



DG4

***FEDERAL PUBLIC SERVICE 'PUBLIC HEALTH,
FOOD CHAIN SAFETY AND ENVIRONMENT'***

**Application of dossiers for plant protection products used on
ornamentals**

Ir F. Cors
Ir A. De Cock
ir.F. Goossens
ir P. Hucorne
ir B. Weickmans

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1 Introduction

The authorizations in ornamentals are generally use extensions made by third parties (research stations, producers organizations, ...). The authorization's holders are also invited to propose use extensions in ornamentals.

This guidance indicates the points which should be taken into consideration when generating this type of dossier.

The data requirements and the risk evaluation for formulations are defined in the directive 91/414/CEE (Annex IIIA and Uniform principles). However, some risk assessments have already been submitted in the original dossier ¹; some risk assessments are not relevant and can be waived.

The list of crop-pest combinations has been revised for the ornamentals. The various ornamental types are organized in a hierarchical structure. It is proposed to grant authorizations for large groups of ornamentals on the basis of a limited set of representative tests. The crops which have been tested and evaluated in the authorizations procedure would be mentioned on the authorization act and on the product label.

2 Data requirements

2.1 Formulation identification – Physico-chemical data – Analytical methods - Residues

No specific information has to be submitted for these parts of the dossier provided that the data are already available in the original dossier

2.2 Information on use

The information on the use of the formulation should be submitted under a specific format. More information can be found in the guidance document « Harmonisation des informations sur l'usage des produits phytosanitaires (Annexe IIIA 3.1-3.9) »

2.3 Toxicology

No specific information has to be submitted for this part of the dossier, provided that the toxicological studies are already available in the original dossier.

¹ *Original authorization* : This means, in this document, the existing authorization just before the extension in ornamentals.

The risk for the operator which has been calculated for the crops of the original authorization (generally knapsack sprayer application and boom sprayer application) generally covers the use in ornamentals. In some circumstances (much higher application rate, very different mode of action,...) the risk for the operator should be recalculated.

2.4 Fate and behaviour in the environment

Predicted Environmental Concentration in groundwater : The acreage ornamentals is very small in comparison with the main field crops. Therefore, no specific PEC groundwater calculation has to be submitted for ornamental and lawn uses provided that the evaluation has been done for one major field crop.

	Acreage in Belgium (nb of ha)
Cereals	248 530
Maize	212 200
Beets	108 520
Cichory	14 140
Potatoes	66 600
ornamental crops (outdoor)	1 070
nurseries (outdoor)	4 450
Ornamental crops (under protection)	675
Nurseries (under protection)	51

* : Use in private and public areas is not mentioned in the statistics.

2.5 Ecotoxicology

The risk assessment to non-target organisms has to be checked by means of the Excel spreadsheets available on *fyto*web under ‘info pour l’industrie – info voor de industrie’

TER should be calculated for birds, mammals, aquatic organisms (buffer zones), honeybees, earthworms.

Birds and mammals - Soil macro-organisms and soil micro-organisms

No specific study has to be performed provided that an evaluation has been performed for the original authorization.

Risk to aquatic organisms

No specific study has to be performed provided that an evaluation has been performed for the original authorization.

'Ornamentals' or 'trees and shrubs' are very large groups of plants with varying height. It is proposed to indicate 2 buffer zones are proposed which are based on the type of sprayers/ type of crops.

ornamentals < 50 cm : 'field crop' scenario, knapsack sprayer and boom sprayer

ornamentals > 50 cm : 'grapevine' scenario, air blast spraying, important drift

'lawns' and 'non woody ornamentals' are considered as field crops.

Ex : an authorization on "coniferous tree" would be granted with indication of 2 buffer zones. Depending on the crop height (seedling, small ornamental tree, tall tree,..) the user can determine whether he is allowed to apply the product and under which conditions.

Non-target arthropods

No specific study has to be submitted provided that the data are already available in the original dossier (2 standard species + 2 relevant species)

Detailed information can be found on on fytoweb under 'info pour l'industrie – info voor de industrie' - 'Evaluation du risque des produits phytosanitaires pour les arthropodes non-cibles'

Honeybees

Spraying during flowering should not be allowed for the compounds with HQ > 50. The HQ are derived from laboratory toxicity data.

