of Plants of December 2, 1961, the Spanish authorities will not avail themselves of the possibility provided in Article 4(4) of the Convention of limiting the benefit of the protection to the nationals of those member States of the Union which apply the Convention to that species and to natural and legal persons resident or having their registered office in any of those States. Concerning applicants from countries with which Spain has not concluded an agreement for the protection of new varieties of plants, reference is made to Plant Variety Protection No. 30 (November 1982), page 41.

The list of the genera and species which are covered by plant variety protection legislation is given overleaf, with the relevant duration of protection. The Spanish common names appear in the Orders No. 29194 of November 16, 1978, No. 14072 of May 26, 1982, No. 6125 of April 16, 1985 No. 20409 of July 17, 1986, No. 17785 of June 10, 1988, and 6277 of March 3, 1989. The English, French and German common names have been added, without guarantee of concordance, by the Office of the Union.

<u>Español</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>	<u>Duration/ Durée/Dauer</u>
Alfalfa	Lucerne, Alfalfa	Luzerne	Luzerne	16
Almendro	Almond	Amandier	Mandel	20
Arroz	Rice	Riz	Reis	16
Avena	Oats	Avoine	Hafer	16
Cebada	Barley	Orge	Gerste	16
Clavel	Carnation	Oeillet	Nelke	16
Fresa	Strawberry	Fraisier	Erdbeere	16
Girasol	Sunflower	Tournesol	Sonnenblume	16
Guisantes	Peas	Pois	Erbsen	16
Habas	Broad Beans	Fèves	Dicke Bohne, Ackerbohne	16
Híbridos de almendro por melocotonero	Hybrids between almond and peach	Hybrides entre amandier et pêcher	Hybriden zwischen Mandel und Pfirsich	20
Judías	Beans	Haricots	Bohnen	16
Lechuga	Lettuce	Laitue	Salat	16
Lentejas	Lentil	Lentille	Linse	16
Limonero	Lemon	Citronnier	Zitrone, Limone, Zitronatzitrone	20
Maíz (exclusiva- mente limitada a líneas puras)	Maize (limited to pure lines only)	Maïs (limitée aux seules lignées pures)	Mais (nur auf reine Linien beschränkt)	16
Mandarino	Mandarine	Mandarinier	Mandarine	20
Manzano (exclusi- vamente limitada a variedades frutales)	Apple (limited to fruiting varieties only)	Pommier (limitée aux seules varié- tés fruitières)	Apfel (nur auf Obstsorten beschränkt)	20
Melocotonero	Peach	Pêcher	Pfirsich	20
Melón	Melon	Melon	Melone	16
Naranja	Orange	Oranger	Apfelsine, Orange	20
Nectarina	Nectarine	Nectarinier	Nektarine	20
Patata	Potato	Pomme de terre	Kartoffel	15
Pomelo	Grapefruit	Pomélo	Grapefruit	20
Raygrass	Ryegrass	Ray-grass	Weidelgras	16
Rosal	Rose	Rosier	Rose	18
Sandía	Watermelon	Pastèque	Wassermelone	16
Soja	Soya Bean	Soja	Sojabohne	16
Trébol violeta	Red Clover	Trèfle violet	Rotklee	16
Trigo	Wheat	Blé	Weizen	16
Triticale	Triticale	Triticale	Triticale	16
Veza común	Common Vetch	Vesce commune	Saatwicke	16

## NEWSLETTER

## OFFICE OF THE UNION

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## OBITUARY

**Jean Bustarret**

Jean Bustarret passed away on October 5, 1988. He was one of the more prominent founders of the International Convention for the Protection of New Varieties of Plants, the UPOV Convention. It fell to André Cauderon, a man closely associated with Jean Bustarret's life and work over many years, to pay a last tribute to his memory in the Academy of Agriculture of France. At the suggestion of the French delegation on the UPOV Council, his address is published in these columns as a UPOV tribute to this distinguished man.

We feel, however, that we must add a brief supplementary comment on Jean Bustarret's immense contribution to the founding and the development of UPOV.

In 1958 Jean Bustarret was elected Chairman of the Committee of Experts which prepared in a series of four meetings and in a remarkably short period of time the draft Convention that was eventually adopted on December 2, 1961. As will be seen from André Cauderon's address, Jean Bustarret's expertise and wide connections were important to this work and to the success of the second session of the 1957-1961 Diplomatic Conference, where he was the Chairman of the General (steering) Committee.

The UPOV Convention was greatly cherished by Jean Bustarret. He followed its development with great interest both during his working life and after his retirement. He contributed to the setting up of the international administrative system for cooperation in the examination of varieties which is still in operation today. He also contributed to the 1978 revision of the Convention through his active participation in the Committee of Experts on the Interpretation and Revision of the Convention and in the Diplomatic Conference. He was an influential delegate in both fora. The Records of the Diplomatic Conference testify to his role as an authority both on scientific aspects of the subject matter dealt with in the Convention and on the interpretation of the intentions of the draftsmen of the 1961 Convention. Some of his interventions were decisive on the outcome of the Conference.

His contribution to the technical work of UPOV is of lasting importance. When the UPOV Council decided at its fifth session, in 1971, to set up a Technical Steering Committee, Jean Bustarret was elected as Chairman for the inaugural term of office, although he was already close to retirement, and his term of office was renewed in 1974 for one year. During the four years of his tenure, principles were established under his guidance which remain fundamental to the technical work associated with plant variety protection. Apart from some necessary updating in the light of new circumstances, they have stood the test of time and attest to the wisdom of their originators.

Jean Bustarret never sought to take the credit for those achievements. He was one amongst a number of talented pioneers, but he was the one who above all brought those pioneers to work together in a spirit of cooperation and an atmosphere of friendship which has become the norm for all UPOV technical affairs.

### The Life's Work of Jean Bustarret\*

(1904-1988)

André Cauderon\*\*

Jean Bustarret passed away on October 5, 1988. He endeavored, more than anyone else, over an exceptionally long period of some thirty years, to ensure that French agricultural research was a tool that responded to the needs of our times.

The presence of the family Bustarret at Brassempouy, a village of the Chalosse familiar to archeologists, is attested to already in the sixteenth century. From his home in Versailles, Jean Bustarret faithfully maintained the family house, built in 1840, and ensured that it remained the center of summer-time family gatherings; it was there that he was host to his close friends to whom he admitted his regret at not being able to take better care of the garden during his short holidays.

The grandfather of Jean Bustarret had broken with a long farming tradition by leaving Brassempouy to go to Bordeaux; there he pursued a successful career as a ship broker, as did his son. The eldest of his four grandsons, Jean, was born in Bordeaux on January 25, 1904. Jean Bustarret enjoyed a brilliant school career at the Lycée Montaigne; poor health led him to take the direction of the National Institute of Agriculture (Institut national agronomique) and obliged him to prepare for the entrance examinations at home. He was admitted in 1924 and graduated in 1926. In 1930, he joined the plant breeding station that had been set up at Epoisses, close to Dijon, by the PLM railway company. 1930 was also the year of his marriage to Anne Doazan whom he had met during his practical training at Villariès, by Toulouse; they were to have six children. When the railways were nationalized in 1937, the Dijon station and its staff were attached to the Ministry of Agriculture. In 1938, Jean Bustarret joined the Agricultural Research Center at Versailles; the family then moved to Versailles and the house on the plateau Montbauron was henceforth to become the home port.

#### The Work of the Researcher

Although he had assumed general responsibilities at a very early juncture --on his arrival at Versailles--Jean Bustarret always remained a researcher at heart: when preparing his decisions, he never failed to give pride of place amongst his concerns to scientific arguments. In his research work, it was already possible to identify his future qualities as a leader: for example his clarity, his open-mindedness, his bent for analysis and his sense of responsibility.

The team in Dijon was headed by Charles Crépin, who was to be frequently referred to as "mon maître" by Jean Bustarret. Following in the footsteps of Emile Schribaux, he conducted a program to rationalize breeding, in which Jean Bustarret played a very large part: whether in the methodology for evaluating the characteristics that together defined a variety, the elaboration of breeding strategies in order to obtain a maximum of improved characteristics within one line, or propagation techniques ensuring the genetic, physiological and health qualities of the seed or planting material.

The Dijon team published work, in particular, on resistance to cold in wheat,<sup>1</sup> resistance to smut in oats<sup>2</sup> and resistance to bunt in wheat.<sup>3,4</sup> These articles produced original scientific results, particularly as regards the diversity of a pathogenic species faced by the diversity of a cereal species or the various ways in which cold acts; they also provided operational indications for assessing varieties and on the recommended methods and techniques for breeding. At the same time, the work carried out by this same team, first in Dijon, then in Versailles, to obtain productivity, earliness and resistance to cold within one and the same line of wheat--a thing held to be

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\* Address given to the Academy of Agriculture of France at its sitting of December 14, 1988 (Records, Vol. 74, 1988).

\*\* Member of the Academy of Sciences, Perpetual Secretary of the Academy of Agriculture.

impossible--was to be brilliantly successful since, from 1950 onwards, the variety 'Etoile de Choisy' was to play an important part in the renewal of South-West France since it was to make fertilization profitable in that region; it was also to enjoy lengthy success throughout France, but also in Southern Europe and in the USSR.

As from 1937, Jean Bustarret also carried out work on potato<sup>5</sup>, both in Morvan and in Finistère, taking into account both protection against viruses and blight and cooking quality. In so doing, he created an excellent variety that is still highly appreciated today, 'BF 15'; I may also mention the programs undertaken on oil plants as of 1938; these were to result, three years later, in the necessary bases for renewing the growing of oilseed rape, whose present importance is well known.<sup>6</sup>

Most of those publications included not only the exact results and the immediate recommendations, but also proposals for long-term research action. These forward-looking objectives, that frequently exceeded the modest means available at the time, were to bear witness some decades later to a wide range of interests and to the clear thinking of their author. In the same context, I should emphasize the importance of a 1944 publication: Varieties and Variations.<sup>7</sup> In that publication, Jean Bustarret compares the various modes of propagation of species and the differing approaches to the concept of variety by agriculturists, botanists and microbiologists. He points to the importance, for geneticists, physiologists, pathologists, technologists, breeders, and so on, of clearly perceiving the complexity of the concept of variety and also to the need for precise knowledge of the type of living material involved in their experiments. This text of remarkable clarity contributed to the basic learning of a whole generation. Admiration for its author may be accompanied by a further feeling of great emotion: it was at the end of the lecture he was giving on that subject at the Versailles Center that Jean Bustarret was called away urgently when one of his sons was hit by a car. That is the hardest ordeal to which a couple may be put: the death of a child. Other misfortunes were to follow and Mrs. Jean Bustarret was to pass away in 1953; her husband then assumed the full responsibility of the family at the same time as his considerable professional duties.

#### The Influence of the Teacher and of the Organizer of the Varieties/Seed Complex

The growth of research first requires the training of researchers. One of the great concerns of Jean Bustarret, in charge of the Central Plant Breeding Station as of 1944, was to train young scientists recruited to the newly-established posts. The cycle of lectures, visits and discussions then organized at Versailles by Jean Bustarret and Robert Mayer was also open to scientists from the breeding firms since the scientific strengthening of those firms was a prerequisite for the development of cooperation with the State laboratories. This common melting-pot was to anticipate the systems set up later by higher education. Those who participated will never forget the Versailles cycle. Beyond his capabilities as a teacher, both in the classroom and in the field, Jean Bustarret appeared to them as a most reserved person whose silences were impressive for the newcomers; once contact had been made, he proved to be a simple and benevolent man, although highly allergic to lack of precision--and even more so to flattery. Indeed, his rapid judgment of men was exceptional.

His learning, his curiosity and his interest in history<sup>8</sup> naturally drew Jean Bustarret towards teaching; he was to teach genetics at the National School of Horticulture (Ecole nationale supérieure d'horticulture - ENSH) as from 1941 and was to continue his courses until 1959 despite the enormous pressure of his responsibilities. His marking of papers from ENSH on Sunday afternoons is well remembered by his children.

The proper organization of the application of plant breeding is essential to the effectiveness of the research-and-development complex and Jean Bustarret played a big part in two fields: the technical regulations on marketed varieties and seed, as adviser to the Ministry of Agriculture; the protection of new plant varieties, in the legal field.

