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PLANT VARIETY PROTECTION

Gazette and Newsletter

of the

International Union for the Protection of New Varieties of Plants (UPOV)

No.43	May 1985	Geneva
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GAZETTE

EXTENSION OF PROTECTION TO FURTHER GENERA AND SPECIES

Denmark

By virtue of the Order of the Minister of Agriculture No. 675 of December 20, 1984, Concerning the Protection of Plant Novelties (List of Species), protection was extended to <u>Aeschynanthus</u> Jack. with effect from January 7, 1985.

Pursuant to Article 12(1) of the Law on the Protection of Plant Breeders' Rights (see <u>Plant Variety Protection</u> No. 29, page 14), the duration of protection is 15 years, Aeschynanthus being, as a general rule, vegetatively propagated.

Pursuant to Article 1 of the Order No. 137 of March 26, 1982, Concerning the Possibility for Foreign Breeders to Obtain Protection of Plant Breeders' Rights, etc. (see <u>Plant Variety Protection</u> No. 29, page 19), breeders who are nationals of or have their residence or registered office in a UPOV member State may obtain protection in Denmark for novelties of any botanical genus or species protected in Denmark. In addition, pursuant to Article 3(2) of the Law mentioned above, the Minister of Agriculture may exceptionally provide that it shall be possible to grant protection to a breeder to whom the preceding provision does not apply if, in the particular case, such protection is found to be in the interest of the Danish agricultural economy.

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 3 (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).

NEWSLETTER

OBITUARY

Johan Le Roux

In the beginning of February, the Office of the Union received the sad news that Dr. Johan Le Roux died in a traffic accident between Capetown and Johannesburg.

Dr. Le Roux has served his country as an Agricultural Attaché, and later on as an Agricultural Counsellor, in the South African Embassy at Paris (France). In these functions, he regularly represented South Africa on the various UPOV organs from 1979 to 1984. In 1981, he was appointed alternate representative of South Africa on the UPOV Council.

Over the years, Dr. Le Roux has made an invaluable contribution to the work of UPOV in all areas--administrative, legal and technical--and has become one of the pillars of UPOV. It is on the very day of his return to his home country that UPOV lost one of its strongest promoters and his colleagues a great friend.

[Section continued on page 10]

List of Taxa Covered by Plant Variety Protection Legislation in Denmark

Liste des taxons couverts par la législation sur la protection des obtentions végétales au Danemark

Liste der taxonomischen Einheiten, die in Dänemark der Sortenschutzgesetzgebung unterliegen

Dansk	Latine	English	Français	Deutsch
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
Plumosus	Asparagus setaceus (Kunth) Jessop	"Asparagus Fern"	Asparagus	Asparagus, Federspargel
Havre	Avena sativa L., Avena byzantina C. Koch	Oats	Avoine	Hafer
Begonie	Begonia spp.	Begonia	Bégonia	Begonie
Berberis	Berberis spp.	Berberis, Barberry	Berberis, Epine-vinette	Berberitze

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Dansk	Latine	English	Français	Deutsch
Foderbede	Beta vulgaris L. var. crassa Mansf.	Fodder Beet	Betterave fourragère	Runkelrübe
Bladbede	Beta vulgaris L. var. vulgaris	Mangel, Leaf Beet, Swiss Chard	Bette commune, Poirée	Mangold
Rødbede	Beta vulgaris L. var. conditiva Alef.	Garden Beet, Beetroot	Betterave rouge, Betterave potagère	Rote Rübe
Bougainvillea	Bougainvillea spp.	Bougainvillea	Bougainvillier	Bougainvillea
Kålroe	Brassica napus L. var. napobrassica (L.) Rchb.	Swede	Chou-navet, Rutabaga	Kohlrübe
Raps	Brassica napus L.	Swede Rape, incl. Oilseed Rape	Colza	Raps
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
Rosenkål	Brassica oleracea L. convar. oleracea var. gemmifera DC.	Brussels Sprouts	Chou de Bruxelles	Rosenkohl
Savoykå].	Brassica oleracea L. convar. capitata (L.) Alef. var. sabauda L.	Savoy Cabbage	Chou de Milan	Wirsing
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
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

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Dansk	Latine	English	<u>Français</u>	Deutsch
Rybs	Brassica rapa L. var. silvestris (Lam.) Briggs	Turnip Rape	Navette	Rübsen
Majroe	Brassica rapa L. var. rapa	[Spring] Turnip	Navet [de printemps]	Mairübe
Turnips	Brassica rapa L. var. rapa	[Autumn] Turnip	Navet [d'automne]	Herbstrübe
Kommen	Carum carvi L.	Caraway	Carvi, Cumin des prés	Kümmel
Dvaergcypres	Chamaecyparis spp.	Chamaecyparis	Chamaecyparis	Scheinzypresse
Chrysanthemum	Chrysanthemum spp.	Chrysanthemum	Chrysanthème	Chrysantheme
Endivie	Cichorium endivia L.	Endive	Chicorée frisée, Scarole	Winterendivie
Cikorie	Cichorium intybus L.	Chicory	Chicorée, Endive	Wurzelzichorie, Salatzichorie
Melon	Cucumis melo L.	Melon	Melon	Melone
Agurk	Cucumis sativus L.	Cucumber, Gherkin	Concombre, Cornichon	Gurke
Centnergraeskar	Cucurbita maxima Duch.	Pumpkin	Potiron, Giraumon	Riesenkürbis
Mandelgraeskar	Cucurbita pepo L.	Pumpkin, Marrow, Courgette, Vegetable Marrow	Courge, Pâtisson, Citrouille	Gartenkürbis, Olkürbis
Kvaede	Cydonia spp.	Quince	Cognassier	Quitte
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
Nellike	Dianthus caryophyllus L.	Carnation	Oeillet	Nelke
Koralranke	Euphorbia fulgens Karw.	Euphorbia fulgens	Euphorbia fulgens	Korallenranke
Kristi tornekrone	Euphorbia milii et hybridae	Christ's Thorn, Crown of Thorns	Epine du Christ	Christusdorn
Julestjerne (poinsettia)	Euphorbia pulcherrima Willd. ex Klotzsch	Poinsettia	Poinsettia	Poinsettie, Weihnachtsstern

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Dansk	Latine	English	Français	Deutsch
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
Julerose	Helleborus L.	Christmas Rose	Hellébore, Rose de Noël	Schneerose, Christusrose
Ridderstjerne (amaryllis)	Hippeastrum Herb.	Amaryllis	Amaryllis	Ritterstern, Amaryllis
Вуд	Hordeum vulgare L.	Barley	Orge	Gerste
Hyacinth	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
Kalanchoe	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 L.	Ryegrass	Ray-grass	Weidelgras
Hvid lupin	Lupinus albus L.	White Lupin	Lupin blanc	Weisslupine
Smalbladet 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	Malvaceae	Mallow	Mauve	Malve

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

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Dansk	Latine	English	Français	Deutsch
Levkøj	Matthiola spec.	Stock	Giroflée	Levkoje
Humlesneglebaelg	Medicago lupulina L.	Black Medick, Yellow Trefoil	Luzerne lupuline, Minette	Gelbklee (Hopfenklee)
Lucerne	Medicago sativa L.	Lucerne, Alfalfa	Luzerne	Luzerne
Sandlucerne	Medicago X varia Martyn	(Hybrid) Lucerne	Luzerne hybride	Bastardluzerne
Narcis	Narcissus L.	Narcissus, Daffo-	Narcisse,	Narzisse
Opiatvalmue	Papaver somniferum L.	Opium Poppy	Oeillette, Pavot	Mohn
Pastinak	Pastinaca sativa L.	Parsnip	Panais	Pastinak
Pelargonie	Pelargonium L'Hér. (incl. PGrandiflorum-Hybridae; PZonale-Hybridae et PPeltatum-Hybridae)	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 (lav timothe)	Phleum bertolonii DC.	Timothy	Fléole diploïde, Petite fléole	2wiebellieschgras
Timothe	Phleum pratense L.	Timothy	Fléole des prés	Wiesenlieschgras
Aert	Pisum sativum L.	Pea	Pois	Erbse
Rapgraes	Poa spp.	Meadow-grass	Pâturin	Rispengras
Potentil	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

Dansk	Latine	English	Français	Deutsch
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. ssp. oleifera (DC.) Metzg.	Fodder Radish	Radis oléifère, Radis chinois	Olrettich
Radis	Raphanus sativus L. var. sativus	Radish	Radis de tous les mois	Radieschen
Rabarber	Rheum rhabarbarum L.	Rhubarb	Rhubarbe	Krauser Rhabarber
Ledkaktus, herunder påske- 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 Lindl. 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
Hindbaer	Rubus idaeus L.	Raspberry	Framboisier	Himbeere
Sanktpaulia	Saintpaulia ionantha H. Wendl.	African Violet	Saintpaulia	Usambaraveilchen
Skorsonerrod	Scorzonera hispanica L.	Black Salsify	Scorsonère, Salsifis noir	Schwarzwurzel

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Dansk	Latine	English	Français	Deutsch
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
Kartoffel	Solanum tuberosum L.	Potato	Pomme de terre	Kartoffel
Fredslilje (spathiphyllum)	Spathiphyllum spp.	Spathiphyllum	Spathiphyllum	Spathiphyllum
Spinat	Spinacia oleracea L.	Spinach	Epinard	Spinat
Streptokarpus	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
Alm. 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
Tulipan	Tulipa L.	Tulip	Tulipe	Tulpe
Blåbaer	Vaccinium myrtillus L.	Bilberry, Whortle- berry, Blueberry	Myrtille	Heidelbeere
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

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Development of Plant Variety Protection Throughout the World in 1984

Following established practice, the representatives of the States and organizations having participated in the eighteenth ordinary session of the Council (October 17 to 19, 1984) reported on the development of plant variety protection and related matters in their country or at the international level.

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

a. Statements by the Representatives of Member States

Belgium.- There are two points to be noted in the legal field: first, it is not certain that the Law approving the 1978 Act of the Convention and amending the Law of May 20, 1975, on the Protection of Plant Varieties will be voted on still in 1984; secondly, the fees for examination for distinctness, homogeneity and stability of varieties, for the purposes of both protection and inclusion in the catalogue, were increased on February 29, 1984, by a Royal Decree of February 14, 1984.

The list of protected taxa has not been altered in the course of the past year. However, in view of the offers of cooperation made by other member States, there are plans to extend protection to the following taxa:

(i) examination carried out by the Federal Republic of Germany: chicory, kalanchoë, white, blue and yellow lupins, parsley, white, show and fancy pelargoniums, black radish, fodder radish and spruce;

(ii) <u>examination carried out by Denmark</u>: poinsettia, leek and alsike clover;

(iii) examination carried out by France: cornsalad and chili;

(iv) <u>examination carried out by the Netherlands</u>: anthurium, sheep's fescue, hyacinth and meadow-grasses;

(v) <u>examination carried out by the United Kingdom</u>: Leyland and Monterrey cypresses and hybrid lucerne;

(vi) examination carried out by Switzerland: fennel.

There are plans moreover to agree on additional provisions to the agreements with the Federal Republic of Germany and the United Kingdom in order to extend the cooperation officially to hybrid ryegrass and alfalfa respectively. Overall, as in previous years, Belgium avails itself of cooperation for most protected taxa, with the exception of certain staple crops, and takes over test reports, in practically all cases paying the remuneration of 350 Swiss francs agreed upon within UPOV.

This state of affairs is to be considered in the light of the fact that the majority of new plant variety certificates (87% of those still in force) are granted for foreign varieties, and that Belgian breeders operate mainly in the cereal field. Detailed statistics are given in the table on pages 11 and 12 below.

Finally, in anticipation of a meeting organized by the Commission of the European Communities, an Interministerial Economic Commission met on October 2, 1984, to consider "Biotechnology from the Point of View of Intellectual Property Protection." One of the topics under this heading was the relations between patent protection and protection by new plant variety certificates; in that context views were exchanged on the legal treatment of new varieties embodying a patented gene. The Plant Variety Protection Service has announced that, in its opinion, the protection of such varieties falls exclusively within the purview of plant variety protection law. For his part, the representative of the Intellectual Property Service considered that exploitation of the varieties concerned could be made possible, where those varieties were the subject of new plant variety certificates, by the grant of licenses or compulsory licenses in respect of the patented gene.

	1977	1978	1979	1980	1981	1982	1983	1984**	total
Agricultural Crops									
Barley	-	17	1 15	2 2	2 2	8 2	4 8	4 4	38 33
Field Bean	- -		-	-	-		-	1 1	1 1
White Clover	-	-	-	1 1		-	-		1 1
Meadow Fescue	- -		-	2 2	1 -	-		-	3 2
Red Fescue	-	-	-	7 7	- -				7 7
Flax, Linseed	- -	- -	2 -	6 7	2 -		- 3		10 10
Нор	- -	-	- -	-	-		-	2 -	2 -
Smooth Stalked Meadow-grass	-	- -	- -	4 4	-	-	-	 -	4 4
Oat	-	10 -	2 11	- -	2 2	2 2	1	- 1	17 16
Potato	- -		-	33 29	- 3	- 1	4 -	1 2	38 35
Rye	- -	1 -	1 2	-	-	-	-		2 2
Hybrid Ryegrass	1 -	1 -	- 1	- 1	-	-	-	-	2 2
Italian Ryegrass		4 -	- 4	-	-	-		-	4 4
Perennial Ryegras s	1 -	6 -	3 7	3 -	- 1	1 2	-	1 -	15 10
Spelt	-	1 -	- 1	1 -	- 1	1 1			3 3
Turnip	-	- -	-	1 -	-	- -	- 1		1 1
Bread Wheat	1 -	20 1	4 20	3 4	2 2	4 2	1 4	6 6	41 39
Fruit Crops									
Apple		1 1	1 -	1 1	1 -	4 1	8 1		16 4
Cherry	-	-	-	-	-	-	1 -	-	1 -

USE MADE BY BREEDERS OF THE PLANT VARIETY PROTECTION SYSTEM IN BELGIUM*

* First line: applications filed; second line: titles of protection issued. ** Until September 30, 1984

	1977	1978	1979	1980	1981	1982	1983	1984**	total
Fruit Crops (Cont'd)									
Pear	-	-	-	-	-	-	2 -	-	2 -
Plum	- -	- -	-	1	- -	2 -	- -	-	3 1
Raspberry	- -	-	-	-	-	-	-	1 -	1 -
Strawberry	- -	8 8	2 -	- 2	3 -	1 -	4 5	- 1	18 16
Vegetables									
Cauliflower	-	-	-	-	1 -	- -	- 1	- -	1 1
French Bean	-	13 5	1 3	- 4	2 -	- -	- 1	- -	16 13
Lettuce	-	-	2 -	1 2	1 -	- 1	-		4 3
Реа	- -	17 6	2 7	- 2	- 2	2 -	1 -	-	22 18
Black Salsify	-	- -	-	2 1	- -	1 -	-	1 -	4 1
Ornamental Species									
Azalea	-	4 -	1 2	3 3	3 5	- 1	3 1	1 2	15 14
Bromeliaceae	- -	-	-	- -	-	2 -	1 -	-	3 -
Carnation	- -	- -	4 -	- 4	2 2		 _	-	6 6
Chrysanthemum	- -	-	- -	- -	- -	13 1	14 12	- 1	27 14
Freesia		-	- -	- -	- -	-	1 -	- 1	1 1
Rose	-	40 -	8 19	17 9	21 26	11 27	23 12	21 16	141 109
Forest Trees									
Poplar		13 -	- -	- 13	- -	- -	-	-	13 13
TOTAL	3 -	156 21	34 92	88 99	43 46	52 41	68 49	39 36	483 384

<u>Denmark</u>.- In the course of the past year, the committee entrusted with the revision of national legislation on plant variety protection has held two meetings and has mainly concerned itself with the organization of its work. It has set up a subcommittee responsible for considering the specific problems raised by vegetatively propagated plants, notably in the ornamental sector. The committee will also concern itself with the revision of the list of protected taxa. It should also be pointed out that it will take due account of the legislation of the other member States participating in the cooperation system, with a view to harmonizing, if possible, the new Danish legislation with that of those States.