In the first context, Jean Bustarret was one of those who inspired the policy of the Standing Technical Committee on Plant Breeding (Comité technique permanent de la sélection - CTPS) from 1942--although he did not chair that



Committee until 1961--right up to 1976; his scientific and technical competence, his practical sense, his attention to detail and his precision did much to facilitate the drafting, updating and implementation of effective and prudent regulations, prepared after consultation with all the parties concerned, based on reliable technical trials carried out in all clarity and adapted to the national and international contexts. In addition to its main task of keeping the catalogues of varieties admitted to trade, CTPS played a capital part: it helped in standardizing breeding and propagation methods; it was behind the creation of a national field experiment network as from 1950; it maintained consistent concertation in the variety/seed complex, with large-scale participation by the profession, the National Institute of Agronomic Research (Institut national de la recherche agronomique - INRA) and the Ministry of Agriculture.<sup>9</sup> In this delicate exercise, the excellent relations that existed between Jean Bustarret and the breeders proved most useful: a conversation with his old friend Florimond Desprez frequently made it possible to identify the good solution.

The International Convention for the Protection of New Varieties of Plants (Paris Convention) and the corresponding French Law owe even more to the personal action and militancy of Jean Bustarret.<sup>10,11</sup> In a legal field quite unfamiliar to a biologist, he succeeded in building up, in parallel to patents, an original and coherent system for which he obtained international recognition. The Paris Convention, adopted in 1961, is now applied in 18 countries where it has enabled official acknowledgment of certain breeders' rights. Whereas the creation of a new variety becomes ever more expensive, this guarantee encourages firms to put new research programs in hand and at the same time permits breeders the free use of all genes, thus recognizing the specific nature of genetic resources.

#### The Organization and General Trend of Research

It was first in the context of plant breeding that Jean Bustarret assumed overall management responsibilities, even before being officially made responsible for the department in 1944; together with Robert Mayer, at that time appointed Director of the Versailles station, he devoted his first endeavors to strengthening and equipping the existing stations in accordance with the approach he had summarized in a 1951 publication:<sup>12</sup> participation in the basic genetic or biological research in subjects essential to breeding, attentive use of the results of research in other disciplines, stock-taking and analysis of the diversity of significant botanical groups, development of breeding methods, conduct of innovative breeding programs and, finally, study of the conditions for the agricultural and industrial use of varieties.

In his task, Jean Bustarret was assisted by an eclectic group of colleagues belonging to the "hard core" of research between the wars, who were also his friends: Luc Alabouvette, Gustave Drouineau, Pierre Limasset, Robert Mayer, etc.; nevertheless, he avoided stifling his young research workers with unnecessarily detailed directives that would render their work sterile. In 1946, following a trip to North America--a tiring journey at that time in a military aircraft with landings in Ireland and Newfoundland--, he told me that he had seen very early maize hybrids with high productivity and that I should look into this new field in Versailles and try to contribute some original element. Only a researcher who was also a keen-sighted agriculturalist could have recognized the reasonable hopes that would justify such a directive at a time at which the growing of maize in France was losing momentum with hardly more than 300,000 hectares, whereas the United States of America enjoyed a crushing scientific, technical, industrial and commercial superiority in this speciality.

The attention that Jean Bustarret devoted to plant breeding, a synthetic department that was close to his heart, but which he did not treat with any special indulgence, formed part of a broader project: that of a national agency responsible for all agricultural research. A first Agricultural Research Institute had been set up in 1921 and then administratively suppressed in 1932. It was re-formed in 1946 as a public establishment of an administrative nature, under the name of INRA, then employing some 126 scientists; this figure was to grow to almost 1,000, covering a much wider field, by 1972. Jean Bustarret played a capital part not only during this entire period of expansion and innovation, but already during the preparatory work for setting up INRA, under the impetus of Charles Crépin and Maurice Lemoigne. Their project, supported by Jean Lefèvre, the Secretary General of the Ministry, was accepted by the

Minister, Tanguy-Prigent; Jean Bustarret, assisted by Marc Ridet, who was to remain his financial assistant for a long time, was appointed rapporteur to the Council of State. The draft Law was adopted in May 1946.

In 1948, Raymond Braconnier replaced Charles Crépin at the head of the Institute; Jean Bustarret was appointed Inspector General in 1949. At the departure of Raymond Braconnier, in 1956, many of the researchers in INRA expected the Institute to be headed by Jean Bustarret; however, it was Henri Ferru who was to be appointed. The capabilities of both men were such that they left the impression of a great team, that led to the INRA's greatest period of expansion,<sup>13</sup> and also of a pair of friends. In 1963, at the departure of Henri Ferru, the Minister, Edgard Pisani, appointed Jean Bustarret as Director of the Institute, a title that was transformed a year later to that of Director General; in 1972, he took his administrative retirement.

In a publication that appeared in 1966,<sup>14</sup> Jean Bustarret retraces the development of INRA during its first 20 years; I need not repeat here the organization and structures, remarkably suited to both the time and the problems; nor the procurement of the indispensable funds; nor the reclassifying of the agricultural research staff; nor indeed the major successes of the laboratories that enabled the Institute to play its part in the remarkable expansion of agriculture after the war and which led to its reputation in many different circles. I will lay emphasis, on the other hand, on a more fundamental, a more durable aspect: the features of agricultural research described in 1966 by the man that had contributed so much to shaping them:

1. The awareness of research with an aim, whose choices must take into account the nature and seriousness of the social and economic problems, of the scientific and technical situation and, finally, of the duty to undertake work at a sufficiently early juncture for the results to have every chance of facilitating the subsequent evolution of society.

2. The need to carry out basic research, particularly into the structures and mechanisms of life, in conjunction with concerns for its application. The topics and material are therefore to be chosen as a function both of the priorities of agriculture and of the capability of man to act on a given factor of the soil, of the climate or of living beings in order to influence the results of agriculture. Jean Bustarret frequently mentioned the support given to this policy of balance by the members of the first Standing Scientific Committee of INRA: Maurice Lemoigne, Clément Bressou, Pierre-Paul Grassé, André Leroy and Emile Terroine.

3. The need to ensure collaboration between highly differing scientific and technical disciplines and to study in detail, in their situations, the great diversity of living beings and environments that constitute the reality of agriculture.

4. The calling for analysis and also for experiments under conditions close to those of the field.

5. Finally, the will to cover the various aspects of activities relating to agriculture, whereby Jean Bustarret points to the branches developed or put in hand by INRA between 1946 and 1966: the zootechnical sector, with the creation of the Center at Jouy-en-Josas and the inception of the Centers at Tours and at Clermont-Ferrand, veterinary research, food-processing technologies, forestry and hydrobiological research (which previously came under the water and forestry administration) and, finally, agricultural economy and rural sociology, fields entered into by INRA in 1955 and 1964, respectively. This constitutes a truly exceptional record of scientific extension.

In 1971, at the time of the 25th anniversary of the Institute, Jean Bustarret summarized in the following words what had been the priorities of INRA since 1966:

- modernization of animal and plant production
- diversification of production, for example towards protein plants
- improvement of the quality of produce and adaptation to the market
- improvement of the food industries
- agricultural and bioclimatic research into rural planning
- adaptation of forests to their twofold aim of production and environment
- study of agricultural structures, relations between agriculture and industry and the place of agriculture within the overall economy.

These choices corresponded well with the problems that were to be faced by an agriculture that had at last become, on the whole, an exporting industry thanks to the progress in productivity; research, that had played a large part in that progress,<sup>15</sup> adjusted its programs to the new situation that was to arise.

### The Relations

Jean Bustarret devoted considerable attention to outside relations: with the numerous departments of the superordinate Ministry of Agriculture; with the future Ministry of Research that was to develop from the General Directorate for Scientific and Technical Research (Délégation générale à la recherche scientifique et technique - DGRST) in 1958 and whose first head, Pierre Piganiol, was later to chair the Board of Trustees of INRA; with the other research agencies whose numerous personalities were to participate in agricultural research councils and boards; with higher education, particularly with the National Schools of Agriculture (Ecoles nationales supérieures agronomiques - ENSAs) on whose premises the INRA centers were to be strongly developed; with the numerous undertakings, both upstream and downstream of agriculture; with the technical institutes with which particularly close links were altogether natural; finally, with the farmers and their professional organizations, always bearing in mind that they are the people who in fact implement the knowledge and instruments produced by the research and development sequence: for example, the links with the Centers for Technical Agricultural Studies (Centres d'études techniques agricoles - CETAs) have been closely pursued at all levels of INRA. The quality of these links with the farmers was emphasized at a reception which the Standing Assembly of Chambers of Agriculture was to organize in honor of Jean Bustarret when he went into retirement.

Relations with tropical research warrant a special mention. It was Jean Bustarret himself who maintained contacts with the heads of agencies such as the Center for Scientific and Technical Research for Overseas (Office de la recherche scientifique et technique d'outre-mer - ORSTOM), the Institute for Research on Cotton and Tropical Fibers (Institut de recherche pour le coton et les textiles tropicaux - IRCT), the Fruit and Citrus Institute (Institut des fruits et agrumes - IFAC), the Institute for Research on Tropical Agriculture (Institut de recherches agronomiques tropicales - IRAT), etc. The result of these links was the development of the INRA Center in the West Indies as from 1964 and the greater availability of laboratories in France to cooperate with the Mediterranean countries, particularly Morocco and Tunisia, and also with the tropical countries.

In a general manner, all international exchanges grew considerably after the end of the war; the friendly relations that Jean Bustarret established were of great value: for example, with Emile Larose at Gembloux, where the Faculty of Agriculture awarded him an honorary doctorship, or with F.R. Horn in Cambridge. Jean Bustarret, who was a member of the Swedish Academy of Agricultural and Forestry Sciences, met there his dear friend Erik Akerberg; it was Erik Akerberg who presented the greetings of the Swedish Academy to the Academy of Agriculture of France on the occasion of its bicentenary in 1988, at which he recalled those memories with emotion. Another friend, Tom Walsh, director of agricultural research in Ireland, was very appreciative of the organization of INRA and of the research concepts of Jean Bustarret whom he honored, on his departure, with a reception at the Irish Embassy in Paris.

The setting up of EUCARPIA was to crown this international activity. The European Association for Research on Plant Breeding was created on the initiative of Jean Bustarret, of J.C. Dorst (Wageningen) and of W. Rudolf (Cologne). From 1961 to 1964, Jean Bustarret was Chairman of this Association that is today the most important body, well beyond the frontiers of Europe, for worldwide concertation in the plant breeding sector.

Jean Bustarret received many honors, including Commander of the Legion of Honor, Grand Cross of the Order of Merit, and others too numerous to mention here. He took the corresponding duties seriously. Elected to membership of the Academy of Agriculture in 1959, he followed its work despite his numerous occupations; in 1975 he became a most attentive President and ensured that active links were maintained with research. For example, he presented in 1975 a note by Autran and Bourdet on the use of gliadin electrophoresis in the testing of wheat varieties and seed: one of the first examples of technology derived from biochemistry, which is today revolutionizing agriculture and the industries of living matter. The Academy of Agriculture will not forget his

exemplary activities that were turned to the future. It is fully aware of the loss it has suffered.

Retirement was to give Jean Bustarret a period of calm after a life of intense activity. His children, his friends, the Academy of Agriculture, a few trips, and the house in Brassempouy throughout the summer: such were the interests he pursued from the small apartment he had taken in Versailles, rue Henri-Simon. The reception given by his children to celebrate his 80th birthday enabled his many friends to express their admiration and their friendship.

Then came the problems of age that he accepted stoically, and he recently chose to enter a home in Louveciennes where he had the occasion to appreciate its calm. He continued to receive his visitors with the same friendly attention, but with an increasing detachment from the things of this world; he was already much further. A few weeks before his passing away, he confided in one of us that he had had the life he would have wished. Thus, he departed from this earth like the true man he was.

For a whole generation of research workers and agriculturalists, Jean Bustarret is not only the creator whose work I have sketched out, he remains the leader who knew them personally and who always found the right words. He was the only one who really knew everything of INRA and all of his researchers. His most admirable characteristic was that he could be both extremely lucid --particularly in his knowledge of men and of their weaknesses--and at the same time so basically benevolent. He was a kind of father to us and we share the sorrow of his children and of his whole family.

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## GENERAL STUDIES

**Recent Phenomena in the Protection of Industrial Property\*****Barry Greengrass\*\***

I am extremely grateful to the Hungarian Association for the Protection of Industrial Property for providing me with the opportunity of addressing you on the subject of industrial property protection in agriculture. I will be confining myself rather strictly to the field of plant breeding and associated technological development, with perhaps one minor digression into the animal breeding sector, and must make the traditional assertion that the views I express are my own as an individual having recently joined UPOV from an industrial and legal background, and are not, in any sense, the views of UPOV. Some of the matters which I will discuss are matters currently under discussion within UPOV but not yet at a stage where one can talk of an official UPOV position.