As a result of cooperation in examination, specifically with the Federal Republic of Germany and still on an informal basis, crown of thorns (Euphorbia-Milii-Hybrids) was added to the list of protected taxa in February 1984. Negotiations have taken place since the last Council session between representatives of Denmark, France, the Federal Republic of Germany, the Netherlands and the United Kingdom with a view to the revision of the existing agreements and the conclusion of new ones. It is hoped that the negotiations will be completed in time for the new agreements to come into effect in 1985, and that the new Model Agreement submitted to this Council session will serve as the basis for those new agreements.

One hundred and fifty-six applications for protection, relating to 57 varieties of agricultural crops and 99 varieties of ornamental plants, were filed in 1983. A hundred and fifteen titles of protection were granted for 42 varieties of agricultural crops, two vegetable varieties, two fruit varieties and 69 ornamental varieties. Between January 1 and October 11, 1984, 121 applications for protection were filed and 74 titles of protection granted.

<u>France</u>.- In the course of the past year, two amendments have been made to national legislation:

(i) protection was extended recently to inbred lines of sorghum, and to thyme and triticale, while extension to brome, dieffenbachia and white lupin is under consideration;

(ii) examination fees were raised by a Ministerial Order dated August 9, 1984, to 2,250 French francs for important species and to 1,250 francs for garden or pot-grown ornamental plants, the fee payable for streamlined examination of mutants having been set at 750 French francs.

From a legal point of view, it should be mentioned that an appeal was filed against a decision rejecting an application for the protection of a maize line, handed down by the Committee for the Protection of New Plant Varieties and upheld by the Paris Court of Appeal. In simple terms, the decision relied on the fact that the sale of seed of a line to an establishment that produces and sells seed of hybrid varieties is liable to destroy the novelty of the line. Appeals seeking the annulment of a number of other rejection decisions invoking the same grounds, have also been filed, always for maize lines.

With regard to the interest shown by breeders in the plant variety protection system, detailed statistics are given in the table on page 14 below. From a technical point of view, it should be mentioned that no applicant has yet requested examination for a mutant, and that the first applications concerning F1 wheat hybrids were filed at the beginning of 1984.

Federal Republic of Germany.- Parliament has approved the 1978 Act of the Convention by a law dated August 28, 1984. However, the deposit of the corresponding instrument of ratification is still dependent on the alignment of national legislation on the Act. Draft legislation amending the Plant Variety Protection Law is at present before Parliament.

The list of protected taxa will shortly be enlarged by the inclusion of Brassica pekinensis (Lour.) Rupr. (Chinese cabbage), Iris L., Leptospermum scoparium J.R. and G. Forst. and Spathiphyllum Schott. Protection may perhaps also be extended to Sinningia Nees (gloxinia) and to ornamental forms of the Prunus genus.

Negotiations are in progress with a number of other member States with a view to improving cooperation in examination by centralizing examination for a greater number of species and by strengthening the system whereby the results of examinations already carried out by one or other of the States participating in the cooperation system are taken over.

As in previous years, the Federal Plant Varieties Office has organized visits to its testing installations with respect to species whose examination is centralized at that Office under cooperation schemes with certain member States. The visits provide the opportunity for discussing examination with

USE MADE BY BREEDERS OF THE PLANT VARIETY PROTECTION SYSTEM IN FRANCE

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Cumulative data as at the 31st of December of each year

Years	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Data												
Number of applications	608	739	855	1038	1311	1695	2075	2456	2910	3336	3834	4450
Number of withdrawals	-	14	46	80	138	. 174	232	326	415	536	671	821
Number of rejections	-	-	-	2	9	15	30	33	51	59	66	77
Number of certifi- cates issued	6	28	279	418	560	687	910	1036	1242	1696	2040	2217
Number of appli- cations examined	-	36	319	494	701	970	1266	1489	1802	2385	2871	3409
Number of certi- ficates expired or abandoned	0	5	26	26	53	80	122	194	279	405	481	629
Number of certi- ficates in force	6	27	274	392	513	607	788	842	963	1291	1559	1788

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the breeders directly concerned, both within the country and abroad. In the case of Begonia elatior, the UPOV Technical Working Party for Ornamental Plants and Forest Trees took part in the visit. Another opportunity for profitable discussions on the basis of actual cases visible in glasshouses or on open-air testing plots was provided by the General Assembly of CIOPORA, held on July 5 and 6, 1984, at the headquarters of the Federal Plant Varieties Office.

In the course of the year ending June 30, 1984, 771 applications for protection were filed (against 623 the previous year). Also, the five thousandth title of protection since the introduction of the system for the protection of new plant varieties (in 1953) was granted in July 1984.

<u>Hungary</u>.- The past year has been devoted mainly to informing the various interested circles on plant variety protection and on the advantages offered by UPOV. The Institute for Plant Production and Qualification has drawn up, for the benefit of Hungarian breeders and plant improvement institutes, an information document on the advantages of protection and on the procedure and examination associated with the protection of new plant varieties. Information meetings have also been organized jointly with the National Office of Inventions, in order to publicize the legal, administrative and technical aspects of protection.

The National Office of Inventions will shortly be publishing the General Introduction to the Test Guidelines (UPOV document TG/I/2) in an Annex to its Official Gazette. An article entitled "Obligations and Possibilities Arising From Accession to the UPOV Convention" has been published in the review of the Hungarian Association for Industrial Property Protection. Finally, a scientific committee has examined the Guidelines for Variety Denominations.

The above action, combined with Hungary's accession to the UPOV Convention, has aroused considerable interest in protection among the breeders working in plant improvement institutes. This interest has taken the form of requests for more detailed information, and a very marked increase in the number of patent applications filed: 20 applications have already been filed this year, 60% by Hungarians and 40% by foreigners, compared with previous average filings of four a year. For its part, the Institute for Plant Production and Qualification has examined a total of seven varieties in 1984 for the purposes of protection, namely four sunflower varieties, two lucerne varieties and one hybrid maize variety.

As for other patents, data concerning patents granted for plant varieties will be published in the Patent and Trademark Gazette, the official journal of the National Office of Inventions. However, from next year onwards, the Institute for Plant Production and Qualification will also be publishing the list of patented varieties in its list of varieties accepted for propagation.

At the international level, a communication was addressed to the meeting of the Presidents of Offices of Inventions of countries members of the Council for Mutual Economic Assistance (CMEA), held in Havana in December 1983, announcing Hungary's accession to the UPOV Convention and outlining the main characteristics of UPOV. This communication aroused great interest among the participants.

<u>Ireland</u>.- Regulations issued on May 31, 1984, extended protection to broad bean, cocksfoot, field pea, hybrid ryegrass, Italian ryegrass, rape and timothy.

In the course of the past year, 20 applications have been filed, bringing their total to 185, and 88 titles of protection granted (total 116, including nine subsequently abandoned).

<u>Israel</u>.- On April 12, 1984, Israel deposited its instrument of accession to the 1978 Act of the Convention, after having adapted its legislation to the Act and at the same time made some minor amendments. In view of past experience, however, there are still plans to undertake an overall review of the legislation. It is hoped that the review will not be as difficult to bring about as the recent amendment.

The extension of protection to three new taxa is planned.

An agreement on cooperation in examination is in the process of being concluded with South Africa. With regard to that cooperation, new difficulties have arisen, probably owing to differences in climatic conditions and more especially in light intensity: a lessening in the differences in the color of the flowers has made it necessary to undertake a further examination of the variety under local conditions.

Since last October, 53 titles of protection have been granted, including 44 for foreign varieties, ornamental with only one exception.

Japan. - There has been no amendment of legislation in the course of the past year. An extension of protection to new taxa is in preparation, however.

From a technical point of view, the drawing up of test guidelines is progressing steadily: 157 have already been adopted, eight will be by next March and 12 others are in preparation.

The JHS Color Chart has been put into practice and favorably received by examiners and breeders, owing to the fact that the names of the colors are clearly defined and that the presentation of the color chips is very practical for examination.

The project for the development of objective methods of determining characteristics such as fragrance and pungency has moved into its second year. Varieties of chili and tea have already been examined by gas chromatography, but the method has yet to be perfected before it is used as a routine test. The fragrance components of roses, grape vine and garlic are also being studied at present.

Netherlands. - The Netherlands deposited its instrument of acceptance of the 1978 Act of the Convention on August 2, 1984.

Last July, the study committee set up earlier by the National Board for Agricultural Research published its report on "Plant Breeders' Rights and Patent Rights in Relation to Plant Genetic Engineering." The committee was composed of experts from agricultural circles--both public-sector and private -sector--from the biochemical industry, from the universities and from industrial property, including the Patent Office. On the basis of Netherlands legislation, the committee endeavored to answer the question whether, through genetic engineering, patents could have a bearing on plant improvement and the use of varieties. In this connection it is very important that agricultural and industrial circles achieve mutual understanding; the principle of approaching jointly the problems raised by plant genetic engineering has moreover proved extremely useful, and this fact deserves to be stressed.

The committee concluded that, while both Netherlands and European patent legislation excluded the protection of plant varieties by means of industrial patents, protection of that type could be obtained by the patenting of a substance incorporated in the plants of one or more varieties. Apart from the eventuality of double protection, with the titles of protection being also capable of falling into different hands, the committee drew attention to the limitations that patents could impose on the use of the varieties concerned, those limitations being impossible under the protection system based on the UPOV Convention. In the light of those facts, the committee recommended examination of the possibility of amending the legislation to remove the limitations or of eliminating their absolute character. Finally, in view of the international aspect of the question, the committee also recommended that studies and perhaps also amendments be made at the international level.

With effect from April 1, 1984, protection has been extended to cacti with jointed stems, cotoneaster, spindle tree, busy lizzie, mahonia, sea holly and cinquefoil. Moreover, the protection previously granted to florist's chrysanthemum and carnation has been extended to the whole of the two genera concerned.

From a legal point of view, it should also be mentioned that the Board for Plant Breeders' Rights has referred 93 cases of alleged infringement to the judicial authorities.

In 1983, the Board for Plant Breeders' Rights received 695 applications and granted 299 titles of protection.

In the course of the past year, the Netherlands has continued its efforts towards intensifying international cooperation in examination. It is hoped that new bilateral agreements will shortly be concluded, even with States that have not taken part in the negotiations on the new Model Agreement.

<u>New Zealand</u>.- A Bill amending and consolidating the plant breeders' rights legislation was presented to Parliament on October 6, 1983, and referred to a select committee. The committee considered the Bill and also the contributions of a certain number of interested organizations. The proposed provisions on compulsory licenses caused considerable controversy, which resulted in the drafting of amendments, including the proposal to introduce a period of three years from the grant of the title of protection during which the compulsory licenses would be inoperative (called the "period of sole rights"). Another amendment would make it possible to issue a "compulsory sale order" instead of granting a compulsory license.

In June 1984, the select committee reported to Parliament and submitted the amended Bill. Unfortunately, Parliament was dissolved before it was able to consider the Bill, which, however, was reintroduced on September 21, a rare occurrence, as a private member's Bill by a member of the Opposition in the new Parliament.

The matter of the protection of biotechnology is a highly topical one in New Zealand. This year the request has been made for the plant variety protection system to be extended to microorganisms and especially to bacteria. The Plant Varieties Office has considered this request and replied that, while agreeing that it might indeed be more logical to protect microorganisms such as bacteria by a breeder's right rather than by a product patent, the fact of the Patent Office having announced that it was prepared to consider the possibility of protecting microorganisms by means of patents would prevent the Plant Varieties Office from acceding to the request, in view of the provisions of Article 2(2) of the Convention. There are good prospects of a solution being found to this particular question in further discussions between the parties concerned. There is however some reason to fear that the problem may become more and more complex and arduous, as has been indicated in the Symposium organized in conjunction with the present Council session.

The filing in New Zealand of two applications for protection for varieties of potato reproduced by sexual means aroused great interest among the other member States in earlier years. Neither of these two applications produced any result: one was withdrawn and the other declared lapsed by the Registrar.

With regard to the volume of activity of the Plant Varieties Office, statistics are to be found in the table on page 18 below.

South Africa.- The only change that has occurred in legislative terms since the last session of the Council is an increase in fees. The list of protected taxa has not been enlarged, but interest in the protection of ornamentals continues to grow.

It has not been possible to conclude any planned cooperation agreement in the course of the past year, in spite of the progress made. South Africa has nevertheless acquired two new examination reports on chrysanthemum from the United Kingdom authorities.

In the course of the year ending September 30, 1984, 50 applications for protection were received, in particular for 25 ornamental varieties and 10 varieties of deciduous fruit trees. In the course of the same year 19 titles were granted, 11 of them for roses.

Spain.- The work on the revision of national law and its adaptation to the 1978 Act of the Convention has progressed in the course of the past year, and a preliminary draft of an amended law has been submitted to the authorities. However, no amendment has been made to the law and regulations; in particular, the list of protected taxa is unchanged and still has 17 entries.

Between October 1983 and October 1984, 189 applications for protection were filed, bringing the total of applications to 1,152. The number of titles at present in force is 285.

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Applications Titles Titles in received issued force Crops, herbage 17 Barley ---Bean - soya _ 1 - tick 1 -1 1 Brassicas -4 1 Lentil -1 -Linseed -1 1 Lucerne 3 -Oats -1 2 14 Pea --Phacelia 1 1 1 Potato 3 2 1 Ryegrass -1 _ Sunflower _ 2 Triticale 2 -7 Wheat _ -9 Subtotal 6 57 Ornamental Plants Akeake (Dodonea viscosa) _ _ 1 Carnation 4 _ -Cherry - flowering 1 _ _ 1 1 Cypress _ 1 Kahikatea (Podocarpus dacry-_ diodes) Kowhai (Sophora microphylla) -1 1 Lemon - ornamental --1 Metrosideros (M. carminea) 1 -_ Orchids 2 2 13 31 Rose 115 20 35 Subtotal 121 Fruit Plants Apple 1 5 1 Cherry -1 Feijoa sellowiana _ 3 -Nectarine 3 _ -Peach 5 --_ Pepino (Solanum muricatum) _ 8 -Plum 1 1 3 3 Strawberry Tamarillo (Cyphomandra betacea) 1 _ -Subtotal 10 5 21 TOTAL 39 46 199

USE MADE BY BREEDERS OF THE PLANT VARIETY PROTECTION SYSTEM IN NEW ZEALAND

From October 1, 1983, to September 30, 1984

<u>Sweden</u>.- No amendment has been made to Swedish legislation since the last Council session.

In the course of the budgetary period that ended on June 30, 1984, 49 applications were filed and 31 certificates granted. On the same date, 187 titles were in force. Those titles relate, in broad terms, half to varieties of agricultural crops, mostly Swedish, and half to varieties of ornamental plants of foreign origin.

<u>Switzerland</u>.- At the 17th ordinary session of the Council, the Delegation of Switzerland reported on two questions: on one hand the effect of protection in relation to the propagation of a protected variety of a fruit plant for the propagator's own needs, and on the other hand the extension of protection to new taxa and the setting up of an examination center for four ornamental species.

On the first question, the Expert Committee on Plant Variety Protection held two meetings, and decided to propose to the Federal Council that Article 13(1) of the Law be amended so that the authorization of the owner of the protection would be required for the propagation of protected varieties for the purposes of commercial production of fruit, berries, ornamental plants or cut flowers. This proposal will shortly be subjected to internal and possibly also external examination.

The second question is still under consideration within the Plant Variety Protection Office. For the time being there are plans to extend protection to the 36 new taxa appearing in the list on pages 20 and 21 below.

United States of America.- As far as the Patent and Trademark Office is concerned, the main event of the past year has been the exoneration of plant patents, applicable to vegetatively propagated varieties, from the maintenance fees introduced earlier when the whole fee structure was revised. The search system for variety denominations is in the process of being introduced.

The past year has been normal with respect to the volume of work: two hundred and fifty-five patent applications were filed, comprising 154 by residents and 101 by non-residents, mainly from France, the Federal Republic of Germany, the Netherlands and Costa Rica. A hundred and ninety-seven patents were granted, comprising 140 to residents and 57 to non-residents, mainly from the Federal Republic of Germany, the United Kingdom, France and the Netherlands. Those patents relate most especially to roses, African violets, pears and chrysanthemums. 2,456 plant patents are in force at present.

As far as the Plant Variety Protection Office is concerned, 165 applications have been filed in the course of the past year (152 by residents and 13 by non-residents) and 118 certificates have been granted (108 to residents and 10 to non-residents). At the end of 1983, the number of titles in force was 1,191.

<u>United Kingdom.</u> Apart from the fee schedule, there has been no amendment of legislation in the course of the past year. In fact more importance has been attached to overcoming the ever-greater strains that were being felt in the field of examination, both for protection and for the national list of varieties passed for marketing, owing to the continuous increase in the number of applications, notably for cereals and some other species. Thought has also been given to the necessary revision of the present examination criteria and procedures, in order to take into account the development of plant improvement, and particularly the advent of Fl hybrid varieties of cereals produced with the aid of gametocides.

The activities described above have delayed the extension of protection to six new ornamental taxa, which was planned for 1984. It will probably now be achieved at the beginning of 1985. There are also plans to extend protection to mushrooms, and the Netherlands authorities have been consulted on the subject of the possibility of cooperative examination to be carried out by the Netherlands. In the meantime, it has been established that a patent application for a mushroom strain has been filed with the United Kingdom Patent Office. As the application has not yet been published, the details are as yet unknown. The Plant Variety Rights Office will obviously be following this case closely. LIST OF THE SPECIES WHOSE PROTECTION IS BEING CONSIDERED IN SWITZERLAND LISTE DES ESPECES DONT LA PROTECTION EST ENVISAGEE EN SUISSE LISTE DES ARTEN, DEREN SCHUTZFAEHIGKEIT IN DER SCHWEIZ EROERTERT WIRD

AGRICULTURAL CROPS / PLANTES AGRICOLES / LANDWIRTSCHAFTLICHE ARTEN

Latine	English	Français	Deutsch
Glycine max (L.) Merrill	Soya Bean, Soybean	Soja	Sojabohne
Medicago sativa L.	Alfalfa, Lucerne	Luzerne	Blaue Luzerne
Phleum L.	Timothy	Fléole	Lieschgras
Poa L.	Meadow-grass	Pâturin	Rispengras
Vicia faba L. var. minor Harz	Field Bean, Tick Bean	Féverole	Ackerbohne
VEGETABLES / PLANTES POTAGERES / GEMU	SEARTEN		
Latine	English	Français	Deutsch

Allium porrum L.	Leek	Poireau	Porree			
Apium graveolens L. var. rapaceum Gaud.	Celeriac	Céleri-rave	Knollensellerie			
Asparagus officinalis L.	Asparagus	Asperge	Spargel			
Beta wılgaris L. ssp. vılgaris var. flavescens DC. f. crispa	Mangel, Swiss Chard	Bette à côtes	Stielmangold			
Brassica oleracea L. convar. capitata L. var. capitata L. f. alba DC.	White Cabbage	Chou cabus	Weisskohl Wirsing			
Brassica oleracea L. convar. capitata L. var. sabauda L.	Savoy Cabbage	Chou de Milan	Wirsing			
Cichorium intybus L. var. foliosum Hegi	[Salad] Chicory	Chicorée amère	Salatzichorie			
Cucumis sativus L.	Cucumber, Gherkin	Concombre, Cornichon	Knollensellerie Spargel Stielmangold Weisskohl Wirsing Salatzichorie Gurke Rhabarber Dicke Bohne (Puffbohne) PLANTES FRUITIERES ISSer Ziersorten;			
Rheum L.	Rhubarb	Rhubarbe	Rhabarber			
Vicia faba L. var. major Harz	Broad Bean, Horse Bean	Fève	Dicke Bohne (Puffbohne)			
FRUIT CROPS (excluding ornamental v (variétés ornementales exclues; po einschliesslich Unterlagen)	varieties; includi orte-greffes inclus	ing rootstocks) / 5) / OBSTARTEN (a	PLANTES FRUITIERES ausser Ziersorten;			
Latine	English	Francais	Deutsch			

Cydonia Mill.	Quince	Cognassier	Quitte
Prunus armeniaca L.	Apricot	Abricotier	Aprikose
Prunus persica (L.) Batsch	Peach	Pêcher	Pfirsich
Pyrus L.	Pear	Poirier	Birne

ORNAMENTAL PLANTS / PLANTES ORNEMENTALES / ZIERPFLANZEN

Latine	English	Français	Deutsch
Anthurium Schott	Anthurium, Tail Flower	Anthurium	Flamingoblume
Calluna C. vulgaris (L.) Hull	Heather, Ling	Callune	Be se nhe i de
Cotoneaster (B. Ehrh.) Medik.	Cotoneaster	Cotoneaster	Cotoneaster
Chamaecyparis Spach	Chamaecyparis	Chamaecyparis	Scheinzypresse
Cyclamen L.*	Cyclamen	Cyclamen	Alpenveilchen
Delphinium L. partim	Perennial Delphinium	Pied d'alouette vivace	Ausdauernder Rittersporn
Erica gracilis Salisb.	Heath	Bruyère	Glockenheide
Fuchsia L.	Fuchsia	Fuchsia	Fuchsie
Impatiens-Neu-Guinea-Hybriden	New Guinea Impatiens	Impatiente de Nouvelle-Guinée	Neu-Guinea- Impatiens
Lilium L.	Lily	Lis	Lilie
Nephrolepis Schott	Sword-fern, Ladder Fern	Nephrolepis	Schwertfarn
Primula L.*	Auricula, Oxlip, Cowslip, Primrose	Primevère	Primel, Schlüsselblume
Rumohra adiantiformis	Rumohra	Rumohra	Lederfarn
Salvia L.	Sage	Sauge	Salbei
Sinningia Nees*	Gloxinia	Gloxinia	Gloxinie
Thuja L.	Thuya	Thuya	Lebensbaum
Viola L.*	Pansy	Pensée	Stiefmütterchen

In July of the current year, the Plant Varieties and Seeds Tribunal heard an appeal against the Controller's decision to reject the application for protection and the request for inclusion in the national list of the winter wheat variety 'Moulin,' on the grounds of insufficient homogeneity. The appeal was allowed, and protection was granted at the beginning of October. While the Tribunal did not question the general validity of the rules and the procedures observed by the official departments, it did criticize certain aspects, notably the identification of the origin of off-types and aberrant rows and their inclusion in the evaluation of homogeneity. It insisted that for certain varieties the origin of the off-types should be established with more certainty, and that, in essence, those should be discarded whose occurence was not the breeder's fault and which would be eliminated by him in the course of the maintenance of the variety. Examination rules and procedures are at present being reviewed in the light of the Tribunal's decision, in order to establish what amendments should be made to them.

b. Statements by the Representatives of Non-Member States

<u>Austria</u>.- The draft of a new law on the protection of plant varieties has been subjected to the approval procedure during the summer of the current year. On expiry of the time limit imposed for observations, in a few days' time, the draft will be given a final discussion, during which proposals for major amendments may yet be taken into account. The Federal Government will then present the draft to Parliament. This law, which will enable Austria to go ahead with its plan to accede to the UPOV Convention, is expected to be adopted by the National Council at its next session in the spring.

^{*} Vegetatively propagated varieties only / Variétés multipliées par voie végétative seulement / Nur vegetativ vermehrte Sorten

The entry into force of the plant breeders' rights law will, however, call for a revision of the laws now in force concerning plant improvement on the one hand and seeds on the other. The drafts of the amended laws were worked out recently and will shortly be put through the approval procedure. The field of varieties and seeds can thus be expected to be governed by up-to-date legislation as from next year.

<u>Norway</u>.- The position has remained practically unchanged during the last two years. Pursuant to agreements concluded between Norwegian seed traders and foreign breeders, the former have for some years already been paying a sort of royalty proportional to the quantity of seed marketed.

Further, an official system will be introduced in the near future, based on a 1983 addition to the Seed Law. This system will concern agricultural crops and will be practically identical to the one introduced in Finland in 1978.

<u>Poland</u>.- Poland plans--but this certainly does not need to be confirmed-to become a member of UPOV. In this connection it is essential that Poland provide itself with plant breeders' rights legislation. In the course of the past year new versions of the draft law covering the main aspects of plant production, and of its implementing regulations, have been drawn up. The work on this project has taken a great deal of time, not only on account of the sheer size of the field covered, but also because the Ministry of Agriculture and Food Economy has received a great many observations on the draft. It should be made clear that the observations did not refer to the part concerning plant variety protection, which was based on the principles written into the UPOV Convention. The draft is expected to be presented to the Council of Ministers at the beginning of 1985, and then to the Diet as a Government draft.

c. Statements by the Representatives of Organizations

European Communities (EC).- The European Communities are at present concerned with two problems relating to intellectual property in the plant field:

(i) the creation of a European/Community breeder's right within the framework of the UPOV Convention and in cooperation with UPOV;

(ii) the promotion of biotechnology within the Communities and--as an instrument of that promotion--the improvement of the conditions governing access to appropriate forms of protection for the results of work concerned with biotechnology.

For the details of the planned European/Community protection system, reference is made to paragraph 92 of document C/XVII/15. The observations made so far by the Member States of the Communities and by the professional organizations set up at European Community level have encouraged the Commission to continue with its initiative. At present the Commission is organizing work on the writing of a preliminary draft, which will also reply to the great number of questions that have been asked and to the observations that have been made during the consultation procedure.

With regard to the second problem, the Commission has heard industrial circles and also, recently, Member States. At present it is dealing with the conclusions that should be drawn from these exchanges.

In the course of the past year, the Commission has taken steps to work out a common position for Member States of the European Communities in relation to the Resolution adopted by the FAO in 1983, containing an "International Undertaking on Plant Genetic Resources." The Member States of the European Communities are expected to accept the Resolution subject to a limitation concerning what it has become usual to call "breeding material," and also subject to a series of clarifications regarding the legal scope of certain rules specified in the Resolution.

United Nations Food and Agriculture Organization (FAO).- The FAO is keeping a permanent watch on plant variety protection in view of the bearing that it has on the creation of varieties and their use. However, in view of the complexity of the guestion, the FAO has not yet taken a position.

Membership of the Union (as at May 1, 1985)

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		Dat	te of Entry int	o Force o	f*:	
State	Convention of	1961	Additional Ac	t of 1972	Geneva Act of	1978
Belgium	December 5,	1976	February ll	, 1977	-	
Canada**	-		-		-	
Denmark	October 6,	1968	February ll	, 1977	November 8,	1981
France	October 3,	1971	February 11	, 1977	March 17,	1983
Germany (Federal Republic of)	August 10,	1968	February 11	, 1977	-	
Hungary	-		· –		April 16,	1983
Ireland	-		-		November 8,	1981
Israel	December 12,	1979	December 12	, 1979	May 12,	1984
Italy	July 1,	1977	July 1,	1977	-	
Japan	-		-		September 3,	1982
Mexico**	-		-		_	
Netherlands	August 10,	1968	February 11	, 1977	September 2,	1984
New Zealand	-		-		November 8,	1981
South Africa	November 6,	1977	November 6,	1977	November 8,	1981
Spain	May 18,	1980	May 18,	1980	-	
Sweden	December 17,	1971	February 11	, 1977	January l,	1983
Switzerland	July 10,	1977	July 10,	1977	November 8,	1981
United Kingdom	August 10,	1968	July 31,	1980	September 24,	1983
United States of America	-		-		November 8,	1981
Total (17 member States)	12		12		13	

* Full titles: <u>Convention of 1961</u>: International Convention for the Protection of New Varieties of Plants of December 2, 1961; <u>Additional Act of 1972</u>: Additional Act of November 10, 1972, Amending the International Convention for the Protection of New Varieties of Plants; <u>Geneva Act of 1978</u>: 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.

** Not yet a member State of UPOV. <u>Canada</u> signed the Geneva Act of 1978 on October 31, 1978, and Mexico on July 25, 1979.

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STATISTICS ON THE PROTECTION OF PLANT VARIETIES IN 1982*

Chart I

Applications Filed and Titles of Protection (Special Titles, Patents, Inventors' Certificates) Issued in 1982; Titles Having Ceased to be in Force in 1982; Titles in Force on December 31, 1982

	Applica	ations fi	iled by	Title	es issued	d to	Titles having ceased to be	Titles in force on
	Resi- dents	Non- resi- dents	Total	Resi- dents	Non- resi- dents	Total	in force in 1982	December 31, 1981
Argentina	20	2	22	4	12	16	-	18
Austria	65	-	65	25	-	25	12	200
Belgium	15	40	55	3	41	44	37	286
Bulgaria	37	-	· 37	40	-	40	-	-
Chile	15	7	22	3	10	13	-	63
Denmark	27	102	129	21	42	63	44	500
France	325	173	498	293	51	344	76	1559
Germany (Fed. Rep. of)	416	231	647	184	73	257	425	2122
Hungary	-	-	-	-	-	-	-	31
Ireland	12	117	129	8	8	16	-	16
Isræl	57	45	102	10	1	11	8	123
Italy	66	57	123	46	5	51	-	51
Japan	226	-	226	129	-	129	1	322
Netherlands	599	192	791	259	88	347	236	2108
New Zealand	45	1	46	40	-	40	6	145
Romania	15	-	15	9	-	9	-	85
South Africa	21	17	38	10	11	21	6	137
Soviet Union	-	-	· _	253	-	253	-	3378
Spain	81	101	182	22	89	111	-	217
Sweden	21	35	56	14	8	22	26	149
Switzerland	13	22	35	1	34	35	-	81
United Kingdom	149	286	435	70	92	162	120	1076
United States	165	21	186	156	18	174	-	1078
of America ¹ •	151	37	188	135	38	173	120	2373
Zimbabwe	3	-	3	5	-	5	-	30

* Established on the basis of information supplied by the competent authorities of the various States. For the statistics of preceding years, see <u>UPOV Newsletter</u> Nos. 6, 12, 21 and 26 and <u>Plant Variety Protection</u> No. 37 and No. 42.

¹ The figures above the dotted line refer to sexually reproduced varieties, protected under the Plant Variety Protection Act. The figures below the dotted line refer to asexually reproduced varieties, protected under the Patent Act.