As you will know, in a particular species a plant variety is a particular plant or group of plants expressing specific characteristics which can be passed to its progeny on a stable basis. In such a particular species, some 20 or so of these characteristics may be desirable from the standpoint of utility, and the task of the plant breeder is to seek to enhance the expression of these characteristics and to combine the optimum expression of each of them in a new variety. The expression of plant characteristics is influenced by the environment of the plant, by the soil, by the pattern of weather experienced in the particular season, by the manipulations to which the plant may be subjected by the grower, and so on.

Most useful characteristics such as maturity, yield and quality, are controlled genetically by the interaction of vast numbers of genes, about which very little is known. The genetic engineers describe the plant as being still for most purposes a "black box." The plant breeder typically (there are in practice many approaches) crosses, sexually, two plants expressing desirable characteristics differently, hoping to be able to select within their progeny a plant or plants which express these characteristics in a more advantageous way. Of course, in making this selection he must recognize that the expression of the characteristics that he observes, in a particular season and a particular place, may not be precisely reproduced in another season or another place, and he must endure the frustration of seeing one desirable characteristic expressed strongly alongside a deterioration in the expression of some other essential feature.

The amount of potential variation in most plant species is so great that very large numbers of plants must be examined. The segregation of the progeny of a cross and the variation in the seasons requires breeding work to take place over many years.

"Cross the best with the best and hope for the best" is a well-worn adage which expresses some aspects of the plant breeder's craft. The breeder's assumption is that each new "best variety" results from the re-assembly of the myriad genetic factors in a more useful form. By crossing that variety with another best variety he may hope to take another step up in performance. It does not always work. Brilliant parents do not always have equally brilliant offspring, and the same is true in the plant kingdom.

"Hope for the best" recognizes the vast gap in our knowledge of the genetic factors which account for the performance of a plant and recognizes the unpredictable nature of many steps in plant breeding.

A successful plant breeding program can be likened to a pipeline. Once the pump is primed with an initial supply of good plant material, one can

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\*\* Vice Secretary-General of UPOV.

expect a reasonable stream of new varieties to emerge from the end of the pipe. Varietal development is not a "one-off" affair.

Since the "best variety" likely to be released to the market place in, say, five years time is already available to its breeder, he will use this in his crossing program long before it is available to competitors. There is thus a tendency for a successful, efficiently-run program to be self-perpetuating and to be always one step ahead of its competitors. Varieties still in the pipeline will tend to be, say, "better" in some way than those emerging from the end.

Depending upon his breeding philosophy, a plant breeder may make large, or very large, numbers of initial crosses. The plants he observes from those crosses will be in the millions. He will start a fresh cycle of crosses and selection on a regular basis. Towards the end of a cycle he will have discarded all but the progeny of a few tens or hundreds of selections. He will call these tens or hundreds of progenies, "lines," "selections" or "varieties." These terms are interchangeable. He will confidently assume that any or all of these lines, selections or varieties will be protectable under the UPOV system.

The essence of the breeding process which I have described is the efficient carrying out of routine procedures. These procedures will be based upon the nature of the species and the breeder will use in his planning whatever knowledge is available concerning the inheritance of particular characters.

Breeders are always seeking to replace art with science, to make the basis for their selections more objective and to speed up the process.

In most cases the essence of plant breeding does not, however, involve invention in the patent law meaning of the term; the objective of breeding programs will usually be obvious. All breeders in a given species will be seeking to combine greater yield, disease resistance and good harvest characteristics, with appropriate maturity and good industrial quality. From time to time an exceptional creative step may occur but this is comparatively unusual.

The fact that much, and almost certainly the majority, of plant breeding does not involve invention does not mean that in some way it is a less worthwhile activity than that which leads to a patentable invention. The reality is that this style of activity has played most probably the major role in the improvement of agricultural productivity.

The breeder evaluates his material under carefully controlled conditions. The chosen product is that which, under the same husbandry regime as that practiced by farmers, gives the most valuable output. For no other additional cost or input than the choice of variety "A" rather than variety "B," the farmer gets "more," and the value of that addition, less any increase in the price of seed or plants, is added directly to the farmer's net profit or results in a lower cost of the end product to consumers.

Plant materials are the basic building blocks for agriculture and the food industry. A reduction in cost here offers the potential for a series of cost reductions throughout the subsequent value-adding chain. A key indicator of the prosperity of a society is the proportion of the average person's income that is spent on food. The fact that this proportion is so low in developed nations is due in large measure to the contributions of the plant breeder.

You may be wondering why I am talking so much about plant breeding when addressing a group of specialists in intellectual property.

My objective at the outset is to put into proper perspective the activity with which plant variety protection is concerned and its relation to other forms of innovative activity, perhaps protected by patent. Today, virtually without exception, the varieties grown and used in agriculture have been developed using the class of activity which I have characterized as plant breeding. The breeder's pipelines are full. There is no reason to suppose that they will not continue to provide a continuous flow of new varieties in the future.

We hear much about the emergence of new technology and the future ability to introduce into plant varieties important new features such as insect resistance and herbicide resistance and perhaps useful genes derived from other species. As yet there are few (are there in fact any?) varieties available to commercial growers which incorporate features derived from the new technologies. The mid-1990s seem likely to be the earliest date for an initial

modest practical impact. It is important to realize that the development of these new features will be of little use unless they can be incorporated into the best-performing variety. The nature of the plant breeding pipeline is such that it will be futile to introduce the new feature into today's varieties, since by the time the new feature is incorporated, varietal improvements will be available which will reduce or eliminate the attraction to the grower of the new feature if incorporated in an obsolete variety. What grower will sacrifice 5-10% of yield potential in order to take advantage of, say, a new form of herbicide resistance? The precise answer depends upon a multiplicity of factors, but the new development will be at risk unless it is incorporated into a highly competitive plant variety.

The new "inventive" technologies must be developed on a "hand in glove" basis with breeding programs if they are to succeed. The research director of a major plant biotechnology corporation expressed the role of the plant breeder when saying "you realize that you (i.e. the breeders) have the Crown Jewels!" He was recognizing that the polygenic creation of the plant breeder was likely to be far more important for the eventual performance of a product in the marketplace than the one or two genes that he hoped to incorporate. He was also recognizing that whenever he attempted to incorporate anything other than the simplest genetic sequence into a variety, the resulting disruption of the plant would cause him to have recourse to classical plant breeding procedures before he could hope to have a marketable product.

You may, however, be tempted to think that plant breeding, significant as an economic activity, is rather humdrum compared with the excitement of the new technologies. I must correct any such impression. Plant breeding is technology-acquisitive. It uses all available methodologies to create genetic diversity and select within it. "The genetic supply industry" is a somewhat freshly-coined title to describe today's plant breeding industry. Inside any one organization operating within the genetic supply industry, you are likely to find breeding work, the creation of the "balanced genetic structures" which constitute plant varieties and, alongside it or as part of it, the deployment of the new technologies which as M. André Cauderon has said "create 'Bricks' and not 'structures'." Tissue culture, cell fusion, rDNA approaches are all, for this industry, additional means for the creation of diversity. Every 1% to 10% of breeding improvement in the current variety makes an essential contribution to the next step forward. The activity that leads to this class of improvement, virtually every year, is as important as the very occasional quantum leap based upon an inventive step. You will find both classes of activity in the same enterprise, both needing an appropriate form of industrial property protection.

The breeder's product, reproductive or vegetative propagating of one sort or another, frequently suffers from the drawback that it may be readily reproduced.

Once in the market place it is no longer under his control and, in the absence of some special rights or circumstances to protect his position, the breeder's opportunity to derive a return on his investment is poor.

A typical view in patent circles in the immediate post-war period was that plant varieties were not amenable to protection by the patent system. The debate was confused by "product of nature" arguments, but the essence of the argument was that varieties were not capable of complete description and lacked repeatability. Frequently an inventive step was seen to be lacking and the reproductive nature of plant material made it extremely difficult to apply the patent concept of exhaustion of rights.

In the United States of America the Plant Patent Act provided some protection but this was strictly limited to asexually reproduced plant varieties, with sexually reproduced varieties being regarded as totally incapable of description. The suggestion of the German Group at the Vienna AIPPI Congress of 1952, namely that there should be patents for plant innovations which fulfilled the patent criteria alongside plant variety protection for which different criteria should be applied, was not followed up. Only with the coming into force of the International Convention for the Protection of New Varieties of Plants of December 2, 1961, was the breeders' economic role fully recognized with the creation of a system of plant breeders' rights which took into account the particular nature of plant varieties and was based on the criteria of novelty and of distinctness, uniformity and stability ("DUS"), which were tailor-made for plant varieties. Examination on the basis of the

DUS requirements, at the present time effected by or on behalf of the competent authority in each UPOV member State, ensures that the variety does truly exist in the form claimed by the breeder, that this form is capable of description, and that the variety is reproducible in accordance with that description. Repeatability and inventive step are not required, and the need for description and disclosure are replaced in most member States with the submission of plant material by the breeder and its examination by the authorities in relation to the DUS criteria. The system deals with the problems arising from the ability of plant material to reproduce; the exhaustion principle does not apply to commercial reproduction.

An outstanding feature of the system in its practical operations is the certainty which attaches to the rights granted.

If one were asked to specify in an abstract way the ideal features of an intellectual property rights system, key criteria would presumably include the following:

- (a) the subject matter of the right should be well defined;
- (b) the grantee of the rights and other interested parties such as farmers, horticulturists and consumers can rely upon the validity of the rights when granted;
- (c) the likelihood of the grant of rights can be confidently anticipated without excessive cost or delay.

The plant breeders' rights system emerges very well indeed from an examination based on these criteria.

Disputes concerning the validity of rights granted have been virtually non-existent, a major benefit for breeders and others involved. Confidence in the availability of protection when the fruits of a long-term research program become available is an important aspect of the incentive provided by protection. Breeders applying for protection for a new variety assume that the variety will be distinct and protectable. They are rarely disappointed. The UPOV examination system when fully deployed makes an important contribution to the breeder's confident assumption of the validity of his right. The fact that all varieties likely to be relevant to distinctness, including the varieties of competitors which are currently the subject of applications for rights, can be grown alongside each other, means that proper priority can be given to studying the precise features which are necessary to distinguish varieties of relevance. A breeder attempting to describe his own variety (a breeder is not trained to do this specialized task) would be much less well placed. The UPOV Guidelines have ensured a fairly uniform approach amongst most member States, and there is a steadily growing acceptance by member States of each other's examination results.

Most member States have seasoned teams of workers doing this rather specialized work, away from the limelight. They do not often receive recognition. I would like to pay tribute to them here, and to recognize the good work that they have done and are doing to develop the know-how base upon which the plant variety rights system and seed industry is dependent.

New technology is adopted for the examination when proven. Electrophoresis, genetic fingerprinting, machine vision and color assessment are all amongst techniques currently under review. A future trend may see applicant breeders assuming more responsibility for conducting the examination of their own varieties, particularly if, as in the Federal Republic of Germany, protection is extended to virtually the whole plant kingdom. Any such "self-examination" should ideally be based upon Guidelines and use the extensive know-how that has now accumulated in the UPOV examination system.

The cost of the breeders' rights system to applicants compares well with other systems, particularly when you take into account the total cost, including the time and effort of searches and the professional support necessary to operate within other systems of protection. There is scope for significant further cost reductions within the breeders' rights system as member States cooperate more fully and adopt new technology.

This certainty which has become such a feature of plant breeders' rights has important practical implications in relation to many of the most important agricultural crops where commercialization involves the granting in many countries of hundreds of licenses. This licensing system, not entirely unlike



the licensing system for copyright, assumes the validity of the licensed rights. Very great practical problems would result if the certainty inherent in the breeders' rights system were eroded.

The majority of the current users of the plant breeders' rights system, namely the plant genetic supply industry, upon whom the prosperity of growers is heavily dependent, is appreciative of many of the practical merits of the breeders' rights system. At its conference in Brighton in June 1988, ASSINSEL, the International Association of Plant Breeders for the Protection of Plant Varieties, resolved as follows:

- "1. That, given strengthening and other improvements which are currently being considered in the UPOV Convention, the UPOV Convention and corresponding national PBR laws should provide the most satisfactory and appropriate system of protecting plant varieties.
2. That the patent system appears generally ill-suited for protecting plant varieties and that therefore plant varieties should be protected only by PBR."

I am sure that this element of security or certainty is a major factor in the loyalty of much of the genetic supply industry to the UPOV system. ASSINSEL also resolved on a number of other questions relevant to the proceedings of this Conference and qualified its views in some respects, and I will refer to some of these later.

The plant breeders' rights system based upon novelty and the DUS criteria is quite capable of being the basis for the grant of broadly-based rights akin to those granted in the patent system. The plant breeder's right is not intrinsically more limited than the rights granted by any other system of intellectual property. Under the conditions in 1961 when the Convention was brought into being, it was not deemed appropriate that the protection provided should have the broad scope granted by the patent system. The scope provided reflected earlier debate, which had in many instances prevented the wholehearted application of the patent system to agricultural inventions and inventions relevant to the food production system.

With minor exceptions, the 1961 Convention limited the right granted to the breeder to the exclusive right to produce and sell reproductive material commercially. Under most breeders' rights laws, this right has allowed a grower to remain free to reproduce a protected variety on his own land for his own purposes. It was unthinkable at that time to consider any limitation upon what was considered to be a fundamental freedom of the grower. In today's climate of opinion, there is a tendency to question this freedom more readily, but when doing so we must recognize that this freedom arises primarily from the reproducible nature of seed, and that the practical result in the plant breeders' rights system may not be particularly different from that which would result if the exhaustion of rights principles of the patent law were to be fully applied.

Protection is accorded under the Convention to any uniform, stable variety, the subject of an application for protection, which 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. The characteristics which permit a variety to be defined and distinguished must be capable of precise recognition and description." Debate on the application of these criteria has been long and hard. It is now generally accepted that the word "important" means important for the purpose of description and does not refer to the practical utility of the characteristic. Does this mean that a variety differing clearly from another by any precisely recognized character, however small, should be protectable? The answer seems to be yes. I say, "seems to be yes" since it is not clear whether this was the wish of the fathers of the Convention. The Committee of Experts which prepared the draft UPOV Convention, at its first session, held in Paris from May 7 to 11, 1957, commented as follows: "the notion important characteristic has been used despite its imprecision because it does not seem possible to protect a variety that only shows minimal differences from a pre-existing variety. It is clear that the importance of a characteristic varies from one species to another: the colour of the flower is more important for a rose than for a potato." The fact that they compared two species rather than gave example of an important and an unimportant characteristic in a single species demonstrates the difficulty of demarcation in this area. In the context of a discussion of priority at its second meeting in Paris from September 16 to 19, 1958, the

Committee of Experts considered "that it is practically impossible for two breeders of good faith to select simultaneously the same variety." One would still agree with that statement, and this type of thinking is embodied in Article 6 of the Convention: almost any distinct variety is protectable. As explained earlier, it is an important assumption by plant breeders that any of the selections emerging from their breeding pipelines and selected by means of performance criteria which are frequently quite different from those used for the assessment of distinctness will, in fact, be protectable. The commercial success of the variety will be dependent upon its agronomic performance and not at all upon its degree of distinctness.

A further important feature was the so-called "breeders' exemption," whereby a protected variety was made freely available to other parties for use as an initial source of variation for the purpose of creating other varieties.

Some 27 years have passed since the Convention was signed. It would be surprising if a newly introduced concept in intellectual property could not be improved in the light of experience. It is widely felt that the time is right to consider its modification to reflect the experience of its operation and changed perspectives concerning agriculture and plant breeders and their respective roles in society. Key areas where changes are felt to be desirable are in relation to distinctness and minimum distances, to the scope of breeders' rights and to the so-called breeders' exemption.

The current concepts of distinctness, particularly when linked with the unrestricted right to use a protected variety as an initial source of variation, do offer room in some instances for plagiaristic breeding approaches. When the Committee of Experts stated in 1958 that it was not possible for two breeders to select the same variety simultaneously, they assumed good faith. The breeders' rights system must be proof against those who are not working in good faith to create varieties of true originality.

The current scope of protection, limited, with exceptions, to the commercial production and sale of the reproductive material, is open to abuse. The fact that on-farm usage of reproduced material falls outside the breeders' protection is exploited by some to their profit, diluting both the potential return to the breeder and the underlying policy of the breeders' rights system, which is to provide incentives for breeders.

The Council of UPOV called upon its Administrative and Legal Committee in November 1987 to do the necessary preparation work for the revision of the Convention. Drafts of possible changes were prepared and discussed in this Committee in April 1988. Modifications have been made in the light of these discussions and will be reviewed by the Committee in October 1988. The revision process is still in its early days, however, and documents and proposals are still intended for the purpose of discussion and clarification.

The draft revisions under discussion deal with many aspects of the Convention, but the core proposals of most critical interest to the plant genetic supply industry and their advisers involve distinctness, scope of protection and the breeders' exemption.

A number of alternatives are under consideration in relation to distinctness which are designed to provide a basis for requiring greater originality in candidate varieties. The objective will be to secure acceptable minimum distances between varieties without departing too far from the principle that all original products of breeding should be protectable.

The unlimited availability of a variety under the breeders' exemption, as a basis for the development of a subsequent variety, can be unfairly exploited particularly in view of the distinctness rules which strongly favor protectability. It is accordingly now felt that the introduction of a dependency principle should be considered. One proposal is that a later or "dependent" variety which is essentially derived from, or based upon, an earlier or "dominant" variety should be exploitable only on payment of some form of equitable remuneration to the earlier breeder, but there are many possibilities. The circumstances in which a later variety may be distinct from an existing ("dominant") variety but nonetheless be essentially derived from or based upon it requires analysis and debate. Breeding history may play a role here, and the application of new technology to establish genetic relationships may be important in any practical application of the new principle. The net

effect of the introduction of dependency would be the substantial improvement of the position of the person who assembles the polygenic basis for plant performance.

It is important to note that dependency does not involve a too fundamental departure from the principle that a protected variety should be available as an initial source of variation. It is the use of the first variety, not as a source of initial variation but as virtually the sole source for the performance of the later variety, that is being questioned.

There is some support for the notion that breeders' rights should, subject to reasonable provisos concerning exhaustion of rights, be extended perhaps to the product of the plant variety and, for example, take the form of a broad exclusive right to reproduce the variety and to offer for sale, market, use, import or stock material of the variety. In so far as the circumstances in a member State require some qualification of this broad right, the State might be free to limit the right. Much debate will undoubtedly take place on both the extent of the newly-defined right and the extent to which it should be fixed in a convention.

The changes outlined are those suggested by the experience of operating the Convention over some 27 years and do not require speculation concerning the impact of new technology. They would, however, facilitate the absorption by the plant genetic supply industry of the results of new technology and provide solutions to many of the problems which some have envisaged.

I have referred to the plant breeding or genetics supply industry as being technology-acquisitive. The exciting potential for plant development arising from the new techniques of rDNA, cell fusion, tissue culture and so on enables plant breeders to contemplate innovative steps which were previously out of the question. The possibility of a large range of new, patentable inventions in the plant field has raised the issue of how rights in such inventions should interact with the plant breeders' rights system. A tremendous additional stimulus has been provided not only for the industry but also for the UPOV system. Genetic fingerprinting offers a valuable additional tool in variety identification. Plant breeders and UPOV welcome the challenge of new technology and are responsive to the changes necessary to adapt to the new situations.

These technical developments and the investments in research that have followed have led to controversy. Faced with the difference in scope of breeders' rights compared with the rights of a patentee, and with the free access to the use of protected varieties as an initial source of variation in the UPOV system, some parties have concluded that a drastic change is essential if investment is to be recouped. Vested interests seek to be heard and some surprisingly partisan and unbalanced views have been expressed. Extreme positions on the patent side might suggest that patents are capable of handling all situations and plant variety protection should simply be abolished. Among the opponents there are those opposed to patents for genes and those insisting without qualification that any patents for genes should be open to compulsory licensing subject to no conditions other than remuneration of the patent holder. Critics on the patent side concentrate on the limited present scope of breeder's rights and the breeders' exemption, conveniently forgetting the fact that breeders' rights were created to fill a vacuum in the patent system and at the present time provide the basis for the ongoing operations and investments of a large industry. Critics frequently lose sight of, or have never had occasion to become familiar with, the very great virtues of the plant breeders' rights system. Its "user-friendly" aspect contrasts sharply with the patent system. Any lay businessman who has ever asked a patent adviser whether a particular development is patentable and furthermore whether it will be worth while from a business standpoint to secure a patent, will know that the answer is frequently not straightforward; even the research required to secure a negative answer can be expensive. A patent, when granted, is usually only prima facie valid and may still be subject to challenge in the courts. Doubts and uncertainties of this nature are inherent in a system which seeks to meet the awesome challenge of protecting the property in an idea. I make these points simply to highlight the fact that there are merits in the plant breeders' rights system that one does not find in quite the same form in the patent system. In moving towards systems able to serve in an optimum way all involved in innovative efforts with plants, we must seek to preserve and adapt the best features of both systems.

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ISRAEL

[These pages replace the corresponding pages published in Plant Variety Protection No. 56]

the application for registration under this Law, provided that the application for registration under this Law is filed within twelve months from the date of the coming into force of section 72 and other conditions prescribed by regulations are fulfilled. If the application for a priority right is granted, the period of the breeder's right shall be reckoned from the date of registration of the breeder's right in that Convention state.

(c) Notwithstanding the provisions of subsection (b) and section 102, the Minister may, by regulations, apply subsection (b) in respect of any state, whether or not it is a Convention state, if it appears to him that that state accords reciprocity to Israel in this matter.

(d) Nothing in this Law shall be construed as granting relief for infringement of a breeder's right in respect of the period before the coming into force of this Law.

#### Section 104

##### Implementation and Regulations

The Minister is charged with the implementation of this Law and may make regulations as to any matter relating to such implementation, including-

- (1) registration procedure;
- (2) procedure in proceedings before the Council or the Registrar under this Law;
- (3) forms for applications under this Law, the mode of drawing up specifications, and the mode of representing a variety in the specification;
- (4) the fees payable in respect of applications filed under this Law, acts of the Registrar or the Council, the registration and renewal of registration of a breeder's right, and other services under this Law;
- (5) payment for an opinion or the carrying out of research;
- (6) the preparation, readying for the press, printing, publication and sale of abridgments of specifications, specifications of breeders' rights and other publications by or on behalf of the Council or the Registrar;
- (7) the issue of certificates under this Law attesting to registration of a breeder's right in the Register of Rights;
- (8) the payment of expenses incurred by the members of the Council in respect of their participation in the activities thereof;
- (9) the payment of expenses to witnesses and experts who have given evidence or opinions before the Council or the Registrar;
- (10) the assignment of experimental plots, and laboratories, for the testing of new varieties, within the framework of farms of the Ministry of Agriculture or otherwise;
- (11) the circumstances of the discontinuance of the tenure of a member of the Council.

#### Section 105

##### Publication

This Law shall be published in Reshumot within thirty days from the date of its adoption by the Knesset.

## SCHEDULE\*

## (Section 2)

## Plants to Which the Law Applies

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Allium cepa L.	Onion	Oignon	Zwiebel
Allium sativum L.	Garlic	Ail	Knoblauch
Alstroemeria L.	Alstroemeria	Alstroèmère, Lis des Incas	Inkalilie,
Amygdalus communis L.	Almond	Amandier	Mandel
Anemone L.	Anemone	Anémone	Anemone, Windröschen
Annona cherimola Mill.; A. squamosa L.	Annona, Cherimoya; Annona, Sugar Apple, Sweet Sop	Chérimolier; Pommier-cannelle	"Cherimoya"; Rahmapfel, Süß- sack, Zuckerapfel
Anthurium Schott	Anthurium, Tail Flower	Anthurium	Flamingoblume
Arachis hypogaea L.	Peanut	Arachide	Erdnuss
Aster L.	Aster	Aster	Aster
Avena sativa L.	Oat	Avoine	Hafer
Begonia L.	Begonia	Bégonia	Begonie
Brassica oleracea L. convar. botrytis (L.) Alef.	Cauliflower	Chou-fleur	Blumenkohl
Callistephus Cass.	Aster (China)	Aster, Aster de Chine, Reine-marguerite	Sommeraster
Capsicum annum L.	Sweet Pepper, Cap- sicum, Chili	Poivron, Piment	Paprika
Carthamus tinctorius L.	Safflower	Carthame, Safran bâtard	Saflor, Färberdistel
Carica papaya L.	Papaya, Pawpaw	Papayer, Arbre à melon	Melonenbaum, Papaya

\* This list is based on a translation from the originals in Hebrew published in Reshumot (original list) and in Kovetz Hatakanot (subsequent amendments made by means of orders).

Cette liste est fondée sur une traduction des textes originaux en hébreu publiés dans Reshumot (liste initiale) et dans Kovetz Hatakanot (modifications ultérieures faites par voie d'ordonnances).

Diese Liste stützt sich auf eine Übersetzung der in Reshumot (Originalliste) und in Kovetz Hatakanot (spätere durch Verordnungen erlassene Änderungen) in hebräisch veröffentlichten Originaltexte.