Chart II

Applications Filed and Titles of Protection Issued to Non-Residents in 1982, Broken Down by Country of Origin

Country of origin Reporting country	Belgium	Denmark	France	German Democratic Republic	Germany (Federal Republic of)	Ireland	Italy	Japan	Ne the rlands	New Zealand	Sweden	Switzerland	United Kingdom	United States of America	Others*	Total
Argentina	-	-	- -		-					-				2 12	-	2 12
Belgium			17 22	-	5 5				8 9				7 2	3 3	-	40 41
Chile		-		-	-			-	7 10					-	-	7 10
Denmark		-	9		47 17				26 7		13 8	3 6	4 4	-	• •	102 42
France	-	4		-	68 26	-	30 -	-	59 20	-	-	-	- 2	11 2	1 1	173 51
Germany (Fed. Rep. of)	2 -	9 3	62 24	3 -	-	- 	3 ∸	-	127 40	-	10 2	-	12 4	3 -	-	231 73
Ireland	2 -	6 -	4 -	-	4 2	-		-	75 -	-	2 -	-	24 6	-	-	117 8
Israel	1 -		5 -		10 -	-		-	27 1		-		1 -	1 -	-	45 1
Italy	-		33 4	-	7 1	-	-	-	3			-	8-	6 -	-	57 5
Netherlands	5 2	10 2	28 26	1 1	90 32	-	7	-	-	3 -	1 2	7	10 11	29 11	1 -	192 88
New Zealand	-	-	-	-	-	-	-	-	-	-	-	-	-	1 -	-	1 -
South Africa	-	-	4 6	-	1 -	-	-	-	2	2 -	-	-	-	5 3	3 1	17 11
Spain	1 1	-	46 65	 -	7 -	2 -	16 16	-	17 6	-	3 -	-	7 1	1 -	1 -	101 89
Sweden	-	-	7	-	22 6	-	-	-	4 -	-	-	-	2	-	-	35 8
Switzerland	-	-	7	-	13 17	-		-		-	-	-	-	-	-	22 34
United Kingdom	7 -	2	38 15	-	70 16	1	-	4	36	4 6	6 3	-	-	29 13	6	286 92
United States of America ¹	- -	-	-	1 _	- -	1 -	-	- -	16 15	- -	_ _ 	-	3	- -	- -	21 18
	-	4	3 5	-	8 16	-	1 -	1 -	- 7	1 -	1 -	5 2	7 2	-	6 2	37 38

General remark: For each reporting country, the first line of figures refers to applications and the second line to the titles of protection issued.

¹ See footnote 1 to Chart I.

* Detail (the figure before the slash refers to applications and the figure after the slash to the titles of protection issued):

Finland 2/-

Poland 3/-

United Kingdom: Canada 1/-

France: Bulgaria l/-Spain: Israel l/-Israel -/l Netherlands: Canada 1/-South Africa: Greece 1/-Spain 2/-Zimbabwe -/1

United States of America: Australia 1/-Canada 1/l Costa Rica -/1

Nicaragua 4/-

STATISTICS ON THE PROTECTION OF PLANT VARIETIES IN 1983*

Chart I

Applications Filed and Titles of Protection (Special Titles, Patents, Inventors' Certificates) Issued in 1983; Titles Having Ceased to be in Force in 1983; Titles in Force on December 31, 1983

	Applic	ations f	iled by	Title	es issue	d to	Titles having ceased to be	Titles in force on
	Resi- dents	Non- resi- dents	Total	Resi- dents	Non- resi- dents	Total	in force in 1983	December 31, 1983
Argentina	21	8	29	26	2	28	-	46
Austria	59	-	59	25	-	25	12	213
Belgium	23	47	70	5	46	51	63	274
Bulgaria	35	-	35	24	-	24	-	-
Chile	17	-	17	17	-	17	22	58
Denmark	46	110	156	25 ·	86	111	55	556
France	417	199	616	271	106	377	148	1788
Germany (Fed. Rep. of)	485	21 5	700	244	87	331	175	2278
Hungary	-	1	1	3	-	3	-	34
Ireland	-	16	16	4	8	12	2	26
Israel	24	82	106	8	6	14	19	118
Japan	315	34	349	183	-	183	1	504
Netherlands	455	240	695	203	96	299	261	2146
New Zealand	59	2	61	24	1	25	9	161
Romania	39	-	39	10	-	10	-	95
South Africa	16	25	41	13	18	31	2	166
Soviet Union	-	-	-	209	-	209	-	3587
Spain	92	123	215	27	67	94	25	286
Sweden	22	48	70	11	21	32	17	164
Switzerland	10	37	47	2	8	10	-	91
United Kingdom	221	201	422	98	112	210	128	1158
United States	152	13	165	108	10	118	5	1191
of America ¹ .	154	101	255	140	57	197	114	2456

* Established on the basis of information supplied by the competent authorities of the various States. For the statistics of preceding years, see <u>UPOV Newsletter</u> Nos. 6, 12, 21 and 26 and <u>Plant Variety Protection</u> No. 37 and No. 42.

¹ The figures above the dotted line refer to sexually reproduced varieties, protected under the Plant Variety Protection Act. The figures below the dotted line refer to asexually reproduced varieties, protected under the Patent Act.

Chart II

		-							A STREET, STRE	the second s	-			1	1	2
Country of origin Reporting country	elgium	enmark	rance	erman Democratic epublic	ermany (Federal epublic of)	reland	taly	apan	e the rlands	ew Zealand	we de n	witzerland	nited ingdom	Inited States of America)the rs*	otal
	Å	Â	<u>fi</u>	0 2	0 2	н	н	<u> </u>	Ż	Ż	S	s l		5 0		H
Argentina	-	-	-	-							-			8 2	-	8 2
Belgium	-		14 21	-	10 6		1 -		21 15	1 -	- -	-		-	- 4	47 46
Denmark	-	-	3 19	3-	53 39				28 15	-	8 7	5 1	8 4	1 -	1 1	110 86
France	2 -	1 2	-	-	38 36	-	39 26	1 -	74 35	-		7		37 -	- 7	199 106
Germany (Fed. Rep. of)	1	11 2	38 20	5 1	-	-	9 -		117 57	-	10 2	- 1	22 3	2 -	-	215 87
Hungary	-	-	-		-	-	-		=	-	-	-	-	1 -	-	1 -
Ireland	-	-	2	-	- 2			-	7	-	1 -	-	6	-	-	16 8
Isræl	3	-	12 1	-	24 3		5 -	-	31 2		1 -		2	4	- -	82 6
Japan	-	-	23	-	-			-	10	-	-	-		-	1 -	34 -
Netherlands	4	8 5	49 21	3	78 46	-	10	-		-	2 -	- 4	21 11	27 8	38 1	240 96
New Zealand	-	-	-	-	-	-	-	-	-	-			-	- 1	2 -	2 1
South Africa	-	1 1			7 8	-	- 2	2	6 4	-	-			6 3	3 -	25 18
Spain	- 1	-	39 36	-	31 14	- 1	9 1	1 -	30 7	-	5 3	-	5 4	3		123 67
Sweden	-	2 -	2 4	1 -	24 14	- -	-	-	17 3	-	-	-	-	2 -		48 21
Switzerland		-	72	-	19 6	-	1 -	-	7	-	_	-	-	1 -	2 -	37 8
United Kingdom	5	9	36	4	38 21	1	-	-	64 46	10 2	10 2	-	-	16 9	8	201
United States	-			-	2	1		2	6	-	1		1 2		-	13 10
of America ¹		3 2	19 7	3 3	26 20	- - -	2 -	 1	24 6	••••• 6 3	- -	- - -	3 14	-	15 1	 101 57

Applications Filed and Titles of Protection Issued to Non-Residents in 1983, Broken Down by Country of Origin

<u>General remark</u>: For each reporting country, the first line of figures refers to applications and the second line to the titles of protection issued.
¹ See footnote 1 to Chart I.
* Detail (the figure before the slash refers to applications and the figure after the slash to the titles of protection issued):
South Marian. Graph 2/2

South Africa: Greece 2/-Belgium: Greece -/4 Denmark: Poland 1/1 Zimbabwe 1/-Switzerland: Poland 2/-France: Greece -/7 Germany (Fed. Rep. of): Brazil -/1 Japan: Brazil 1/-United Kingdom: Austria 3/-Canada 1/-Netherlands: Canada 3/-Czechoslovakia 4/-Soviet Union -/1 Israel 9/0 United States of America: Canada 2/1 Netherlands Antilles 25/-Poland 1/-Costa Rica 11/-Israel 1/-South Africa -/1South Africa 1/-

GENERAL STUDIES

Biological Problems in Meeting D.U.S. Standards for Plant Variety Rights Registration*

J. Smartt**

In recent decades the activities of plant breeders have been greatly stimulated by the establishment of Plant Variety Rights and considerable breeding successes have been achieved. These successes have however carried penalties and plant breeders are now faced with greater difficulties than hitherto in meeting D.U.S.¹ standards. The plant breeder himself is perhaps more concerned with circumventing these difficulties than in analysing them. Professionally it would be undesirable for him to publicise his problems as this could be construed as a reflection on his competence. There is thus scope for an interested and concerned observer to attempt an objective analysis of these problems, since it would not be open to this type of misunderstanding and it might actually do some good.

As different problems arise in meeting standards for distinctness, uniformity and stability, these need to be considered individually before broader, general conclusions are drawn.

Distinctness

It is entirely appropriate for registration authorities to insist that new cultivars must be recognizably distinct form existing cultivars before registration can be considered. It is obviously also desirable that such distinctions can be made without undue difficulty. It is possible that the difficulty of establishing distinctness might be such that it could be quite impracticable to attempt to do so. This could mean that some means of establishing distinctness are acceptable and others not, on purely practical grounds.

Distinctness is most readily achieved when the characters conferring this are under the control of few genes (i.e. oligogenic), are highly heritable and produce marked morphological or other discontinuities. It is much less readily achieved when characters are under polygenic control and heritability is relatively low. This situation is well illustrated by resistance to certain rust species in cereals. Until quite recently the favored strategy was to use racespecific resistance in breeding, which is under simple genetic control. These genes conferred a very high grade resistance but this broke down, with the emergence of new rust biotypes, with disastrous effects on yield. Attention was then increasingly focussed on race non-specific resistance which, while less effective than the race specific form was much more durable. Different types of non-specific resistance can be additive in their effects. It may therefore be possible to accumulate a level of race non-specific resistance genetic control would be much more complex. It is possible also that comparable to that conferred by a single race specific resistance gene, however its genetic means. Whereas it may be relatively easy to characterize a cultivar carrying race specific resistance (the biotypes to which it is known to be resistant can simply be listed), it may not be easy to distinguish between two similar cultivars showing similar levels of race non-specific resistance, even though these may be controlled by different genetic loci. We can see therefore how a change such as this in breeding strategy can make it more difficult to demonstrate distinctness between cultivars.

Other recent trends in the development and exploitation of cultivars have increased the difficulty of establishing distinctness satisfactorily. In the aftermath of World War II there was a marked change in the United Kingdom for example in the matter of cultivar development. The farming industry accepted much more readily cultivars developed in other countries. A notable example of this is the phenomenal success of the French wheat Cappelle Desprez in the

1 Distinctness, uniformity (or homogeneity) and stability.

^{*} The paper was read at Cambridge on September 18, 1984, at a Plant Variety Rights Conference organized by the Faculty of Law of the University of Southampton.

^{**} Department of Biology, University of Southampton (United Kingdom).

fifties and sixties over much of the United Kingdom. The range of cultivars in production has of late tended to become narrower and in many respects these came to resemble each other more closely in morphology and commercial quality. With increased mechanization of all stages of growing and processing of crops, rather little variation in morphological and commercial characters can in fact be tolerated. Millers and others would be most reluctant to accept wide and erratic variation in quality resulting from changes in cultivars. Highly standardized cultivars are therefore in demand which conform to the specifications of both producers and processors.

This tendency has been reinforced by the increasing tendency of breeders to define the phenotypes of the cultivars they hope to produce by breeding and selection. In a sense they are working towards an ideal type or 'ideotype' which can be regarded as a biological blueprint. It is theoretically possible that several selections produced by different breeders could conform very closely to the ideotype yet genetically be far from identical. It might be difficult to distinguish them without using detailed biochemical differences. This situation is well known to population ecological geneticists: identical morphological phenotypes established by (natural) selection in populations can be shown to be genetically quite different by biochemical tests. This phenomenon is sometimes called genetic homeostasis. In cultivated plants too selection, even from genetically rather different populations, could produce close conformity to a standard. This would increase the difficulty of distinguishing new cultivars selected towards the same ideal. In practice however, since there is no kind of restriction on the use of registered cultivars as parents of crosses, it is highly probable that different breeders will tend to use the same or very similar parents in their crosses and by selection towards the same goals produce perhaps indistinguishable products. In human populations we have two types of 'look-alikes': totally unrelated individuals with an extraordinary resemblance to each other and identical twins whose resemblance arises from their genetic identity. Ideotype breeding initially could produce cultivars which are essentially doubles but subsequently tend to produce the equivalent of identical twins.

This problem arises out of the success that plant breeders have had in progressing towards their goals. The situation can be represented diagrammatically: Figure 1 represents the state of affairs when breeding programmes were relatively local enterprises with locally determined selection criteria while Figure 2 seeks to represent the current situation in which breeding efforts are towards very specific and well defined common objectives, i.e. towards a standard ideotype. In the former situation the demonstration of distinctness would not be expected to become more difficult with time. In the latter, progress towards an ideotype achieved by different breeders would tend to produce strong convergence in morphological and biochemical features, to the extent that eventually products of different breeders might become excessively difficult if not impossible to distinguish. The first breeder to register a cultivar conforming to an ideotype is accepted.

This problem then can be expected to get worse as breeding progresses towards the current ideal types. What can the breeder do? It is possible that selectively neutral characters could be introduced which might confer a level of distinctness sufficient to satisfy the plant variety registration authorities. There is also the question of minimum distances between cultivars. If the trends discussed continue, a point will be reached when distinctions can no longer be made reliably, minimum distances will thus have to be established which can be gauged satisfactorily and without excessive difficulty.

Uniformity (Homogeneity)

It might well be expected that if distinctness is difficult to achieve, then uniformity would be easy. This is not so and the difficulties encountered in achieving uniformity are complex. Just as distinctness is most readily achieved when a character difference is under simple genetic control so also may uniformity. Reverting to the earlier example of race-specific versus race non-specific resistance, the former can be categorized in terms of the biotype (or biotypes) against which the gene (or genes) is effective; in the latter this would have to be in terms of host reaction which is more subject to environmental influences. Uniformity would thus have to be defined in terms of an acceptable range rather than very close conformity to a clear-cut character state. Perhaps the greatest problem in achieving uniformity or homogeneity arises from the fact that most cultivars do not consist of a single genotype. Cultivars usually consist of a blend of the best selections that have arisen from a particular set of parents in a cross. These are selected to the same standard of commercial and agronomic quality but are not genetically identical. As a result they may show an unacceptably wide range of morphological variation. It is strongly felt by many plant breeders that complete genetic uniformity in a cultivar is undesirable. Some genetic variability is thought to buffer against variation in growing season conditions from year to year and help maintain stable yield levels.