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
<i>Carum carvi</i> L.	Caraway	Carvi, Cumin des prés	Kümmel
<i>Carya illinoensis</i> (Wangenh.) C. Koch	Pecan Nut	Pacancier	Pekan, Pekannuss
<i>Catharanthus roseus</i> (L.) G. Don	Vinca	Catharanthus	Catharanthus
<i>Chamaelirium</i> Desf.	Geraldton Wax	-	-
<i>Chrysanthemum</i> L.	Chrysanthemum	Chrysanthème	Chrysantheme
<i>Cicer arietinum</i> L.	Chick-pea	Pois chiche	Kichererbse
<i>Citrullus lanatus</i> (Thunb.) Matsum. et Nakai	Watermelon	Pastèque	Wassermelone
<i>Citrus spec.</i>	Citrus	Agrumes	Zitrus
<i>Cucumis melo</i> L.	Muskmelon	Melon	Melone
<i>Cucumis sativus</i> L.	Cucumber, Gherkin	Concombre, Cornichon	Gurke
<i>Cucurbita pepo</i> L.	Pumpkin, Marrow, Courgette	Courge, Pâtisson, Citrouille	Gartenkürbis, Olkürbis
<i>Cynara</i> spp.	Artichoke, Cardoon	Artichaut, Cardon	Artischoke, Kardone
<i>Dahlia</i> Cav.	Dahlia	Dahlia	Dahlie
<i>Dianthus</i> L.	Carnation	Oeillet	Nelke
<i>Diospyros kaki</i> L. f.	Japanese Persimmon, Kaki	Plaqueminier, Kaki	Kakipflaume
<i>Duboisia leichardtii</i> F. Moell.	Duboisia	Duboisia	Duboisie
<i>Eriobotrya japonica</i> (Thunb.) Lindl.	Loquat	Néflier du Japon	Japanische Mispel, Loquate
<i>Euphorbia pulcherrima</i> Willd. ex Klotzsch	Poinsettia	Poinsettia	Poinsettie, Weihnachtsstern
<i>Fragaria</i> L.	Strawberry	Fraisier	Erdbeere
<i>Freesia Klatt</i>	Freesia	Freesia	Freesie
<i>Gerbera</i> L.	Gerbera	Gerbera	Gerbera
<i>Gladiolus</i> L.	Gladiolus	Glaïeul	Gladiole
<i>Gossypium</i> L.	Cotton	Cotonnier	Baumwolle
<i>Gypsophila</i> L.	Gyp, Gypsophila, Baby's Breath	Gypsophile	Gipskraut, Schleierkraut
<i>Helianthus annuus</i> L.	Common Sunflower	Tournesol, Soleil	Sonnenblume
<i>Hibiscus</i> L.	Hibiscus	Hibiscus	Eibisch
<i>Hordeum vulgare</i> L.	Barley	Orge	Gerste
<i>Impatiens</i> L.	Impatiens, Busy Lizzie, Balsam, Touch-me-not	Balsamine, Impatiente	Springkraut, Balsamine

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Iris L.	Iris	Iris	Iris, Schwertlilie
Kalanchoë Adans.	Kalanchoë	Kalanchoë	Kalanchoë
Lachenalia Jacq. f. ex Murray	Lachenalia, Cape Cowslip	Lachenalia, Coucou du Cap	Lachenalia
Lactuca sativa L.	Lettuce	Laitue	Salat
Leucadendron R. Br.	Leucadendron	Leucadendron	Leucadendron
Leucospermum R. Br.	Leucospermum	Leucospermum	Leucospermum
Liatris Gaertn. ex Schreb.	Liatris, Blazing Star, Gayfeather	Liatris	Prachtscharte
Lilium L.	Lily	Lis	Lilie
Limonium Mill.	Sea Lavender, Statice	Limonium, Statice	Widerstoss, Meerlavendel
Lisianthus L.	Lisianthus	Lisianthus	Lisianthus
Litchi sinensis Sonn.	Litchi	Litchi	Litschi
Lycopersicon esculentum P. Mill.	Tomato	Tomate	Tomate
Malus sylvestris Mill.	Apple	Pommier	Apfel
Mangifera indica L.	Mango	Manguier	Mango
Medicago hispida Gaertn.; M. sativa L.	Alfalfa (Hairy Medick and Lucerne)	Luzerne (hérissée et cultivée)	Schneckenklee (Sichelluzerne und Blaue Luzerne)
Musa L.	Banana	Bananier	Banane
Narcissus L.	Narcissus, Daffo- dil, Jonquil	Narcisse, Jonquille	Narzisse
Nicotiana tabacum L.	Tobacco (common)	Tabac	Tabak
Olea europaea L.	Olive	Olivier	Oelbaum, Olive
Orchidaceae Juss.	Orchids	Orchidées	Orchideen
Origanum L.	Sweet Marjoram	Origan	Dost
Ornithogalum spp.	Chinkerinchee, Star of Bethlehem	Ornithogale, Dame d'onze heures	Milchstern, Vogelmilch, Stern von Bethlehem
Oryzopsis holciformis (N. B.) Hack.	Oryzopsis	Petit millet, Oryzopsis, Faux-millet	Grannenhirse
Pelargonium L'Hér. ex Ait.	Pelargonium	Pelargonium	Pelargonie
Persea americana Mill.	Avocado	Avocatier	Avocado
Petunia Juss.	Petunia	Pétunia	Petunie
Phalaris tuberosa L.	Hardings Grass	Herbe de Harding, Alpiste tubéreux	Knolliges Glanzgras
Phaseolus vulgaris L.	French Bean	Haricot	Gartenbohne

<u>Latine</u>	<u>English</u>	<u>Français</u>	<u>Deutsch</u>
Piqueria Cav.	Piqueria	Piqueria	Piqueria
Portulacaria Jacq.	Portulacaria, Purslane Tree	Portulacaria	Strauchportulak, Speckbaum
Prunus armeniaca	Apricot	Abricotier	Aprikose
Prunus domestica L.; P. salicina Lindl.	Plum	Prunier	Pflaume
Prunus persica (L.) Batsch	Peach	Pêcher	Pfirsich
Pyrus communis L.	Pear	Poirier	Birne
Ranunculus L.	Ranunculus, Buttercup	Renoncule	Hahnenfuss
Raphanus sativus L.	Radish	Radis	Rettich
Ricinus communis L.	Castorbean	Ricin	Wunderbaum, Palma Christi
Rosa L.	Rose	Rosier	Rose
Saintpaulia ionantha H. Wendl.	African Violet	Saintpaulia	Usambaraveilchen
Salvia L.	Sage	Sauge	Salbei
Sesamum indicum L.	Sesame	Sésame	Sesam
Simmondsia chinensis (Link) Schneid.	Jojoba	-	-
Solanum melongena L. var. esculentum Nees	Eggplant, Aubergine	Aubergine	Eierfrucht, Aubergine
Solanum tuberosum L.	Potato	Pomme de terre	Kartoffel
Solidago L.	Golden Rod	Verge d'or	Goldrute
x Solidaster Wehrh.	Solidaster	Solidaster	Solidaster
Sorghum vulgare Pers.	Sorghum	Sorgho	Mohrenhirse
Trachelium Tourn.	Throatwort	Trachélie	Halskraut
Trifolium alexandrinum L.; T. berytheum Boiss.; T. repens L.; T. subterraneum L.	Clover	Trèfle	Klee
Triticum aestivum L. emend. Fiori et Paol. (T. aestivum L. ssp. vulgare (Vill., Host) Mac Kay); Triticum durum Desf.	Wheat	Blé	Weizen
Vicia faba L.	Horse Bean	Fève	Dicke Bohne
Vicia sativa L.	Common Vetch	Vesce commune	Saatwicke
Vitis vinifera L.	Vine	Vigne	Rebe
Zea mays L.	Maize	Maïs	Mais



## SWITZERLAND

## Ordinance on the Protection of Plant Varieties\*

Consolidated Text of the Ordinance of May 11, 1977,  
as Amended by the Ordinance of February 28, 1983\*\*

## CHAPTER I

## GENERAL PROVISIONS

Section 1: Organization and Principles of ProcedureArticle 1

## Competence

(1) The implementation of the Law of March 20, 1975, on the Protection of New Plant Varieties ("the Law") and of this Ordinance shall be within the competence of the Plant Variety Protection Office ("the Office") attached to the Federal Department of Agriculture and of the federal agricultural research stations ("Authorities Responsible for the Examination").

(2) The Office shall be empowered to decide on the grant of protection and on related questions under the Law and this Ordinance (Articles 23 and 31 of the Law). It shall in particular be its responsibility to:

- (a) examine applications for protection, including variety denominations (Articles 14 and 18 to 27);
- (b) declare variety protection forfeit (Article 37(2));
- (c) cancel variety denominations (Article 17(1));
- (d) establish provisional variety denominations (Article 17(2));
- (e) keep the Variety Protection Register (Article 39) and the Register of Applications for Variety Protection (Article 38);
- (f) issue the titles of protection.

(3) It shall be the responsibility of the Authorities Responsible for the Examination to examine the varieties filed and to check the maintenance of the protected varieties (Articles 24(1) and 30 of the Law) as to their novelty, homogeneity and stability by carrying out, where necessary, growing tests (Articles 28 to 30). To this end, they shall deal directly with the applicant for variety protection or his agent as regards technical matters. Competence in respect of the examination of the various varieties shall be in accordance with the attached list of species.<sup>1</sup>

(4) Decisions of a compulsory nature affecting the rights and obligations of the applicant for variety protection shall be taken by the Office. They shall

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\* Titles in National Official Languages: Ordonnance sur la protection des variétés; Sortenschutzverordnung; Ordinanza sulla protezione delle varietà.

\*\* Source: Recueil officiel des lois fédérales, 1977, 880, and 1983, 271. This text also takes account of the new denomination given to the Federal Department of Agriculture and the Federal Bureau of Intellectual Property pursuant to Article 1 of the (unpublished) Notice of the Federal Council of April 23, 1980, on the Adaptation of Federal Provisions of Law to the New Denominations of Departments and Offices.

<sup>1</sup> Not reproduced here.

be designated as such, grounds shall be given and the legal remedies indicated. In addition, Articles 34 to 39 of the Federal Law on Administrative Procedure shall be applicable.

## Article 2

### Principle of Judicial Investigation

The Office and the Authorities Responsible for the Examination shall not be bound by the information given by the parties. They shall take into consideration ex officio all facts justifying or opposing the grant of variety protection.

## Article 3

### Institution of Ex Officio Proceedings

When the Office institutes ex officio proceedings, it shall immediately inform the owner of variety protection and any other successors in title recorded in the Variety Protection Register.

## Article 4

### List of Species

(1) The list of species annexed hereto<sup>2</sup> shall be an integral part of this Ordinance. It shall set out the plant genera and species of which the varieties are protected under the Law and this Ordinance.

(2) The list of species shall also set out:

- (a) the Authority Responsible for the Examination that is competent for the particular varieties (Article 24(1) of the Law).
- (b) the duration of protection (Article 14 of the Law);
- (c) the derogations from the statutory scope of protection (Article 13(2) of the Law);
- (d) the examination fees for genera and species of which the varieties are examined in Switzerland; for genera and species of which the varieties are examined by foreign authorities, the tariff applicable shall be the amount charged by the foreign authority to the Office;
- (e) the number of years under Article 5(3) of the Law during which the applicant for variety protection may have offered for sale or marketed the variety abroad before the filing of the application, without this being detrimental to novelty ("period of grace").

## Article 5

### Date of Filing

The effective date of filing shall be:

- (a) for communications posted in Switzerland: the date on which the communication was posted or, where that date is not proven, the date of entry in the Register of Applications for Variety Protection kept by the Office (Article 21(3) and Article 38) or the date of submission to the Office or to the Authority Responsible for the Examination;
- (b) for communications posted abroad, addressed directly to the Office or to the Authority Responsible for the Examination: the date of receipt

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<sup>2</sup> Not reproduced here.

- at a Swiss post office or, where that date is not proven, the date of entry in the Register of Applications for Variety Protection kept by the Office (Article 21(3) and Article 38) or the date of submission to the Office or to the Authority Responsible for the Examination;
- (c) for payments by postal remittance: the date of debit of the postal check account of the remitter by the post office or, where that date is not proven, the date of the postal stamp placed on the notification of credit;
- (d) for payments from abroad: by postal remittance, the date of receipt of the remittance notification by the first Swiss postal check office or, where that date is not proven, the date of the postal stamp placed on the notification of credit.

#### Article 6

##### Calculation of Time Limits

- (1) The day on which the event occurs which starts off a time limit shall not be included in the calculation of the time limit.
- (2) Where the time limit is laid down by a decision and failing any other prescription, the period of time shall begin to run on the day the decision is dispatched. Failing proof to the contrary, the date of the decision shall be considered the date of dispatch.
- (3) Where the last day of the time limit falls on a Saturday, a Sunday, or other day on which the Office is closed, on an official holiday at the place of residence or registered office in Switzerland of the petitioner or of his agent, the time limit shall expire on the first working day that follows.
- (4) February 29, the last day of the month in a leap year, shall be assimilated to February 28 of a normal year. Where a time limit calculated in months expires at the end of February, it shall expire on February 28 in a normal year and on February 29 in a leap year.

#### Article 7

##### Language

- (1) Applications and communications addressed to the Office or to the Appeals Section (Article 47) shall be drawn up in the German, French or Italian languages ("the official languages"). The initially adopted official language shall normally be maintained.
- (2) Supporting documents which are not drawn up in an official language shall be accompanied by a translation in an official language. The Office may require the translation to be certified. Articles 22(1)(c), 24(3) and 47(2) shall remain unaffected.

#### Article 8

##### Joint Application for Protection

- (1) Where two or more persons jointly file an application for protection, they shall designate one of their number or a third party as their appointed representative to deal with the Office on behalf of all parties.
- (2) For as long as no representative has been designated, the Office may address all communications, having effect in respect of all applicants, to the first person or undertaking named in the application for protection. If one of the other persons or undertakings concerned enters an objection, the Office shall give all parties a time limit for designating their representative.

Where this time limit is not respected, the application for protection shall be rejected (Article 27(2) of the Law).

#### Article 9

##### Relations with the Designated Representative

(1) For as long as a representative is appointed by one of the parties, the administrative authorities shall not, as a general rule, accept communications or applications other than from that representative. However, the principal may also, with direct effect, withdraw the application for protection of a variety or for a denomination, withdraw an appeal or renounce variety protection.

(2) Where the principal withdraws an application for variety protection or renounces such protection, the representative shall remain empowered to receive the files and the fees which the administrative authorities are required to return in accordance with this Ordinance.

#### Section 2: Characteristics of the Varieties

##### Article 10

##### Novelty

(1) A variety shall be considered to be new if it is clearly distinguished, by one or more important characteristics which may be either morphological or physiological and which, in any event, shall be capable of precise description and identification, from any other variety whose existence is a matter of common knowledge at the time the application for variety protection is filed (Article 5(2) of the Law).

(2) The existence of another variety shall be considered a matter of common knowledge when it is already entered in a public register or its precise description has been the subject of a publication, when it is cultivated regularly or in a reference collection, when its propagating material or harvested material has already been offered for sale or marketed with the consent of its owner, or when its existence has become a well-known fact in any other way.

##### Article 11

##### Homogeneity

(1) A variety shall be considered sufficiently homogeneous for the granting of protection (Article 5(1) of the Law) when the differences between plants are characteristic of the species concerned and when the differences present in the varieties cultivated for comparative purposes are equivalent, both physiologically and morphologically.

(2) Account shall be taken of the particularities presented by cross-pollinating, self-pollinating or vegetatively propagated species and by hybrid varieties.

##### Article 12

##### Stability

A variety shall be considered sufficiently stable for the granting of protection (Article 5(1) of the Law) when, after each reproduction or propagation, or after each cycle of reproduction or propagation if a special cycle is required, it remains true, in respect of its essential characteristics, to the described type.

### Section 3: Variety Denomination

#### Article 13

##### Principles for Coining

(1) A variety denomination may consist of one or more words which should be easy to pronounce and to remember, and capable of acting as an objective denomination.

(2) A designation shall not be acceptable as a variety denomination:

- (a) when it does not permit the variety to be distinguished, particularly when it consists exclusively of figures (Article 6(2)(c) of the Law);
- (b) when it is identical to or may be confused with the denomination under which a variety of the same botanical species or a closely related species has already been filed or registered in Switzerland or in another member State (Article 6(2)(a) of the Law);
- (c) when it is likely to give offense or may mislead, particularly when it is constituted by the botanical or common name for a different species, or when it is liable to give rise to false ideas as to the origin, the characteristics or the value of the variety or in respect of the breeder or owner of the variety (Article 6(2)(a) and (b) of the Law).

(3) If the variety has already been the subject of an application for protection or registered in another member State, the same variety denomination shall be used unless the grounds for exclusion given in paragraph (2) make this impossible, or the denomination is improper for linguistic reasons, or the owner of the variety provides prima facie evidence that a third party right is opposed thereto (Article 6(3) of the Law).

(4) The Office shall publish in the Swiss Patents, Designs and Trademarks Gazette (Feuille suisse des brevets, dessins et marques / Schweizerisches Patent-, Muster- und Marken-Blatt) (Article 40(3)) the list of species it considers related for the examination of the variety denomination within the meaning of paragraph (2)(b) of this Article, of Article 15(1) and (3) of this Ordinance and of Article 6(2)(a) of the Law.

#### Article 14

##### Examination of the Variety Denomination

When a proposed variety denomination does not satisfy the requirements of Article 13, the Office shall invite the applicant to propose a new denomination within a prescribed time limit. The application shall be rejected if the applicant does not respond to this invitation.

#### Article 15

##### Trademark Belonging to the Owner of the Variety

(1) If the owner of a variety possesses a right in a trademark for the variety for which the application has been made or for another variety of the same botanical species or of a closely related species, which is identical to or may be confused with the denomination of the variety, he may no longer avail himself of the rights deriving from the trademark as from the time when he obtains variety protection (Article 7(2) of the Law). This ruling shall apply mutatis mutandis when protection was granted in another member State for a variety which, by reason of the species to which it belongs, is included in the list of species.

(2) Trademarks which have been internationally registered under the appropriate version of the Madrid Agreement of April 14, 1891, concerning the International Registration of Trademarks and which enjoy protection in Switzerland shall be assimilated to trademarks entered in the Trademark Register of the Federal Bureau of Intellectual Property.

(3) When submitting the variety denomination, the applicant shall state in writing that he renounces, as from the time when he obtains variety protection, in respect of the variety for which the application has been made and of any other variety of the same botanical species or of a closely related species, to exercise any rights deriving from trademarks which are identical to or may be confused with the variety denomination and which are protected for his benefit in another member State which grants protection for varieties of that species.

#### Article 16

##### Obligation to Use the Variety Denomination

(1) Propagating material of a protected variety may only be marketed under the registered variety denomination. The variety denomination shall also be used after protection has terminated (Article 8 of the Law).

(2) Anyone who markets propagating material of a protected variety shall ensure that the variety denomination is shown on the packaging. The denomination shall be easily recognizable and clearly legible; it may be accompanied by an additional sign.

#### Article 17

##### Cancellation of the Variety Denomination

(1) The Office shall cancel the variety denomination:

- (a) at the request of the owner of variety protection or of a third party, upon production of a final decision pronounced against the owner concerning the cancellation of the denomination, or upon production of prima facie evidence of an opposing right, where the owner of variety protection consents to the cancellation;
- (b) at the request of a person required by Article 16 to use the variety denomination, when a final decision prohibits him from using that denomination and the owner of variety protection appeared in the proceedings as a third party.

(2) The Office shall invite the owner of variety protection to submit to it, within a prescribed time limit, a different denomination for the variety. At the request of the owner of variety protection or of a third party, the Office shall establish a provisional denomination if the person making the request produces prima facie evidence of a legitimate interest. On expiry of the prescribed time limit, the Office may establish a provisional denomination ex officio.

### CHAPTER II

#### APPLICATION FOR PROTECTION AND EXAMINATION OF THE VARIETY

##### Section 1: Application Procedure

#### Article 18

##### Filing

(1) Filings concerning varieties or variety denominations shall be made with the Office in three copies on an official form (Forms A and B). The filing concerning a variety shall consist of:

- (a) the application for variety protection (Form A, Article 19);
- (b) the description of the variety (Article 20);
- (c) the application fee (Article 41).

(2) Where the applicant submitting an application for variety protection (Form A) does not at the same time submit a denomination (Form B), the Office shall invite him to do so within a prescribed time limit.

(3) A separate filing shall be made for each variety.

### Article 19

#### Application

(1) The application shall contain:

- (a) the name or business name of the applicant, his place of residence or registered office and his full address;
- (b) the nationality of the applicant where the latter is a natural person;
- (c) the variety denomination or a provisional designation;
- (d) the name and address of the agent, if appropriate. The powers of attorney shall be attached to the application;
- (e) the name and address of the original breeder or discoverer of the variety, accompanied by confirmation that, to the knowledge of the applicant, no other person participated in the breeding or discovery of the variety;
- (f) information regarding acquisition of the variety by the applicant where the latter is not, or not the sole, original breeder or discoverer of the variety;
- (g) a statement that propagating material of the variety has never been offered for sale or marketed in Switzerland prior to filing, or abroad for more than four years prior to filing, with the approval of the owner of the variety or his predecessor in title;
- (h) when the variety has already been applied for or protected in one or more other member States:
  1. the name of the other member State or States,
  2. the variety denomination,
  3. the number under which the application or the title of protection is registered,
  4. the date of the application or the date of issue of the title of protection;
- (i) where priority is claimed under Article 11 of the Law, the date of the first application and the name of the member State in which it was submitted;
- (k) the statement required by Article 15(3);
- (l) the signature of the applicant or his agent.

(2) The application shall be accompanied by:

- (a) the application fee (Article 26(1) and Article 36(1)(a) of the Law, and Article 41(1) of this Ordinance);
- (b) a list of the forms and documents submitted to the Office. Failing this, the Office shall itself draw up a list that shall be considered correct unless proved otherwise.

### Article 20

#### Description of the Variety

(1) The description of the variety shall state the variety denomination and its essential morphological and physiological characteristics. For those varieties of which the plants are produced by crossing certain genetic components, the essential morphological and physiological characteristics of the parents shall also be stated. The description shall further specify the varieties

similar to the variety applied for and shall state in what way the latter differs from them.

(2) The description of the variety may be supplemented by illustrations.

(3) The heading of the description of the variety shall contain the name and given name or the business name of the applicant, his place of residence or registered office, and the designation of the botanical species to which the variety belongs.

(4) All copies of the description shall be signed by the applicant or his agent.

#### Article 21

##### Acceptance and Chronological Order of Applications

(1) Any application not complying with the requirements set out in Articles 18, 19 and 20 shall be returned to the applicant for rectification (Article 27(1) of the Law).

(2) Applications from abroad shall only be accepted if filed through an agent established in Switzerland or if the powers of attorney of an agent established in Switzerland are attached (Article 3 of the Law).

(3) In case of doubt, the chronological order of applications (Article 5(a)) shall be that of the entries in the Register of Applications for Variety Protection (Article 38).

(4) Amendments, additions or replacement documents filed at the same time for several filings shall only be accepted if they are identified in a way that leaves no doubt as to the application to which they belong.

#### Article 22

##### Proof of Priority

(1) The priority deriving from a first filing (Article 11(1) of the Law) shall be proved by submitting:

- (a) copies of the documents contained in the file of the first application for protection, certified by the authority that received the first application;
- (b) a certificate issued by the authority referred to in (a) attesting to the date of the first application for protection;
- (c) a translation in an official language or in English, where the description and certificate referred to in (a) and (b) are not drawn up in an official language or in English.

(2) The complete file proving the priority deriving from a first filing shall be submitted to the Office within three months, failing which the priority right shall lapse (Article 11(2) of the Law).

(3) Applications filed in non-member States shall be assimilated to those filed in member States where the non-member States concerned grant reciprocity (Article 2(2) of the Law).

#### Article 23

##### Publication

The filing of the application shall be published in the Swiss Patents, Designs and Trademarks Gazette.



## Article 24

### Objections

(1) Objections to the granting of variety protection or the admissibility of the variety denomination (Article 29 of the Law) shall be lodged with the Office in writing and in three copies within three months from publication. Objections shall:

- (a) state the name and place of residence or registered office of the person making the objection and, as appropriate, the name and registered place of business of his agent;
- (b) precisely and fully identify the contested application;
- (c) set out the reasons for which the variety applied for may not be protected or for which the proposed denomination may not be accepted.

Objections which do not satisfy these requirements may be taken into consideration ex officio.

(2) Where publications are to be produced as evidence that the variety cannot be the subject of a valid title of protection or that the variety denomination cannot be accepted, the date of the publications, together with the exact identification of the textual passages or drawings cited, shall be stated. Where the request to provide such information is not complied with, the person making the objections shall not be entitled to require the publications produced as evidence to be taken into consideration.

(3) Where a document produced as evidence is not drawn up in an official language or in English, the provision of a certified translation in an official language or in English may be required. If the translation is not submitted within the prescribed time limit, the person making the objections shall not be entitled to require the document produced as evidence to be taken into consideration.