Other breeding strategies such as the production of multiline and synthetic varieties are open to even greater objection in producing essentially nonuniform material. Synthetic varieties have been developed in out-pollinating crops. These are blends of different genotypes of broad compatibility most suitable for production in the developing world where climatic variation between successive growing seasons may be considerable. The supposition is that in the mixture different components may be favored in different seasons and those favored will tend to compensate for those less favored in any one season. The multiline strategy is based on the observation that race specific resistance is more durable when populations are not uniform genetically for the resistance genes they carry. The components of multiline varieties are virtually isogenic, apart from their resistance genes. Presumably it would be possible to patent or register each individual component. Breeders in Europe have been slower to adopt the multiline strategy of using blends of selected cultivars with compatible agronomic and commercial characters. This strategy of employing deliberately controlled mixtures of genotypes, whether of multilines or cultivars, has much to recommend it. It appears to be an effective and ingenious strategy for disease management and for the exploitation of germplasm resources for this purpose, which tends to stabilize yield levels and avoids "boom or bust" cycles in cereal production.

Another difficulty which can arise in achieving a satisfactory degree of uniformity is phenotypic plasticity. The most notorious but probably not unique example of this is the Hydrangea which, depending on soil pH and mineral status may produce either pink or blue flowers or even a mixture of colors on the same plant. Obviously, when Plant Variety Rights are granted, the biological behavior of the species must be well understood and grants of such rights made on material which has been grown under standardized conditions. Just as it is clearly possible that plants which are genetically different can look alike, it is equally possible that genetically identical plants produced under different environmental conditions may look very different.

The breeding system of a species can determine the level of uniformity which can be achieved in practice. In self-pollinators high levels of genetic and morphological uniformity are possible. In obligate out-pollinators and random-pollinators the only way to achieve comparable levels of genetic uniformity is to produce inbred lines and from them Fl hybrids. The normal openpollinated varieties will genetically be much more variable, less uniform and less homogeneous. Thus, within a single crop species, a double-standard of uniformity may have to be tolerated, stringent for Fl hybrids and rather more lax for open-pollinated varieties.

The requirement for a high standard of uniformity can be interpreted as being a potential if not actual impediment to the development and exploitation of sophisticated or advanced plant breeding strategies, such as multiline production. Obviously registration of a multiline raises difficulties. If each component has to be registered separately, the procedure becomes cumbersome. If on the other hand one component of a multiline is changed, does the whole registration procedure have to be repeated? Any registration system which succeeded in reconciling the plant breeders' disposition to avoid extreme uniformity in the disease resistance genetic profile, and the Plant Variety Rights officials' understandable desire to establish the highest practicable levels of uniformity, could be very complex. It would nevertheless be worthwhile to see whether a satisfactory formula could be found. Flexible thinking is obviously demanded of legislators and administrators in order to cope with advances in plant breeding methodology and in the changing nature of its products. The legislators and legal drafsmen have a very difficult task to maintain effective protection on the one hand and not to stifle innovation on the other. A further point which can be made regarding protection is that the need for it is not uniform. The hybrid corn breeder has coped well and profitably without it. Unless his inbred lines are stolen, he is the only one able to produce his Fl hybrids. His operation has a high level of in-built economic protection. The producer of Fl hybrid Brassicas is not in such a happy position. He may be unable to prevent all self-fertilization of his inbreds when making his hybrids, and may actually dispose of a very small, but not insignificant, admixture of inbreds with his Fl hybrids. Obviously such breeders do require protection.

Stability

Plant breeding can be regarded as a means of destabilizing populations followed by an effort to restabilize them. However, stability may not be easy to re-establish after some breeding techniques have been used, for example mutation breeding with ionizing radiations. It is possible that gene mutations might be induced which markedly increased mutation rates at other genetic loci and could thus have an adverse effect on the stability of the genotype. This could be of importance in seed propagated species. In vegetatively propagated species subjected to a mutation breeding programme, chromosome structural changes such as deletions might be induced. There is the possibility that breakage - fusion - bridge cycles could be initiated and if these involved two or more chromosome pairs, then stability might never be re-established.

Another type of instability to be noted is that of chromosome number in polyploids. High-level polyploids in the Graminae can lose chromosomes to produce aneuploids. These are recognizably distinct from their parents and may be both viable and fertile. In the hyacinth, viable aneuploids have arisen at about the triploid and tetraploid levels. These have been selected primarily for their striking flower colors and have been propagated vegetatively with success subsequently. The production of aneuploids <u>de novo</u> can be a problem in hexaploids such as wheat and in artificially produced polyploid hybrids such as <u>Triticale</u>. Strictly homologous chromosome pairing, which ensures stability of a polyploid chromosome complement, is under genetic control. Since this is not an easy character to select for, it is possible that some otherwise desirable genotypes may have unduly high frequencies of homeologous pairing and thus intrinsically unstable chromosome numbers. This is of obvious importance and highly undesirable in a crop reproducing by seed such as wheat (or Triticale). In vegetatively propagated crops such as the highly polyploid sugarcane, it may however be advantageous. The major clones of sugarcane vary appreciably in chromosome number; this number is maintained under vegetative propagation but widely varying chromosome complements can arise in breeding programmes and give wide scope for selection.

The name of Barbara McClintock is associated with many aspects of maize genetics and cytogenetics. Not the least interesting of these are mutator genes (already considered), which enhance mutation rates at other loci, and transposable elements or wandering genes, which can affect gene expression according to their point of integration in the genome. An instance in my own experience which can be explained plausibly by movement of transposable elements is variation in testa color of the Bolivian landrace 'maní pintado'. Two forms exist, one self-colored red and the other variegated red and white. I have been able to select for each type in populations of the other. Traditional genetical analysis suggests a single locus effect with incomplete dominance, but does not explain the comparative ease with which each form can produce the other. The transposable element hypothesis could be put to a critical test, but this is the kind of thing that practical plant breeders would be unlikely to attempt.

It is quite clear that as a consequence of Barbara McClintock's work, geneticists and plant breeders are now having to recognize and come to terms with a much wider range of factors which can influence genetic stability. It would seem that in the past biologists have tended to underestimate the capacity of living organisms to generate variability in what otherwise might be expected to be very stable and uniform populations. This is a useful property for populations under natural selection. It is a very considerable nuisance to the breeder who needs the highest degree of genetic stability he can achieve once he has selected his optimal genotypes.

Conclusions

This brief and necessarily incomplete survey reviews the probable effects of some well-known and well understood genetic mechanisms which can produce difficulties for the plant breeder in meeting D.U.S. standards. Awareness of such problems and their possible causes may enable breeders to identify them and act accordingly. Some problems may be soluble but if not, then the plant breeder can cut his losses and invest his effort elsewhere. Another possibility that must be considered also, is that for highly selected crops some kind of selection end-point is being approached. This could be so for yield in cereals; with yields of some 8 tonnes per hectare we could be approaching this.

The attributes demanded in Plant Variety Rights registration for distinctness and stability are entirely reasonable, easily justifiable, and the operation of standards is open to no serious objection in principle. In practice, matters are of course by no means straightforward. The question of uniformity or homogeneity is much more difficult and contentious and perhaps the plant breeder has some grounds for unease. This chiefly focusses on the apparent lack of flexibility, as he sees it, in the approach of the various registration bodies to advances in methodology and the broader range of its output other than conventional cultivars. It is of course for the latter that our existing regulations and guidelines have been framed. It is to be hoped that in future progress and developments in plant breeding methodology can be matched by comparable achievements in the framing of satisfactory regulations.



PUBLICATIONS BY THE OFFICE OF THE UNION

Test Guidelines

Guidelines for the Conduct of Tests for Distinctness, Homogeneity and Stability (Test Guidelines) have been published by the Office of the Union in a trilingual--English, French and German--edition for the following species:

Document	English	Français	Deutsch	Latine
TG/8/4*	Broad Bean, Field Bean	Fève, Féverole	Dicke Bohne, Ackerbohne	Vicia faba L.
TG/22/6*	Strawberry	Fraisier	Erdbeere	Fragaria L.
TG/27/6*	Freesia (vegetati- vely propagated varieties)	Freesia (variétés à multiplication végétative)	Freesie (vegetativ vermehrte Sorten)	Freesia Eckl. ex Klatt
TG/31/6*	Cocksfoot	Dactyle	Knaulgras	Dactylis glomerata L.
TG/34/6*	Timothy	Fléole	Lieschgrass	Phleum pratense L. et Phleum bertolonii DC.

* Revised edition / Edition révisée / Neu bearbeitete Auflage.

TG/39/6*	Meadow Fescue, Tall Fescue	Fétuque des prés, Fétuque élevée	Wiesen-, Rohr- schwingel	Festuca pratensis Huds. et Festuca arundinacea Schreb.
TG/89/3	Swede	Chou-navet	Kohlnïbe	Brassica napus L. var. napobrassica (L.) Rchb.
TG/90/3	Curly Kale	Chou frisé	Grünkohl	Brassica oleracea L. var. sabellica L.
TG/91/ 3	Crown of Thorns	Epine du Christ	Christusdorn	Euphorbia milii Desmoulins et hybridae
T G/92/3	Persimmon (fruit varieties only)	Kaki (variétés fruitières seule- ment)	Kaki (nur Obst- sorten	Diospyros kaki L.

* Revised edition / Edition révisée / Neu bearbeitete Auflage.

MEMBER STATES

Belgium: Amendment of the Decree on the Protection of New Plant Varieties

By virtue of the Royal Decree of December 20, 1984 (<u>Moniteur belge</u> -<u>Belgisch Staatsblad</u> of February 21, 1985, pages 1953 to 1956), Amending the Royal Decree of July 22, 1977, on the Protection of New Plant Varieties, the provisions regarding variety denominations were amended with effect from February 22, 1985, and adapted to the UPOV Recommendations on Variety Denominations adopted by the UPOV Council at its eighteenth ordinary session held from October 17 to 19, 1985.

Spain: Modification of Fees

Under Article 67(8) of the Law No. 50/1984 of December 30, 1984, Concerning the General Budgets (<u>Boletin Oficial del Estado</u> of December 31, 1984), a new tariff of plant variety protection fees was laid down with effect from January 1, 1985. The main fees are now as follows (in pesetas).

Type of Fee	Group	1	2	3	4
1. Application fee		8,250	8,250	8,250	8,250
2. Examination fee (per year)		19,250	19,250	13,750	11,000
3. Grant fee		8,250	8,250	8,250	8,250
4. Maintenance fee					
- first year		6,875	4,125	2,750	2,750
- second year		9,625	6,875	5,500	4,125
- third year		13,750	11,000	8,250	6,875
- fourth year		16,500	13,750	11,000	8,250
- fifth and subsequent years		19,250	16,500	13,750	11,000

<u>Group 1</u>: cereals, oil seeds, lucerne, cotton, sugar and fodder beet, vetch, potato, pea, broad bean and French bean.

Group 2: fruit trees, rose, carnation and strawberry.

Group 3: lettuce, tomato, onion, melon, sainfoin, red and white clover. Group 4: all other species.

STATISTICS ON COOPERATION IN EXAMINATION (period from July 1, 1983, to June 30, 1984)

Belgium BE Belgique Belgien	<u>1s</u> 2n 3r	<pre>lst line: reports requested by States hereunder 2nd line: requests withdrawn 3rd line: final reports transmitted to States hereunder</pre>											total		
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA		for period	since beginning	
Triticum aestivum L. emend. Fiori et Paol. (Soft Wheat/Blé tendre/Weichweizen)		- - -	- - -	-	- - -		1 0 0	- -		-	. = - -		1 0 0	1 0 0	
<u>Total/Gesamtzahl</u>		- - -	- - -	- - -	-	- - -	1 0 · 0	- - -	-	-	- - -		1 0 0	1 0 0	

STATISTIQUES SUR LA COOPERATION EN MATIERE D'EXAMEN (période du ler juillet 1983 au 30 juin 1984)

Switzerland CH Suisse Schweiz	<u>1è</u> <u>2e</u> <u>3e</u>	re lig ligne ligne	ne:r :dem :rap	apport andes ports	s dema retiré finals	ndés p es trans	ar les mis au	Etats	s ci-de	essous Nessous	3	tot	tal depuis
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	la période	le début
Foeniculum vulgare P. Mill. (Fennel/ Fenouil/Fenchel)			- - -	- - -	2 0 0	- - -		- - -	-		- - -	2 0 0	2 0 0
<u>Total/Gesamtzahl</u>	- - -		- - -	-	2 0 0	- - -	-	- -	- -	- -		2 0 0	. 2 0 0

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STATISTISCHE ANGABEN UEBER DIE ZUSAMMENARBEIT BEI DER PRUEFUNG (für die Zeit vom 1. Juli 1983 bis zum 30. Juni 1984)

Germany (Federal Republic of) DE Allemagne (République fédérale d') Deutschland (Bundesrepublik)	$\frac{\frac{1}{2}}{\frac{3}{3}}$	Zeile Zeile Zeile	dur zur der	ch die rückgen unten	unter ommene genanr	genanr Anfor iten St	nten St derung aaten	aaten en überge	angefo bene a	orderte abschli	Berich essende	nte e Berichte	Gesa	ntzahl
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA		für die Zeit	seit Beginn
Allium cepa L. (Onion/Oignon/Zwiebel)	- - -	- - -		3 0 0	- - -	- - -	- - -	- - -	- - -	- - -	- - -		3 0 0	3 [.] 0 0
Apium graveolens L. var. rapaceum (Mill.) Gaud. (Celeriac/Céleri-rave/Knollen- sellerie)	- -	- - -		- - -	- - -	- - -	- - -	 - -	1 0 2	- - -	,		1 0 2	15 1 11
Avena sativa L. (Oats/Avoine/Hafer)		-		- - -			- - · -	- - -	1 0 1	- - -	- - -		1 0 1	1 0 1
Begonia-Elatior-Hybridi (Elatior Begonia/ Bégonia elatior/Elatior-Begonie)	_ _ _	3 0 3		10 1 4	1 0 15	- - -	- - -	- - -	10 2 7	1 0 1	- - -		25 3 30	211 21 159
Brassica napus L. var. oleifera Metzg. (Winter Oilseed Rape/Colza d'hiver/Winter- raps)		-		0 0 1		- - -	- - -	- - -	Ĭ 0 1	- - -	-		1 0 2	3 0 3
Brassica oleracea L. convar. acephala (DC.) Alef. var. gongylodes L. (Kohlrabi/Chou- rave/Kohlrabi)	_ _ _	2 0 0		- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -		2 0 0	8 4 . 1
Brassica oleracea L. convar. capitata (L.) Alef. var. capitata (White Cabbage/Chou cabus/Weisskohl)		-		1 0 0	-	-	-	- - -	- -	-	- -		1 0 0	1 . 0 0
Brassica rapa L. var. silvestris (Lam.) Briggs (Winter Turnip Rape/ Navette d'hiver/Winterrübsen)	- - 	- - -		-	- - -	-	-	-	1 0 0	-	-		1 0 0	2 0 1

Plant Variety Protection - No. 43

STATISTICS ON (COOPERATION IN	EXAMINATION	(period	from	July	1,	1983,	to	Ju ne	30,	1984)
										And in case of the local division of the loc	