## Article 25

### Comments of the Applicant

(1) Objections lodged in conformity with the requirements shall be communicated to the applicant to enable him to comment on them (Article 29(3) of the Law). His comments shall be submitted in writing, in three copies, within the prescribed time limit. Failing this, the applicant shall not be entitled to require his comments to be taken into consideration.

(2) As a rule no further procedure shall take place.

## Article 26

### Application for a New Denomination

Applications for a new denomination, submitted under Articles 14 and 17(2), shall be submitted to the Office in three copies using the official form (Form B). Articles 14 and 23 to 25 shall apply mutatis mutandis to the subsequent procedure.

## Article 27

### Other Applications

Applications other than those under Articles 19 and 26 shall be submitted to the Office in writing, in three copies. They shall contain the information necessary for them to be examined and shall state the grounds on which they are based.

## Section 2: Examination of Varieties

### Article 28

#### Place, Date and Cultivation

(1) The Authorities Responsible for the Examination shall determine the place and date of the variety examination. They may issue directives concerning the supply of material for the examination and the conduct of the variety examination.

(2) The applicant shall be required to provide the necessary information for the growing tests of the variety; inadequate documentation shall be returned for completion.

### Article 29

#### Propagating Material

(1) The Authority Responsible for the Examination shall prescribe the amount and nature of the propagating material required for the examination, the time for supplying the material and the place to which it shall be supplied. For those varieties of which the plants are obtained by crossing certain genetic components, the Authority Responsible for the Examination may also require the supply of propagating material of such components.

(2) Unless otherwise required by the Authority Responsible for the Examination, the propagating material for each examination shall be taken from the growing period preceding the examination. The propagating material shall not have been subject to chemical treatment unless the Authority Responsible for the Examination authorizes or prescribes such treatment. Where the propagating material has been chemically or physically treated for reasons of plant protection, full details shall be supplied.

### Article 30

#### Provision of Information to the Applicant

(1) The Authority Responsible for the Examination shall provide the applicant, at his request, with information on the test in progress.

(2) By indicating his wishes in advance, the applicant may inspect the test in progress on the spot (Article 30(3) of the Law).

### Article 31

#### Examination Report

(1) Once the Authority Responsible for the Examination considers that the results of the examination are sufficient for the variety to be assessed, it shall draw up an examination report addressed to the Office. It shall proceed in the same manner when the applicant, on the basis of test results over a number of years, requires that a decision be taken on his application for variety protection.

(2) The examination report shall state whether the requirements of novelty, homogeneity and stability of the variety have been met. Where such is the case, the morphological and physiological characteristics of the variety or the combinations of such characteristics which give the variety its novelty shall be recorded in a draft variety description. Where it is not possible to adequately distinguish the variety concerned from another existing variety, the reasons for the inadequacy shall be stated.

(3) The applicant shall be given the opportunity to comment on the examination report and on the draft variety description.

### Article 32

#### Assistance from Other Authorities

- (1) The Authority Responsible for the Examination, in agreement with the Office, may call upon the services of other qualified authorities to carry out the growing test of the variety and conduct other tests (Article 24(2) of the Law).
- (2) In cases where the Authority Responsible for the Examination is itself the applicant, the Office shall ex officio appoint a qualified third party to conduct the examination (Article 10 of the Federal Law on Administrative Procedure).

### Article 33

#### Taking Over of Examination Results

- (1) The Authority Responsible for the Examination may take into consideration results of growing tests and other tests carried out by other qualified authorities.
- (2) The results of growing tests and other tests carried out by foreign authorities may only be taken over if the examination methods used satisfy the requirements of the Law and of this Ordinance. Any agreements concluded between the Office and foreign authorities as regards the exchange of examination results shall remain unaffected.

## CHAPTER III

### PROTECTION AND CHECKING OF THE MAINTENANCE OF THE VARIETY

#### Section 1: Granting of Variety Protection

### Article 34

#### Decision

- (1) On a proposal by the Authority Responsible for the Examination, the Office shall decide to grant variety protection or to reject the application (Article 31 of the Law).
- (2) The decision shall be notified to the applicant or to his successor in title, and to those persons who have lodged objections to the application under Article 24.

### Article 35

#### Entry in the Register

- (1) On entry into force of the decision establishing that the conditions for granting variety protection have been satisfied (Article 47(1)), protection shall be granted to the variety by entry in the Variety Protection Register (Article 31(2) of the Law).
- (2) The official date of entry in the Variety Protection Register shall be that of the last working day of each half month.

### Article 36

#### Title of Protection

The applicant shall receive a title of protection attesting to the entry of the variety in the Variety Protection Register (Article 31(2) of the Law).

## Section 2: Checking of the Maintenance of the Protected Variety

### Article 37

#### Subsequent Examination

(1) Where there are reasons to believe that the requirements placed on the characteristics of the variety are no longer satisfied, the Authority Responsible for the Examination may require the owner of protection to supply all information, documents and propagating material required for checking the maintenance of the protected variety and may, where necessary, require a subsequent examination (Article 17(1)(b) of the Law). Articles 28 and 29 shall apply *mutatis mutandis* to the subsequent examination of the continued existence of the variety.

(2) If the owner of the title hinders, by his behavior, the checking of the maintenance of the protected variety or if the protected variety does not prove to be sufficiently homogeneous, stable and true to its description in the subsequent examination, the Authority Responsible for the Examination shall refer the matter to the Office, accompanied by an examination report in the latter case, for the purpose of instituting proceedings for declaring variety protection forfeit under Article 17(1) of the Law.

## CHAPTER IV

### VARIETY PROTECTION REGISTER, PUBLICATION AND FEES

#### Section 1: Registers and Publications

### Article 38

#### Register of Applications for Variety Protection

(1) Applications for protection of a variety shall be entered without delay in the Register of Applications for Variety Protection, in their chronological order of receipt, stating:

- (a) the provisional serial number;
- (b) the genus or species to which the variety belongs;
- (c) the name or business name of the applicant, his place of residence or registered office and his full address;
- (d) the provisional variety denomination or, if the variety has already been applied for or protected in one or more other member States, the denomination given in those member States;
- (e) the relevant filing date and member State, if a priority right under Article 11 of the Law is claimed.

(2) The Register of Applications for Variety Protection shall not be open to the public but, upon request, the Office shall give third parties information on pending applications subject to the indication by such third parties of the name of the applicant or the provisional serial number given to the application.

(3) Information supplied under paragraph (2) shall be subject to a fee (Article 44(2)).

### Article 39

#### Variety Protection Register

(1) The information listed in Article 32(1) of the Law shall be entered in the Variety Protection Register. The variety description shall contain the morphological and physiological characteristics of the variety on which the grant of protection was based; it may be replaced by a reference to other documents of

the Office. In the case of varieties of which the plants are obtained by crossing specific genetic components, a corresponding note shall be included.

(2) The Variety Protection Register shall also contain:

- (a) the serial number of the title of protection;
- (b) the genus or species to which the protected variety belongs;
- (c) changes affecting continued protection;
- (d) changes affecting the right to protection, where evidence is given to the Office. Such changes shall also include the granting of restricted rights such as a pledge or a license, or the termination of such rights;
- (e) withdrawal of the powers of attorney or changes as regards the identity of the agent, where the powers of attorney given to a new agent are produced.

(3) As long as an exclusive license is entered in the Register, no other license incompatible with that license may be entered for the same variety.

(4) The Office may enter any other information it considers useful.

#### Article 40

##### Publication

(1) Pursuant to Article 33(1) of the Law, the Office shall publish in the Swiss Patents, Designs and Trademarks Gazette:

- (a) the entry of the variety in the Variety Protection Register, indicating the serial number, the genus or species to which the variety belongs, the variety denomination, the owner of the title and, where appropriate, his agent, the breeder, where he is not the owner of the title, the date of the application and of its publication and, where appropriate, the country and date of priority;
- (b) the cancellation of the variety from the Variety Protection Register;
- (c) the cancellation of a former denomination and the entry of the new denomination for the variety in the Variety Protection Register;
- (d) changes entered in the Register concerning continued protection and the right to protection (Article 39(2)(c) and (d));
- (e) withdrawal of the powers of attorney or changes as to the identity of the agent (Article 39(2)(e)) entered in the Register.

(2) Publication shall normally be made every two months.

(3) In the journal referred to in paragraph (1), the Office may communicate other information it considers useful or general information concerning the protection of varieties.

#### Section 2: Fees and Time Limits for Payment

##### Article 41

##### Application Fee

(1) The application fee (Article 36(1)(a) of the Law) shall be 150 francs when the application for protection (Form A) is filed together with the application for a variety denomination (Form B). Where the application for protection is only accompanied by a provisional designation, the application fee shall be 200 francs.

(2) The application fee shall cover all costs incurred in examining the variety denomination, publishing the filing of the application and the variety denomination, and granting variety protection.

(3) Where the application fee is not paid on filing of the application, the Office shall inform the applicant that unless payment is made within 30 days (Articles 20 to 24 of the Federal Law on Administrative Procedure) of notification, the application shall be held to be void.

#### Article 42

##### Examination Fees

(1) The examination fees (Article 36(1)(b) of the Law) payable for each full or partial examination year shall be laid down in the Annex to this Ordinance.<sup>3</sup> The examination year shall begin on expiry of the time limit for supplying propagating material (Article 29(1)).

(2) The examination fees shall become due on the first day of the examination year and, subsequently, on the first day of each following examination year; they shall be payable within three months. The Office shall set a further time limit of 30 days for debtors in arrears and shall inform them that the application for variety protection will be rejected if payment is not made within the prescribed time limit.

(3) Where the Authority Responsible for the Examination calls upon the services of other authorities under Article 32(1), the applicant shall pay only the amount he would have had to pay had the Authority Responsible for the Examination conducted the examination itself.

(4) Where the Authority Responsible for the Examination takes over the results of examinations carried out by foreign authorities (Article 24(2) of the Law and Article 33(2)), the costs incurred thereby which are in excess of the taking over fee under Article 44(1)(e) shall only be charged to the applicant insofar as they cannot be covered by the annual fees following the granting of variety protection.

#### Article 43

##### Annual Fees

(1) For the duration of protection of the variety (protection years), the owner of protection shall pay an annual fee (Article 36(1)(c) of the Law) according to the following scale:

Protection Year	Group 1	Francs Group 2	Group 3
1st . . . . .	240	180	120
2nd . . . . .	300	200	140
3rd . . . . .	400	250	160
4th . . . . .	500	300	180
5th . . . . .	600	400	200
6th to 15th . . . . .	700	500	250
16th to 20th . . . . .	500	300	180
(and, where appropriate, for each of the subsequent years according to Article 14 of the Law).			

Group 1: soft wheat (excluding spelt), maize, potato;

Group 2: all other cereals, all agricultural crops, fruit and berry crops, glasshouse roses;

Group 3: all vegetables and ornamental plants, garden roses.

<sup>3</sup> Not reproduced here.

The first protection year shall begin at the start of the calendar year following the grant of variety protection (Articles 34 to 36). Variety protection shall expire at the end of the twentieth full calendar year (Article 14 of the Law). During the period between the grant of variety protection (Article 35) and the start of the first protection year, the annual fee shall be payable in proportion to the time elapsed. Pursuant to Article 35(2), the time elapsed shall be calculated in half months, each of which shall correspond to one twenty-fourth of the first annual fee.

(2) The annual fee shall fall due on the first day of each new protection year and shall be payable within three months. The Office shall set a further time limit of 30 days for debtors in arrears and shall inform them that variety protection will lapse if payment is not made within the prescribed time limit.

(3) On a proposal by the Committee of Variety protection Experts (Article 55 of the Law), the annual fees may be suitably reduced for species of little commercial importance and which are newly entered in the list of species.

#### Article 44

##### Other Fees

(1) The following other fees shall be charged (Article 36(3) of the Law):

	Francs
(a) Application for a new variety denomination, including its publication (Articles 14 and 17(2), first sentence) . . .	50
(b) Application for cancellation of a denomination (Article 17(1)) . . . . .	50
(c) Application for establishment of a provisional denomination (Article 17(2), second sentence) . . . . .	50
(d) Application for amendment of entries in the Variety Protection Register . . . . .	50
(e) Taking over of examination results from foreign authorities, per examination result . . . . .	350
(f) Procedure for establishing a provisional denomination (Article 17(2), third sentence) . . . . .	100
(g) Procedure for terminating variety protection following	
1. renouncement pursuant to Article 15(1)(a) of the Law . . .	50
2. failure to pay an annual fee pursuant to Article 15(1)(b) of the Law (Article 43(2)) . . . . .	100
3. forfeiture pursuant to Article 17 of the Law . . . . .	200

(2) The Federal Department of Public Economy may require fees to be charged for other services provided by the Office, such as presentation of registers, information given as to the content of the registers, provision of extracts from the registers, certificates, etc.

#### Article 45

##### Advance Payments

Any administrative act for which fees are payable may be subject to an appropriate advance payment or the provision of securities up to the amount of the total fees which will fall due.

#### Article 46

##### Reduction of Fees

(1) When an application for which fees are payable is withdrawn before a decision has been taken thereon, the fees, except the examination fee (Article 42), shall be reduced by half.

(2) If an applicant withdraws his application for variety protection or if it is rejected for any reason whatsoever after propagating material has already been dispatched to the Authority Responsible for the Examination, the examination fee which has fallen due shall be forfeited in whole to the Federal Exchequer.

## CHAPTER V

### FINAL PROVISIONS

#### Section 1: Administrative Jurisdiction

##### Article 47

###### Administrative Appeal

(1) Decisions of the Office concerning the granting, refusal or forfeiture of protection may be referred, within thirty days of their notification, to the Appeals Section of the Federal Bureau of Intellectual Property (Article 25 of the Law).

(2) Where a document produced as evidence is not drawn up in an official language or in English, the presentation of a certified translation in an official language or in English may be required. If such translation is not filed within the time limit prescribed therefor, the document produced as evidence shall not be taken into consideration. For the rest, the procedure shall be governed by the Federal Law on Administrative Procedure.

##### Article 48

###### Appeal under Administrative Law

Pursuant to Article 97 et seq. of the Federal Law on Judiciary Organization, appeal may be made to the Federal Court against decisions of the Office other than those referred to in Article 47.

#### Section 2: Committee of Experts

##### Article 49

###### Number of Members and Rules of Procedure

The Committee of Variety Protection Experts (Article 55 of the Law) shall comprise a maximum of 15 members. The Federal Department of Public Economy shall draw up the rules of procedure of the Committee and shall appoint its members.

#### Section 3: Entry into Force

##### Article 50

This Ordinance shall enter into force on June 1, 1977.



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The present practical situation is that in the United States of America, as you will know, it is possible for a plant breeder in some instances to choose between a plant patent or a plant variety protection certificate and a utility patent. Presumably, he will apply for a utility patent whenever he feels that the particular nature of his variety enables him to fulfill the utility patent criteria. Since the availability of utility patents is a recent development, many aspects of the application of the patent law to plant varieties are unclear and will only become clearer as specific patents and their claims are litigated in specific cases. This could be a lengthy process. Opinion amongst plant breeders seems to be split between those who favor the introduction of utility patents for plant varieties and those who are strongly opposed. All, however, seem to favor the strengthening of the plant variety protection system to cover varieties which do not satisfy the patent requirements.

In countries which have acceded to the European Patent Convention the position is governed by Article 53(b) of the European Patent Convention, which excludes plant varieties from patent protection, and in countries which are signatory to the UPOV Convention (with the possible exception of the United States of America) the position is governed by Article 2 of the UPOV Convention, which forbids the protection of plant varieties of any given species by both patents and plant variety protection at the same time. The patent laws of many States also exclude plant varieties (and animal breeds and essentially biological processes for the production of plants or animals) from patentability. Quite clearly the view of the draftsmen of both Conventions was that patents and plant breeders' rights should have distinct fields of application. The legislation did not set out to create double protection with all the potential for uncertainty and confusion that that might entail. This subject will obviously receive close attention and be the subject of debate. There is much to be said for the view that the confidence and certainty that prevail amongst users of the plant breeders' rights system should not be disturbed but that the breeders' rights system should be strengthened to fulfill better the task that it currently performs.

The ASSINSEL Congress in Brighton, England, in June 1988, to which I referred earlier, resolved to support the patenting of genes and also the patenting of "novel plant breeding procedures or other plant manipulative methodologies (whether or not they are essentially biological) in which the procedures or methodologies are decisive for achieving an inventive result." The support of the Congress for breeders' rights as the sole form of protection for plant varieties, and for patents for genes and plant breeding processes, presumably indicates their support for the continued exclusion of plant varieties from patent protection under Article 53(b) of the European Patent Convention.

There is much in favor of a system where the implications of the patent system are resolved "upstream," as it were, of the plant breeders' rights system. Once a patented gene was incorporated in a plant variety it would thenceforth be subject to plant variety protection procedures, including any future provision for dependency. The same would be true of a plant variety resulting from a patented process if at any time the present exclusion of essentially biological processes were amended; the wall provided by Article 53(b) and corresponding exclusions in national laws would continue to forbid the patenting of plant varieties as such.

I should like to pass on to you for your consideration some thoughts on the interpretation of Article 53(b) in the context of the operations of practical plant breeders and their manipulation of plant material, and particularly the contention that plants are somehow different from plant varieties in the interpretation of this provision. I mentioned earlier the sequence of events in a plant breeding program, and how towards the end of the pipeline a breeder might have ten or hundreds of lines still within his program at a particular stage of development. He may call these remaining plant genetic units "lines," "selections" or "varieties;" the expressions are interchangeable. In a breeding program for a species which is reproduced vegetatively he may use the same expressions, perhaps with the word "clone" as a further alternative. Any individual selection in a vegetatively reproduced species, any selection in a sexually reproduced species made at a stage when segregation has substantially ceased, or in a plant breeding program based upon di-haploidy such as anther culture or the *hordeum-bulbosum* approach in the case of barley, and any single plant selection resulting from the laboratory or greenhouse activity is a plant variety, distinct, uniform and stable. The same comment would apply equally to

plants derived from many other manipulative processes including the regeneration of plants from single cells, whether or not such cells result from a process of somatic embryogenesis or from an rDNA manipulation. It might also be applied to individual cells and plant tissues which contain the total genetic code of a plant variety and differ from a seed or cutting only in the handling processes necessary to generate a plant of the variety.

If a patent for a gene or process is dependent for its demonstration of utility upon the production of plants, then the most useful form in which such plant material may emerge from the process will be in the form of stable, uniform plants. Whenever this is the case it will be a plant variety and will be caught by the language of Article 53(b). In these contexts the notion that patents for plants are somehow different from patents for plant varieties is of somewhat questionable usefulness, quite apart from any consideration of its validity. In the context of a strengthened Convention, this will in no way be a cause of concern to the biotechnologist or the genetic supply industry.

The traditional view that plant varieties are not suited to protection by the patent system was based primarily on the inability of the varietal developer totally to describe his variety. This difficulty was not peculiar to plant material but applied to all living things including microorganisms. The importance of developments in microbiology, including in particular the use of microorganisms to produce antibiotics, led to the development of the microorganism deposit system to remedy the inability of the person who selected the organism to produce a total description. It is now suggested by some that the deposit of a sample of material of any living origin, whether it be plant or animal material, or samples of a microorganism, will enable the patent system to overcome problems that were perceived by earlier generations of patent specialists.

However, the deposit system which simply requires the deposit of the organism without asking many questions about the specification of the deposited material, may be adequate to handle microorganisms where the deposited material is the product of the non-sexual replication of the deposited organism, but quite different problems arise when the material which one might wish to deposit to remedy deficiencies in description is to be reproduced by sexual means. Sexual reproduction implies the potential for variation and unless some supplementary rules are employed, the deposited material would be quite inadequate as a substitute for description.

The plant breeders' rights system addresses this question with its requirement of not simply distinctness but also uniformity and stability and an official examination for the purposes of the DUS criteria. Only when all three criteria are fulfilled can a breeder claim to have "fixed" a variety in a reproducible form.

It may be useful to remark at this point that, where a breeder crosses variety A and variety B, generations subsequent to the immediate progeny of the cross will segregate, with the inbred progeny eventually ceasing to segregate after a period of years which could be as long as ten or more. Since it takes a period of years to achieve acceptable uniformity in a variety, and since breeders are typically striving competitively to achieve the same objectives, it would be quite inappropriate to permit a breeder to claim that he had developed a variety and support his claim with a deposit of material which was not uniform. Another breeder working with the same objective might in fact have had more uniform material, but declined to enter it for protection since it was still not at the necessary level of uniformity to constitute a reproducible variety. In these circumstances it will be quite wrong to accord priority to the man who submits non-uniform material and who has not yet completed his breeding task. Similar issues must arise in relation to the protection of any living material which reproduces sexually. It is for this reason that something akin to the plant breeders' rights system is thought by many to be desirable to complement the patent system and provide adequate coverage for animal breeding as opposed to patentable inventions concerning animals. Definitions for criteria akin to the D, U and S of the UPOV system will be necessary if animal breeds are to be protected.

I would like to mention certain specific issues in relation to intellectual property protection and plants. The notion of patent protection for genes seems to be generally welcomed in professional plant breeding circles. Conversely, the idea that patents can be granted for plant varieties and that the claims of such patents can embrace the characteristics of such varieties

without reference to the underlying genetic sequences governing the expression of such characteristics is a general cause for concern. The problem should not arise in countries where the situation is governed by an exclusion on the lines of Article 53(b) of the European Patent Convention or by the prohibition of double protection of Article 2 of the UPOV Convention. The UPOV Convention protects plant varieties and not the characteristics of varieties; if a breeder develops a short wheat variety it remains possible for others to develop an equally short or shorter variety. In the absence of precise knowledge concerning the genetic sequences the breeder will not know, and indeed does not need to know, exactly how the end result was achieved. Equally, he will not know what other routes are possible to achieve the same end result or if he has achieved the optimum expression of the characteristic. If, in those jurisdictions where utility patents are granted for plant varieties, patent claims for characteristics are widely accepted, plant breeders will be excluded from exploiting whole sectors of the natural variation of a plant species.

Where the genetic factor controlling the expression of a particular character is identified and isolated, there will, in many cases, be no cause for concern provided that the genetic factor has been introduced from another species. Where, however, the particular gene is present in existing plant varieties of the same species and is responsible for the expression of characteristics in varieties of that species, the possibility that the gene when cloned could no longer be freely available for plant breeders to use in their customary manipulation of plant material would be very disturbing.

Some of the theoretical concerns may disappear as broadly-based patents in the biotechnological area are litigated and theoretical doubts are seen to be non-existent, but there will nonetheless be a period of considerable uncertainty. Meanwhile, in those countries with a plant variety exclusion, plant breeding may continue largely undisturbed by the uncertainties.

Should the holders of patents for genes be required to grant licenses under such patents to plant breeders? Should the holders of plant breeders' rights in dominant varieties be required to concede that the holders of plant breeders' rights in dependent varieties are free to market those varieties? There are bodies of opinion which favor the compulsory licensing of patents for genes and which see any dependency system for plant breeders' rights limiting the right of the holder of the dominant plant breeders' rights to the receipt of equitable remuneration, with no right to withhold or limit permission to sell the dependent variety. Against such bodies of opinion are ranged others which can see no reason why protection accorded to innovation in biotechnology should be qualified in ways that do not apply to other technologies. They will claim that, if any dependency system for plant breeders' rights includes in its objectives the discouragement of some plagiaristic breeding approaches, it is illogical to require the breeder of the dominant variety invariably to concede a position in the marketplace to the plagiaristic breeder. These questions will be answered on the basis of broad social criteria; industrial circles are divided on them, but opinions are evolving as the practical implications are seen more clearly.

The plant breeders' rights system serves its users and society well. Its further evolution will better equip it as the basic tool for protecting plant innovation and as the partner of the patent system in providing effective systems of intellectual property for researchers in plant biotechnology.

What one can hope to see in the future is a dynamic relationship between patents and breeders' rights, with the truly inventive step being protected by the patent and the initial patent protection being supplemented for many years by a stream of protected varieties extending into the future the benefits of the initial head start provided by the patent.

I should like to conclude with a very general point. The discussion of intellectual property in plant material is part of a much wider debate involving not just the "private incentive equals public good" issue but also the public perception of the role of biotechnology in society, its impact on the environment and the extent to which it should be regulated. The scope of breeders' rights was influenced in 1961 by perceptions concerning the role of plant breeders in society and in relation to agriculture. Similar perceptions will quite rightly influence the forthcoming debate and will impact upon patents and plant breeders' rights equally. In discussing these topics as intellectual property specialists, we must guard against debating too much amongst ourselves and must be sensitive to the interests of the wider public.

CALENDAR
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UPOV Meetings

September 26 to 29 Wageningen (Netherlands)	Technical Working Party for Fruit Crops
September 27 to 29 New Carrollton, Maryland (United States of America)	Workshop on the Examination of Varieties of Soya Bean for the Purpose of Plant Variety Protection (with particular reference to Minimum Distance)
October 2 and 3 Versailles (France)	Workshop on the Examination of Varieties of Maize
October 5 and 6	Technical Committee
October 9 and 10	Fourth Meeting with International Organizations
October 11 to 13	Administrative and Legal Committee
October 16	Consultative Committee
October 17 and 18	Council

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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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