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Germany (Federal Republic of) DE <u>Allemagne (République fédérale d')</u> Deutschland (Bundesrepublik)	<u>1st</u> <u>2nd</u> <u>3rd</u>	t line: d line: d line:	rep req fin	orts r pests al rep	equest withdr orts t	ed by awn transmi	States tted t	hereu o Stat	inder :es her	eu nde r		t	otal
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	for period	since beginning
Calluna vulgaris (L.) Hull (Heather/ Callune/Besenheide)	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -		1 0 1
Qucumis sativus L. (Qucumber/Concombre/ Gurke)	- - -	- - -		2 0 0	- - -	- - -	- - -	- - -	- - -	- - -	-	2 0 0	2 0 0
Festuca pratensis Huds. (Meadow Fescue/ Fétuque des prés/Wiesenschwingel)	- - -	- - -		- - -	- - -	- - -	-	- - -	- - -	- - -	- - -	- - -	1 0 0
Festuca rubra L. (Red Fescue, Creeping Fescue/Fétuque rouge/Rotschwingel)	- - -	- - -		- - -	- - -	- - -	- - -	-	- - -	- - -	- - -		3 0 3
Fragaria L. (Strawberry/Fraisier/Erdbeere)	1 0 2	7 0 4		- - -	- - -	4 0 6	- - -	- - -	7 0 2	- - -	- - -	19 0 14	54 1 40
Hordeum vulgare L. sensu lato (Spring Barley/Orge de printemps/Sommergerste)	- -	- - -		- - -	- - -	- - -	- - -	- - -	1 0 0	- - -	-	1 0 0	1 0 0
Hordeum vulgare L. sensu lato (Winter Barley/Orge d'hiver/Wintergerste)	- -	2 0 0		- - -	-	- - -	- - -	- - -	1 0 1	- - -	-	3 0 1	6 0 4
Impatiens-Neu-Guinea-Hybriden (New Guinea Impatiens/Impatiente de Nouvelle-Guinée/ Neu-Guinea-Impatiens)	- - -	- - -		9 0 0	- - -	- - -	-	- - -		-	- - -	9 0 0	9 0 0

Plant Variety Protection - No. 43

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STATISTIQUES SUR LA COOPERATION EN MATIERE D'EXAMEN (période du ler juillet 1983 au 30 juin 1984)

<u>Germany (Federal Republic of)</u> DE <u>Allemagne (République fédérale d')</u> Deutschland (Bundesrepublik)	<u>1è</u> <u>2e</u> <u>3e</u>	re lig ligne ligne	ine : r : dem : rap	apport andes ports	s dema retiré finals	ndés p es s trans	oar les mis au	s Etats x Etat	s ci-de	ssous dessous	1	to pour	tal depuis
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	la période	le début
Kalanchoë Adans. (Kalanchoë)	- - -	5 0 2		24 1 11	8 0 8	- - -	- - -	- - -	10 0 10	- - -	- - -	47 1 31	111 5 80
Lolium X boucheanum Kunth (Hybrid Ryegrass/ Ray-grass hybride/Bastardweidelgras, Oldenburgisches Weidelgras)	- - -	- - -		- - -	- - -	- - -	- - -	 - -	- - -	- - -	. – – –	- - -	1 0 1
Lolium multiflorum Lam. (Italian Ryegrass, Westerwold Ryegrass/Ray-grass d'Italie/ Welsches Weidelgras, Italienisches Raygras)	- - -	- - -		1 0 1	- - -	- - -	· _ _ 	- - -	- - -	- - -	-	1 0 1	6 2 5
Lolium perenne L. (Perennial Ryegrass/ Ray-grass anglais/Deutsches Weidelgras)	- - -	- - -		- - -		- - -	1 0 1	- - -	1 0 1	- - -	- - -	2 0 2	6 0 6
Lupinus albus L. (White Lupin/Lupin blanc/ Weisslupine)	- - -	- - -		- - -	- - -	2 0 0	- - -	- - -	- - -	- - -		2 0 0	3 0 1
Lupinus angustifolius L. (Blue Lupin/ Lupin bleu/Blaue Lupine)	- - -	- - -		- - -	- - -	- - -		- - -	- - -	- - -	- - -	- - -	1 0 1
Lupinus Luteus L. (Yellow Lupin/Lupin jaune/ Gelbe Lupine)	1 0 0	- - -				1 0 0	- - -	- - -	- - -	- - -	- -	2 0 0	2 · 0 0
Lycopersicon lycopersicum (L.) Karst. ex Farwell (Tomato/Tomate)		- - -		3 0 0	- - -	- - -	-	- - -	- - -	- - -	-	3 0 0	8 0 4

STATISTISCHE ANGABEN UEBER DIE ZUSAMMENARBEIT BEI DER PRUEFUNG (für die Zeit vom 1. Juli 1983 bis zum 30. Juni 1984)

Germany (Federal Republic of) DE Allemagne (République fédérale d') Deutschland (Bundesrepublik)	$\frac{\frac{1}{2}}{\frac{3}{3}}$	Zeile Zeile Zeile	: dur : zur : der	ch die nückgen n unter	unter Iommene Igenanr	ngenanr 9 Anfoi 1ten St	nten St rderung zaaten	aaten gen überge	angefo ebene a	orderte abschli	Berichte essende Berichte	e Gesa	amtzahl
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	für die Zeit	seit Beginn
Medicago sativa L. sensu lato (Lucerne/ Luzerne)	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -	- - -	-		1 0 1
Pelargonium L'Hér. ex Ait. (Pelargonium/ Pelargonie)	- - -	13 0 8		11 1 1	11 0 4	- - -	- - -	- - -	. – . – –	- - -		35 1 13	74 2 38
Phaseolus vulgaris L. var. nanus (L.) Aschers. (Dwarf French Bean/Haricot nain/ Buschbohne)	- - -	- - -		- - -	- - -	- - -	_ _ 	- - -	- - -	- - -			2 0 2
Phleum pratense L. (Timothy/Fléole des prés/ Wiesenlieschgras)	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -		2 1 0
Pisum sativum L. sensu lato (Garden Pea/ Petit pois/Gemüseerbse)	- - -	- - -		- -	- -	- - -	- - -	- - -	 - -	- - -			1 0 1
Pisum sativum L. sensu lato (Pea for consumption at dry stage/Pois de casserie/ Trockenspeiseerbse)		- - -									-	- - -	2 0 2
Pisum sativum L. sensu lato (Field Pea/Pois fourrager/Futtererbse)					- - -		- -			- - -	-	- - -	2 .0 2
Poa pratensis L. (Kentucky Bluegrass, Smooth-Stalked Meadow-Grass/Pâturin des prés/Wiesenrispengras)	1 0 1	- - -		- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	1 0 1	2 0 2

Plant Variety Protection - No. 43

STATISTICS ON COOPERATION IN EXAMINATION (period from July 1, 1983, to June 30, 1984)

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<u>Germany (Federal Republic of)</u> DE <u>Allemagne (République fédérale d')</u> Deutschland (Bundesrepublik)	$\frac{1s}{2n}$	t line: d line: d line:	rep req fin	orts ro uests al rep	equest withdr orts t	ed by awn ransmi	States tted t	hereu o Stat	nder æsher	eu nde r		t	otal
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	for period	since beginning
Populus L. (Poplar/Peuplier/Pappel)	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -	- - -			17 0 14
Raphanus sativus L. var. oleiformis Pers. (Fodder Radish/Radis oléifère, Radis chinois/Oelrettich)	- - -	- - -		- - -	2 0 1	- - -	- - -	- - -	- - -	-	_ _ _	2 0 1	7 0 4
Rhododendron L. (Azalea/Azalée/Azalee)	1 0 4	- - -		5 0 5	- - -	- - -	· _ _	- - -	- - -	- - -	- - -	6 0 9	18 0 15
Rhododendron L. (Garden Rhododendron/Rhodo- dendron de jardin/Freilandrhododendron)	- - -	- - -		-	-	- - -	- - -	- - -	- - -	- - -		_ _ _	2 0 2
Ribes nigrum L. (Black Ourrant/Cassis/ Schwarze Johannisbeere)	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -		- - -	- - -	8 1 7
Ribes sylvestre (Lam.) Mert. et W. Koch Red Qırrant/Groseillier rouge/Rote Johan- nisbeere)	- - -	- - -		-	- - -	- - -	- - 	- - -	- - -	- - -	- - -	- - -	3 0 2
Rosa L. (Rose/Rosier/Rose)	8 0 7	5 0 10		28 0 11	- - -	13 0 12	-	-	1 1 0	6 0 5	- - -	61 1 45	203 3 168
Rubus idaeus L. (Raspberry/Framboisier/ Himbeere)	1 0 0	0 0 1		1 0 0	- - -	- - -	- - -	- - -	- - -	1 0 0	- - -	3 0 1	5 0 3

STATISTIQUES SUR LA COOPERATION EN MATIERE D'EXAMEN (période du ler juillet 1983 au 30 juin 1984)

Germany (Federal Republic of) DE <u>Allemagne (République fédérale d')</u> Deutschland (Bundesrepublik)	<u>1è</u> <u>2e</u> <u>3e</u>	re lig ligne ligne	ine : 1 : dem : rap	apport nandes oports	s dema retiré finals	ndés p es trans	ar les mis au	Etats	s ci-de	ssous essous	3	to pour	tal depuis
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	la période	le début
Saintpaulia ionantha H. Wendl. (African Violet/Saintpaulia/Usambaraveilchen)		- - -		1 0 1	- - -	5 0 12	- - -	- - -	4 3 5	- - -	- - -	10 3 18	187 11 152
Salix L. (Willow/Saule/Weide)		- - -		- - -	- - -	- - -	- - -	 - -	- - -	- - -	. – – –	- - -	2 0 2
Scorzonera hispanica L. (Black Salsify/ Scorsonère, Salsifis noir/Schwarzwurzel)	1 0 0	- - -		- - -	- - -	- - -		- - -	- - -	- - -	- - -	1 0 0	5 0 1
Secale cereale L. (Spring Rye/Seigle de printemps/Sommerroggen)	- - -	- - -		- - -	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	2 0 2
Secale cereale L. (Winter Rye/Seigle d'hiver/Winterrogen)	- - -	- - -		1 0 2	1 0 1	1 0 1	- - -	- - -	- - -	- - -	- - -	3 0 4	32 1 30
Sinapis alba L. (White Mustard/Moutarde blanche/Weisser Senf)	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	1 0 0
Solanum tuberosum L. (Potato/Pomme de terre/ Kartoffel)		- - -		- - -	- - -	- - -	3 0 2	- - -	- - -	- - -	- - -	3 0 2	107 · 0 9
Trifolium pratense L. (Red Clover/Trèfle violet/Rotklee)		- - -		- - -	- - -	- - -	-	-	- - -	- - -	- - -	- - -	1 0 1

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STATISTISCHE ANGABEN UEBER DIE ZUSAMMENARBEIT BEI DER PRUEFUNG (für die Zeit vom 1. Juli 1983 bis zum 30. Juni 1984)

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<u>Germany (Federal Republic of)</u> DE <u>Allemagne (République fédérale d')</u> Deutschland (Bundesrepublik)	$\frac{\frac{1}{2}}{\frac{3}{2}}$	Zeile Zeile Zeile	dur zur den	ch die ückgen unten	unten ommene genann	genann Anfor iten St	iten St derung aaten	aaten en überge	angefo bene a	orderte abschlie	Beric essende	hte e Berichte	Gesan	ntzahl
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA		für die Zeit	seit Beginn
Trifolium repens L. (White Clover/Trèfle blanc/Weissklee)		- -			- - -	-	- - -	-	1 0 0	- -	- -		1 0 0	1 0 0
X Triticale (Winter Triticale/Triticale) d'hiver/Wintertriticale)		1 0 1		- - -	- - -	7 1 0	- - -	- ` - -	- - -	_ ·	- - -		8 1 1	21 1 1
Triticum æstivum L. emend. Fiori et Paol. (Spring Wheat/Blé de printemps/ Sommerweizen)				- - -	- - -	- - -	1 0 1	- - -		- - -	-		1 0 1	1 0 1
Triticum aestivum L. emend. Fiori et Paol. (Winter Wheat/Blé d'hiver/Winterweizen)	- - -	- - -		2 0 2	- - -	- - -	- - -	- - -	1 0 1	- - -	- -		· 3 0 3	4 0 4
Vicia faba L. var. minor Harz (Field Bean, Tick Bean/Féverole/Ackerbohne)	- - -	-		2 0 1	-	-	- - -	-	-	- - - ·	-		2 0 1	3 0 1
Vicia sativa L. (Common Vetch/Vesce commune/Saatwicke)		- - -				0 1 0		- - -	-		- -		0 1 0	2 1 1
Zea mays L. (Maize/Maïs/Mais)	1 0 0	1 0 1		4 0 1	- - -	- - -	-			- - -	- - -		6 0 2	20 6 5
<u>Total/Gesamtzahl</u>	15 0 14	39 0 30		108 3 41	23 0 29	33 2 31	5 0 4	- - -	41 6 31	8 0 6	-		272 11 186	1100 61 795

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STATISTICS ON COOPERATION IN EXAMINATION (period from July 1, 1983, to June 30, 1984)

<u>Denmark</u> DK <u>Danemark</u> Dänemark	<u>1s</u> 2nd 3rd	t line: d line: d line:	rep req fin	orts r uests al rep	equest withdr orts t	ed by awn ransmi	States	s hereu o Stat	under cesher	eu nde r		t	otal
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	for period	since beginning
Avena sativa L. (Oats/Avoine/Hafer)		- - -	- - -		- - -	- - -	- - -		1 0 1	- - -	- - -	1 0 1	1 0 1
Euphorbia fulgens Karw. (Euphorbia fulgens/ Korallenranke)	_ _ _	- - -	3 0 3		- - -	- - -	- - -	- - -	0 0 3	- - -	- -	3 0 6	29 1 27
Euphorbia pulcherrima Willd. ex Klotzsch (Poinsettia/Poinsettie, Weihnachtsstern)	- - -		1 0 1		0 0 1	- - -	- · - -	- - -	0 0 1	- - -	- - -	1 0 3	81 9 68
Festuca rubra L. (Red Fescue, Creeping Fescue/Fétuque rouge/Rotschwingel)	1 0 1	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -	- - -	1 0 1	2 0 2
Juniperus L. (Juniper/Genévrier/Wacholder)	- - -	- - -	1 0 1		- - -	- - -	- - -	- - -	- - -	- - -		1 0 1	1 0' 1
Lolium x boucheanum Kunth (Hybrid Ryegrass/ Ray-grass hybride/Bastardweidelgras, Oldenburgisches Weidelgras)	0 0 1	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -	- - -	0 0 1	3 0 2
Lolium multiflorum Lam. (Italian Ryegrass, Westerwold Ryegrass/Ray-grass d'Italie/ Welsches Weidelgras, Italienisches Raygras)	1 0 1	- - -	-		-	- - -	-	- - -		- - -	- - -	1 0 1	2 0 2
Lolium perenne L. (Perennial Ryegrass/Ray- grass anglais/Deutsches Weidelgras)	- -	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -	- - -		5 0 0

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STATISTIQUES SUR LA COOPERATION EN MATIERE D'EXAMEN (période du ler juillet 1983 au 30 juin 1984)

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<u>Denmark</u> DK <u>Danemark</u> <u>Dänemark</u>	<u>1è</u> 2e 3e	re lign ligne ligne	ne:r : dem : rap	apport andes ports	s dema retiré finals	ndés p es trans	ar les mis au	Etats x Etat	ci-de s ci-d	ssous essous		to pour	tal depuis
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	la période	le début
Medicago lupulina L. (Black Medick, Yellow Trefoil/Luzerne lupuline, Minette/Gelbklee (Hopfenklee))	- -	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	1 0 1
Poa pratensis L. (Kentucky Bluegrass, Smooth-Stalked Meadow-Grass/Pâturin des prés/Wiesenrispengras)	- -	- - -	-		- - -	- - -	- - -	- - ` -	- - -	- - -	- - -	- - -	1 0 1
Prunus domestica L. (Plum/Prunier/Pflaume)	- - -	- -			- - -			- - -	- - -	- - -		 - - -	3 0 3
Sinapis alba L. (White Mustard/Moutarde blanche/Weisser Senf)	- - -	- - -	- - -		- - -	1 0 1	- - -	- - -	- - -	- - -	- - -	1 0 1	4 0 4
Thuja spp. (Thuya/Lebensbaum)	- - -	- - -	- - -		- - -	- - -	- - -	- - -	-" - -	- - -	- - -	_ 	3 0 1
Trifolium hybridum L. (Alsike Clover/ Trèfle hybride/Schwedenklee)	- - -	- - -	- - -		- - -	- - -	- - -		- - -	- - -	- - -		1 1 0
Trifolium pratense L. (Red Clover/Trèfle violet/Rotklee)	- -	- -	3 0 1		- - -	- - -	- - -	- - -	- - -	- - -	- - -	3 0 1	22 2 12
Trifolium repens L. (White Clover/ Trèfle blanc/Weissklee)	1 0 0	- - -	- - -		- - -	- - -	- - -	- - -	1 0 1	- - -	-	2 0 1	4 0 2

Plant Variety Protection - No. 43

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STATISTISCHE ANGABEN UEBER DIE ZUSAMMENARBEIT BEI DER PRUEFUNG (für die Zeit vom 1. Juli 1983 bis zum 30. Juni 1984)

Denmark DK Danemark Dänemark	$\frac{\frac{1}{2}}{\frac{3}{3}}$	Zeile Zeile Zeile	: dur : zur : den	ch die nückgen n unter	e unten nommene ngenann	ngenanr Anfor Nten St	nten St derung aaten	aaten Jen überge	angefo bene a	orderte abschli	Beric	hte e Berichte	Gesar	ntzahl
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA		für die Zeit	seit Beginn
Triticum æstivum L. (Soft Wheat/Blé tendre, Froment/Weichweizen)	- - -	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -	- - -			1 0 1
Zygocactus K. Schum. et allies (Christmas and Easter Cactus/Cactus de Noël et de de Pâques/Weihnachts- und Osterkaktus)		- - -	5 0 4		- - -		- - -	- - -	· _ - -	- - -	-		5 0 4	6 0 4
Total/Gesamtzahl	3 0 3	- - -	13 0 10		0 0 1	1 0 1		- - -	2 0 6	- - -	- - -		19 0 21	170 13 132

STATISTICS ON COOPERATION IN EXAMINATION (period from July 1, 1983, to June 30, 1984)

France FR <u>France</u> Frankreich	<u>1s</u> 2nd 3rd	t line d line d line	rep reg fin	orts r uests al rep	equest withdr orts t	ed by awn ransmi	States	hereu o Stat	nder esher	eunde r		· t	otal
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	for period	since beginning
Avena L. (Oats/Avoine/Hafer)	- - -	0 0 1	- - -	- - -		- - -	1 0 1	- - -	- - -	- - -	- - -	1 0 2	2 0 2
Beta vulgaris L. ssp. vulgaris var. alba DC. Fodder Beet/Betterave fourragère/ Runkelnübe)	- - -		-	- - -		1 0 1	- - -	- - -	- - -	- - -	- - -	1 0 1	1 0 1
Qıcumis sativus L. (Qıcumber, Gherkin/ Concombre, Cornichon/Gurke)	- - -		- - -	- - -		- - -	- - -	- - -	- - -	- - -	-	-	2 0 2

France FR France Frankreich	<u>1è</u> 2e 3e	re lign ligne ligne	ne:r :dem :rap	apport andes ports	s dema retiré finals	andés p ées s trans	ar les mis au	Etats x Etat	ci-de s ci-d	ssous essous		to: pour	tal depuis
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	la période	le début
Dianthus caryophyllus L. (Carnation/Oeillet/ Nelke)	- -	- -	- -	- - -		- - -	- - -	- - -	- - -	- - -	-	- - -	15 7 7
Festuca ovina L. (Hard Fescue, Sheep's Fescue/Fétuque durette, Fétuque ovine/ Schafsschwingel)		- - -	- -	- - -		- - -	- - -	- - -	- · - -	- - -	-	- - -	1 0 1
Fragaria L. (Strawberry/Fraisier/Erdbeere)	- - -	- - -	- - -	- - -		0 1 0	- - 	- - -	- - -	- - -	- - -	0 1 0	1 1 0
Glycine max (L.) Merrill (Soya Bean/Soja/ Sojabohne)	- - -	- -	- - -	- - -	<u> </u>	2 0 0	-			-	- -	2 0 0	2 0 0
Hordeum vulgare L. sensu lato (Barley/Orge/ Gerste)	- -	1 0 1	- - -	- - -		- - -	2 0 2	-		- - -	-	3 0 3	7 0 7
Helianthus annuus L. (Common Sunflower/ Tournesol/Sonnenblume)		- - -	- - -	- - -		- - -	- -	- - -	- - -	- - -	-	- - -	1 0 1
Hydrangea L. (Hydrangea/Hortensia/Hortensie)	- -	-	5 0 0	- - -		- - -	- -	- - -	- -	- - -	- - -	5 0 0	10 3 0
Linum usitatissimum L. (Flax, Linseed/Lin/	-	-	1	-		-	-	-	_		-	1	5

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STATISTIQUES SUR LA COOPERATION EN MATIERE D'EXAMEN (période du ler juillet 1983 au 30 juin 1984)

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STATISTISCHE ANGABEN UEBER DIE ZUSAMMENARBEIT BEI DER PRUEFUNG (für die Zeit vom 1. Juli 1983 bis zum 30. Juni 1984)

France FR France Frankreich	$\frac{\frac{1}{2}}{\frac{3}{3}}$	Zeile: Zeile: Zeile:	dur zur den	ch die ückgen unten	unter ommene genanr	ngenann 9 Anfor 9 St	iten St derung aaten	aaten en überge	angefo bene a	orderte abschli	Berick	hte e Berichte	Gesar	ntzahl
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA		für die Zeit	seit Beginn
Lolium multiflorum L. (Italian Ryegrass, Westerwold Ryegrass/Ray-grass d'Italie/ Welsches Weidelgras, Italienisches Raygras)	0 0 1	- - -	- - -	- - -		- - -	- - -	- - -		- -	- - -		0 0 1	2 1 1
Malus domestica Borkh. (Apple/Pommier/Apfel)	- - -	- - -	- - -	- - -		- - -	- - -	- - -	- · _ -	- - -	- - -		- - -	6 0 6
Medicago sativa L. (Lucerne, Alfalfa/Luzerne (cultivée)/Blaue Luzerne)	- - -	- - -	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -		- - -	2 0 2
Phaseolus vulgaris L. (French Bean/Haricot/ Gartenbohne)	- - -	- - -	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -		- - -	3 1 2
Pisum sativum L. sensu lato (Pea/Pois/ Erbse)	- - -	- - -	- - -	- - -		- - -	- - -	- - -	 _ _	-	- - -		- - ·	9 0 8
Prunus cerasus L. (Morello, Sour Cherry/ Cerisier (cerises acides)/Sauerkirsche)	1 0 1	- - -	2 0 1	- - -		- - -	- - -	- - -	- -	- - -	-		3 0 2	7 0 3
Prunus domestica L. (Plum/Prunier/Pflaume)	- - -	-	1 0 0	- - -			- - -		- - -	1 0 0	-		2 0 0	4 0 0
Prunus persica (L.) Batsch (Peach/Pêcher/ Pfirsich)		- - -	-	-		- - -	-	- - -	- - -	- - -	- - -		- - -	1 0 1

France FR France Frankreich	<u>1st</u> 2nd 3rd	line: line: line:	rep req fin	orts re uests al rep	equest withdr orts t	ted by rawn transmi	States tted t	hereu o Stat	nder esher	eunder		t	otal
Taxon	BE	Сн	DE	DK	FR	GB	IE	IL	NL	SE	ZA	 for period	since beginning
Pyrus communis L. (Pear/Poirier/Birne)	1 0 0	- - -	- - -			- - -	- - -	- - -	- - -	1 0 0	- - -	2 0 0	3 0 0
Rosa L. (Rose/Rosier/Rose)	11 0 5	0 0 3	- - -	- - -		6 0 11	- - -	- - -	0 0 1	2 0 2	- - -	19 0 22	151 16 112
Solanum tuberosum L. (Potato/Pomme de terre/ Kartoffel)			- - -	- - -		- - -	2 0 2	- - -	- - -	- - -	- - -	2 0 2	2 0 2
Trifolium pratense L. (Red Clover/Trèfle violet/Rotklee)	0 1 0	- - -	- - -	- - -		- - -	- - -	- - -	- - -	- - -	- - -	0 1 0	6 2 4
Trifolium repens L. (White Clover/Trèfle blanc/Weissklee)	- - -	- - -		- - -		- - -	- - -	- - -		- - -	- - -	- - · -	1 0 1
Triticum æstivum L. (Soft Wheat/Blé tendre, Froment/Weichweizen)		1 0 1	- - -	- - -		- - -	1 0 1	- - -	- - -	-	-	2 0 2	12 1 5
Zea mays L. (Maize/Maïs/Mais)	37 9 9	0 0 2	- -	-		19 8 16	- - -	- - -	- - -	- - -	-	56 17 27	309 _43 _181
Total/Gesamtzahl	50 10 16	2 0 8	9 0 1	- - -		28 9 28	6 0 6	-	0 0 1	4 0 2	- - -	99 19 62	565 76 352

STATISTICS ON COOPERATION IN EXAMINATION (period from July 1, 1983, to June 30, 1984)

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<u>United Kingdom</u> GB <u>Royaume-Uni</u> Vereinigtes Königreich	<u>1è:</u> <u>2e</u> <u>3e</u>	re lig ligne ligne	<u>ne</u> : r : dem : rap	apport andes ports	s dema retiré finals	ndés p es trans	ar les mis au	Etats x Etat:	ci-de s ci-d	ssous essous		to pour	depuis
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	la période	le début
Avena sativa L. (Oats/Avoine/Hafer)	- - -	- - -	- - -		- - -		5 0 5		- - -	- - -	-	5 0 5	9 0 7
Chrysanthemum morifolium Ramat. (Chrysan- themum/Chrysanthème/Chrysantheme)	11 0 4	- - -	41 3 20	27 1 15	107 0 60		- - -	 - -	80 28 41	15 0 2	0 0 1	281 32 143	2182 289 1346
Festuca rubra L. (Red Fescue, Creeping Fescue/Fétugue rouge/Rotschwingel)	- - -	- - -	- -	- - -	- - -		_ _ _ _		- - -	- - -	- - -	 - - -	1 0 1
Hordeum vulgare L. (Barley/Orge/Gerste)	- - -	- - -	- - -	- - -	- - -		4 0 2	- - -	- - -	- - -	- - -	- 4 0 2	13 0 10
Lolium X boucheanum Kunth (Hybrid Ryegrass/ Ray-grass hybride/Bastardweidelgras, Oldenburgisches Weidelgras)			- - -	- - -	- - -		- - -	- - -	-	- - -	- - -	 - -	1 0 1
Lolium multiflorum Lam. (Italian Ryegrass, Westerwold Ryegrass/Ray-grass d'Italie/ Welsches Weidelgras, Italienisches Raygras)	- - -	- -	- -	- - -	- - -		-	- - -	3 3 2	- -	- -	3 3 2	70 16 34
Lolium perenne L. (Perennial Ryegrass/ Ray-grass anglais/Deutsches Weidelgras)	- - -		- -	- -	35 4 12		17 2 13	- -	- - -	- - -	- - -	52 6 25	167 8 95
Malus domestica Borkh. (Apple/Pommier/Apfel)	2 0 0	-	- - -	0 0 1	11 2 1		-	-	2 0 1	-	-	15 2 3	93 13 37

STATISTIQUES SUR LA COOPERATION EN MATIERE D'EXAMEN (période du ler juillet 1983 au 30 juin 1984)

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STATISTISCHE ANGABEN UEBER DIE ZUSAMMENARBEIT BEI DER PRUEFUNG (für die Zeit vom 1. Juli 1983 bis zum 30. Juni 1984)

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United Kingdom GB <u>Royaume-Uni</u> Vereinigtes Königreich	$\frac{\frac{1}{2}}{\frac{3}{3}}$	Zeile: Zeile: Zeile:	dur zur den	ch die ückgen unten	unten ommene genann	genann Anfor ten St	ten St derung aaten	aaten en überge	angefo bene a	orderte bschli	Berick essende	nte e Berichte	Gesar	ntzahl
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA		für die Zeit	seit Beginn
Malus Mill. (Flowering Crab/Pommier ornemen- tal/Zierapfel)		- - -	- - -	- - -	- - -		- - -	- - -	- - -	- - -	- - -		- - -	5 0 2
Medicago sativa L. (Lucerne, Alfalfa/Luzerne (cultivée)/Blaue Luzerne)		- - -	- - -	- - -	- - -		- - -	 _ _	- - -	- - -	- -		- - -	5 2 2
Phaseolus vulgaris L. (French Bean/Haricot/ Gartenbohne)		-	- - -	- - -	- - -			- - -	- - -	- - -	- - -		- - -	2 0 2
Pisum sativum L. sensu lato (Pea/Pois/Erbse)	- - -	- - -	- - -	- - -	- - -		- - -	- - -	- - -	- - -	- - -			3 0 2
Potentilla fruticosa L. (Shrubby Cinquefoil/ Potentille ligneuse/Strauchfingerkraut)	- - -	- - -	1 0 1	1 0 1	- - -		- - -	- - -	- - -	- - -	- - -		2 . 0 2	3 0 3
Prunus avium (L.) L. (Sweet Cherry/Cerisier (cerises douces)/Süsskirsche)	- - -	- -	- -				-		- -	- - -	-		- - -	1 0 1
Prunus domestica L. (Plum/Prunier/Pflaume)	- - -	- - -	- - -	-	-		- - -	-	-	- -	- - -		- - -	2 0 2
Rosa L. (Rose/Rosier/Rose)	- - -	- - -	-	- - -	- - -		-	-	- - -	- - -	- - -		- - -	4 0 4

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STATISTICS	ON	COOPERATION	IN	EXAMINATION	(period	from	July	1,	1983,	to	June	30,	1984)

United Kingdom GB <u>Royaume-Uni</u> Vereinigtes Königreich	$\frac{\frac{1s}{2r}}{\frac{3r}{3r}}$	t line d line d line	: rep : rec : fir	ports r quests nal rep	request withdr ports t	ed by awn ransmi	States	hereu o Stat	nder eshei	ceu nde r			t	otal
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA		for period	since beginning
Solanum tuberosum L. (Potato/Pomme de terre/ Kartoffel)		- - -	- - -	- - -	- - -		7 0 7	- - -	- - -	- - -	- - -		7 0 7	9 0 9
Trifolium pratense L. (Red Clover/Trèfle violet/Rotklee)	- - -	- - -	- - -	- - -	- - -		- - -	- - -	- - -	- - -	- - -		- - -	4 0 3
Triticum aestivum L. emend. Fiori et Paol. (Soft Wheat/Blé tendre/Weichweizen)	- - -	- - -	- - -	- -	- - -		10 0 10	- - -	-	- -			10 0 10	18 0 15
<u>Total/Gesamtzahl</u>	13 0 4	- - -	42 3 21	28 1 17	153 6 73		43 2 37	- - -	85 31 44	15 0 2	0 0 1		379 43 199	2592 328 1576

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<u>Netherlands</u> NL <u>Pays-Bas</u> <u>Niederlande</u>	<u>lèi</u> <u>2e</u> <u>3e</u>	re lign ligne ligne	<u>he</u> :ra :dema :rap	apport andes ports	s dema retiré finals	ndés p es trans	ar les mis au:	Etats x Etat	ci-de s ci-d	ssous essous		to pour	tal depuis
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	la période	le début
Agrostis canina L. (Velvet Bent/Agrostis des chiens/Hundsstraussgras)	- - -	-	-	- - -	-	- - -	- - -	- - -		- - -	- - -	-	1 0 1
Agrostis stolonifera L. (Creeping Bent/ Agrostide stolonifère/Flechtstraussgras)	- - -	- - -	- - -	- - -	- - -	- - -	- - -	 - -		- - -	- - -		5 3 2
Agrostis tenuis Sibth. (Brown Top, Common Bent/Agrostide commune/Rotes Straussgras)	- -	- - -	0 0 1		- - -		- - -				- -	0 0 1	34 19 10
Allium ascalonicum L. (Shallot/Echalote/ Schalotte)	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -		-	- - -	. - - -	2 0 2
Allium cepa L. (Onion/Oignon/Zwiebel)	- - -	- -	- - -	- - -	- - -	- - -		- - -			- - -	-	1 0 0
Alstroemeria L. (Alstroemeria/Alstroemère, Lis des Incas/Inkalilie)	- - -	- - -	2 1 2	-	5 0 0	2 0 1	- - -	- -		- - -	- - -	9 1 3	65 2 45
Anthurium Schott (Anthurium/Flamingoblume)	- - -	- - -	0 0 1	-	- - -	- -	-	-		-	-	0 0 1	23 1 22
Avena L. (Oats/Avoine/Hafer)	- - -	1 0 0	-		-	-	1 0 0	-		-		2 0 0	2 0 0

STATISTIQUES SUR LA COOPERATION EN MATIERE D'EXAMEN (période du ler juillet 1983 au 30 juin 1984)

STATISTISCHE ANGABEN UEBER DIE ZUSAMMENARBEIT BEI DER PRUEFUNG (für die Zeit vom 1. Juli 1983 bis zum 30. Juni 1984)

Ne the rlands NL Pays-Bas Nie de rlande	$\frac{\frac{1}{2}}{\frac{3}{3}}$	Zeile Zeile Zeile	: dur : zur : den	ch die ückger unter	unter Iommene Igenanr	ngenani Anfoi nten Si	nten Si rderung taaten	aaten gen überge	ange f e be ne	orderte abschli	e Berich iessende	te Berichte	Gesa	ntzahl
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA		für die Zeit	seit Beginn
Beta vulgaris L. ssp. vulgaris var.alba DC. (Fodder Beet/Betterave fourragère/ Runkelnübe)		- - -	- - -	- - -	- - -	1 0 0	- - -	- - -		- - -	- - -		1 0 0	1 0 0
Beta vulgaris L. ssp. vulgaris var. conditiva Alef. (Beetroot/Betterave potagère/Rote Rübe)	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -		- - -	- - -		- - -	2 0 2
Brassica oleracea L. convar. botrytis (L.) Alef. var. botrytis (Cauliflower/Chou- fleur/Blumenkohl)		- - -	- - -	- - -	- - -	- - -	- - -	- - -		- - -	- - -		- - -	1 0 1
Brassica oleracea L. convar. oleracea var. gemmifera DC. (Brussels Sprouts/Chou de Bruxelles/Rosenkohl)		-	- - -	- - -	- - -	- - -		- - -		- - -	- - -		-' - -	1 0 1
Brassica rapa L. var. rapa (L.) Thell. (Turnip/Navet/Herbstrübe, Mairübe)		-	1 0 0	- - -	- - -	- - -		- - -	-		-		1 0 0	15 3 9
Bromeliaceæ Juss. partim	0 0 1	-	- - -	- - -		- - -	- - -			- - -	- - -		0 0 1	3 0 1
Cichorium intybus L. (Chicory/Chicorée, Endive/Wurzel-, Salatzichorie)	0 0 3	-	- - -		- - -	- -	- -	- -		- - -	- -		0 0 3	3 0 3
Cucumis sativus L. (Cucumber, Gherkin/ Concombre, Cornichon/Gurke)		- - -	- - -	- - -	- - -	- - -		- - -		- - -	- - -			2 0 2

STATISTICS ON COOPERATION IN EXAMINATION (period from July 1, 1983, to June 30, 1984)

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<u>Ne the rlands</u> NL <u>Pays-Bas</u> <u>Nie de rlande</u>	<u>1s</u> 2nd 3rd	t line: d line: d line:	rep req fin	orts r Nests Nal rep	equest withdr orts t	ed by awn ransmi	States tted t	hereu o Stat	nder es here	eu nde r		t	otal
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	for period	since beginning
Cynosurus cristatus L. (Crested Dog's Tail/ Crételle/Kammgras)	- -	- - -	-	- - -	- - '	- - -	- - -	- - -		- - -	- - -	- - -	1 1 0
Dianthus caryophyllus L. (Carnation/Oeillet/ Nelke)	- - -	- - -	44 10 17	1 0 1	1 0 8	 - -	- - -	- - -		- - -	- - -	46 10 26	273 44 137
Festuca ovina L. sensu lato (Hard Fescue, Sheep's Fescue/Fétuque durette, Fétuque ovine/Schafsschwingel)	- - -	- - -	- - -	- - -	- - -	1 0 0		- - -		-	- - -	1 0 0	16 7 8
Festuca pratensis Huds. (Meadow Fescue/ Fétuque des prés/Wiesenschwingel)	0 0 1	- - -	- - -	- - -	- - -	- - -	- - -	- - -		- - -	- -	0 0 1	1 0 1
Festuca rubra L. (Red Fescue, Creeping Fescue/Fétuque rouge/Rotschwingel)	0 0 1	- - -	- - -	- - -		- - -	- - -	- - -			- - -	0 0 1	17 1 16
Fragaria L. (Strawberry/Fraisier/Erdbeere)	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-		-	-	- - -	11 0 11
Freesia Klatt (Freesia/Freesie)	0 0 1	- - -	0 0 4	1 0 1	- -	1 0 1	-	-		- - -	- - -	2 0 7	31 0 29
Gerbera Cass. (Gerbera)	- - -	- - -	26 4 6	- - -	16 0 4	- - -	-	-		- - -	- - -	42 4 10	214 15 132

Plant Variety Protection - No. 43

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STATISTIQUES SUR LA COOPERATION EN MATIERE D'EXAMEN	(période du ler juillet 1983 au 30 juin 1984)
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Netherlands NL Pays-Bas Niederlande	<u>lère ligne</u> : rapports demandés par les Etats ci-dessous <u>2e ligne</u> : demandes retirées <u>3e ligne</u> : rapports finals transmis aux Etats ci-dessous											to	tal	
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA		la période	le début
Gladiolus L. (Gladiolus/Glaŭeul/Gladiole)		- - -	- - -	- - -	 - -	- - -	- - -	- - -		- - -	- - -		- - -	19 0 19
Helleborus L. (Christmas Rose/Rose de Noël/ Schneerose, Christusrose)	. – – –	- - -	- - -	- - -	- - -	- - -	- - -	 -		- - -	- - -		- - -	1 0 1
Hordeum vulgare L. sensu lato (Barley/Orge Gerste)	, 	1 0 0	- - -				- - -	- - -		- - -	- - -		1 0 0	1 0 0
Lactuca sativa L. (Lettuce/Laitue/Salat)	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -		- - -	- - -		-	6 1 4
Lilium L. (Lily/Lis/Lilie)		- - -			- - -		- - -	3 0 3						
Linum usitatissimum L. (Flax, Linseed/Lin/ Lein)		- - -	- - -	- - -	- - -	0 0 1	-	- - -			- - -		0 0 1	1 0 1
Lolium multiflorum Lam. ssp. gaudini (Parl.) Schinz et Kell. (Westerwold Ryegrass/Ray- grass de Westerwold/Einjähriges Weidelgras)		-	- -	-	- - -	-	-	-		- -	-		- - -	1 0 0
Lolium perenne L. (Perennial Ryegrass/ Ray-grass anglais/Deutsches Weidelgras)	1 0 4	- - -	- - -		- -	-	2 0 2	- - -		-	- - -		3 0 6	42 5 34

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STATISTISCHE ANGABEN UEBER DIE ZUSAMMENARBEIT BEI DER PRUEFUNG (für die Zeit vom 1. Juli 1983 bis zum 30. Juni 1984)

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Netherlands NL Pays-Bas Niederlande	 <u>1. Zeile</u>: durch die untengenannten Staaten angeforderte Berichte <u>2. Zeile</u>: zurückgenommene Anforderungen <u>3. Zeile</u>: den untengenannten Staaten übergebene abschliessende Berichte 											Gesar	Gesamtzahl	
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA		für die Zeit	seit Beginn
Malus domestica Borkh. (Apple/Pommier/Apfel)	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -		- - -			- - -	3 0 3
Orchidaceæ Juss. (Orchids/Orchidées/ Orchideen)		- - -	1 0 1	- - -	- - -	- - -	- - -	- ` -		- - -	- - -		1 0 1	32 8 23
Phaseolus coccineus L. (Runner Bean/Haricot d'Espagne/Prunkbohne)	- - -		- - -		- - -	- -		- - -		- - -	- - -		- - -	1 1 0
Phaseolus vulgaris L. (French Bean/Haricot/ Gartenbohne)	- - -	- - -	- - -	- - -	- - -	- -	- - -	- - -		- - -	- - -			12 0 12
Phleum pratense L. (Timothy/Fléole des prés/ Wiesenlieschgras)	- - -	- - -	- - -	- - -										5 0 5
Pisum sativum L. senso lato (Pea/Pois/Erbse)	1 0 0	2 0 2	- -	- -	- -		- - -	- -		-			3 0 2	16 1 14
Poa pratensis L. (Kentucky Bluegrass, Smooth-Stalked Meadow-Grass/Pâturin des prés/Wiesenrispengras)	0 0 1	- -	- - -	- -	3 1 2	0 3 0	- -	- - -		- - -	- - -		3 4 3	83 24 57
Rosa L. (Rose/Rosier/Rose)	8 0 2	- -	- - -	- - -	- - -	17 0 3	-	- - -		12 0 3	- - -		37 0 8	105 2 60

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STATISTICS ON COOPERATION IN EXAMINATION (period from July 1, 1983, to June 30, 1984)

Netherlands NL Pays-Bas Niederlande	<pre>lst line: reports requested by States hereunder 2nd line: requests withdrawn 3rd line: final reports transmitted to States hereunder</pre>											t	total	
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	for period	since beginning	
Scorzonera hispanica L. (Black Salsify/ Scorsonère, Salsifis noir/Schwarzwurzel)	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -		- - -	- - -		2 0 2	
Secale cereale L. (Rye/Seigle/Roggen)	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -		- - -	- - -		1 0 1	
Solanum tuberosum L. (Potato/Pomme de terre/ Kartoffel)	6 0 2	- - -	- - -	0 - 0 1	2 0 14	- - -	31 0 31	- - -		- - -	-	39 0 48	192 8 136	
Streptocarpus X hybridus Voss (Streptocarpus/ Drehfrucht)	- - -	- - -	2 0 14	3 0 4	- - -	- - -	- - -	- - -		3 0 0	- - -	8 0 18	80 4 61	
Tulipa L. (Tulip/Tulipe/Tulpe)	- - -	- - -		- - -	- - -	- - -	- - -	- - -		- - -	- - -	-	2 0 2	
Ulmus L. (Elm/Orme/Ulme)	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -		- - -	- - -	- - -	3 0 0	
Zea mays L. (Maize/Maïs/Mais)	2 0 0	- - -	- - -	- - -	- - -	- - -	- - -	- - -		- - -	- - -	2 0 0	4 0 0	
<u>Total/Gesamtzahl</u>	18 0 16	4 0 2	76 15 46	5 0 7	27 1 28	22 3 6	34 0 33	- - -		15 0 3	- -	201 19 141	1340 150 873	

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New Zealand NZ <u>Nouvelle-Zélande</u> <u>Neuseeland</u>	<u>1è</u> <u>2e</u> <u>3e</u>	<u>lère ligne</u> : rapports demandés par les Etats ci-dessous <u>2e ligne</u> : demandes retirées <u>3e ligne</u> : rapports finals transmis aux Etats ci-dessous										to pour	tal depuis
Taxon	BE	СН	DE	DK	FR	GB	IE	IL	NL	SE	ZA	la période	le début
Cupressus macrocarpa Hartw.	- - -	- - -	-	-	- - -		- - -	- - -	- - -	- - -	- - -	1 0 1	1 0 1
Total/Gesamtzahl		- - -	- - -	- - -	- - -	1 0 1	- - -	 	- - -	- - -	- - -	1 0 1	1 0 1

STATISTIQUES SUR LA COOPERATION EN MATIERE D'EXAMEN (période du ler juillet 1983 au 30 juin 1984)

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STATISTISCHE ANGABEN UEBER DIE ZUSAMMENARBEIT BEI DER PRUE UNG (für die Zeit vom 1. Juli 1983 bis zum 30. Juni 1983)

Sweden SE Suède Schweden	 <u>1. Zeile</u>: durch die Intengenannten Staaten angeforderte Berichte <u>2. Zeile</u>: zurückge Ommene Anforderungen <u>3. Zeile</u>: den untergenannten Staaten übergebene abschliessende Berichte 											Gesar	ntzahl
Taxon	BE	СН	DE	<u>ن</u> ر	FR	GB	IE	IL	NL	SE	ZA	fur die Zeit	seit Beginn
Hordeum vulgare L. sensu lato (Barley/Orge Gerste)	- - -	- - -	- -	-	- - -	- - -	1 0 1	- - -	- - -		-	1 0 1	1 0 1
<u>Total/Gesamtzahl</u>	- - -			- - -	- - -	- - -	1 0 1	- - -	- - -			1 0 1	1 0 1
Total, all States Total, tous les Etats Gesamtzahl, alle Staaten	99 10 53	45	140 18 78	141 4 65	205 7 131	85 14 67	90 2 81	- - -	128 37 82	42 0 13	0 0 1	975 92 611	5771 628 3730

CALENDAR

UPOV Meetings

Computer Programs

and Forest Trees

(Subgroup on July 8) Consultative Committee

Aars, Denmark)

(Subgroup on June 4)

May 8 to 10 Wageningen (Netherlands)

June 5 to 7 Hanover (Federal Republic of Germany)

June 19 to 21 Aarslev (Denmark)

June 25 to 27 Aarslev (Denmark)

July 9 to 12 Cambridge (United Kingdom)

October 14

October 15 and 16

October 17 and 18

November 12 and 13

November 14 and 15

August 12 to 16

Administrative and Legal Committee

Horticulture.

Council

Symposia

Technical Committee

May 6 to 10 Geisenheim (Federal Republic of Germany)

International Symposium on the Taxonomy of Cultivated Plants

Third ISHS Seed Symposium: Seed Research in

Technical Working Party on Automation and

Technical Working Party for Fruit Crops (Subgroup on June 18 at the same place)

Technical Working Party for Vegetables

Meeting with International Organisations

Technical Working Party for Agricultural Crops

Technical Working Party for Ornamental Plants

(Subgroups on June 24 at the same place and at

1986

February 17 to 20 Lincoln (New Zealand)

Wageningen (Netherlands)

Department of Scientific and Industrial Research (DISR) Plant Breeding Symposium

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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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