Glasshouse use

Exposure to non-target organisms is not expected in this type of crop. Specific ecotoxicological risk assessment is not required.

2.6 Biological dossier

The various ornamental crops are organized in a hierarchical structure. It is proposed to grant authorizations for large groups of ornamentals on the basis of a limited set of representative tests.

The number of species which should be tested for efficacy and selectivity in order to grant an authorization have been indicated in the table here below. However, the relevant information which is available in the original dossier (eg : efficacy testing,...). can be used to support the new authorization. This information will be evaluated on a case by case basis.

The crops which have been tested and evaluated in the authorizations procedure would be mentioned on the authorization act and on the product label. For example, with the remark ‘ use granted on the basis of studies on Azalea, Tilia

Testing should be made on « sensitive » species of the following subgroup ornamentals .

Table 2.6-1 : Description of the subgroups mentioned in the tables herebelow

Subgroups used for testing	Names of crops used in the pesticides database		
5 subgroups	Plantes ornementales	sierplanten	
	plantes ornementales (plein air)	sierplanten (open lucht)	
	plantes ornementales (sous protection)	sierplanten (onder bescherming)	
	semences de plantes ornementales	zaaizaden van sierplanten	
2 nd + 3 rd subgroups	arbres et arbustes ornementaux	sierbomen en - heesters	Omvat ook de boom- en struikenteelt Comprend aussi les pépinières d'arbres et d'arbustes
	arbres et arbustes ornementaux (plein air)	sierbomen en – heesters (open lucht)	
	arbres et arbustes ornementaux (sous protection)	sierbomen en – heesters (onder bescherming)	
3 rd subgroup : coniferous trees and shrubs Trees in a “cultivated, artificial ecosystem” all types of tree and shrub nurseries are included in this definition	Résineux ornementaux	coniferen (sierbomen)	ex : Abies, Araucaria, Pinus, Chameaciparys, Cedrus, Tsuga, Gingko,....
	sapins de Noël	Kerstspennen	
2 nd subgroup : broadleaf trees and shrubs (including Azalea, Rosa,...) Trees in a “cultivated, artificial ecosystem” all types of tree and shrub nurseries are included in this definition	arbres et arbustes feuillus ornementaux	Loofbomen en-heesters (sierbomen)	ex : Azalea, Rosa, Platanus, Catalpa,....
	arbres et arbustes feuillus ornementaux (plein air)	Loofbomen en-heesters (sierbomen) (open lucht)	
	arbres et arbustes feuillus ornementaux (sous protection)	Loofbomen en-heesters (sierbomen) (onder bescherming)	
	pépinières d'arbres et d'arbustes fruitiers	kwakkerijen van fruitbomen en – struiken	

Subgroups used for testing	Names of crops used in the pesticides database		
1 st subgroup + 5 th subgroup	plantes ornementales non ligneuses	Sierplanten (niet houtachtig)	
	plantes ornementales non ligneuses (plein air)	Sierplanten (niet houtachtig) (open lucht)	
	plantes ornementales non ligneuses (sous protection)	Sierplanten (niet houtachtig) (onder bescherming)	
5 th subgroup: Not woody, perennial plants, perennial grasses	plantes vivaces ornementales non ligneuses	Sierplanten (doorlevend, niet houtachtig)	ex : Fuchsia, Hedera, Helleborus,...
	plantes vivaces ornementales non ligneuses (plein air)	Sierplanten (doorlevend, niet houtachtig) (open lucht)	
	plantes vivaces ornementales non ligneuses (sous protection)	Sierplanten (doorlevend, niet houtachtig) (onder bescherming)	
1 st subgroup: bulb, rhizome and tuber flowers (ex : Allium, Amaryllis, Anemone, Begonia, Crocus, Cyclamen, Dahlia, Freesia, Galanthus nivalis, Gladiolus, Hippeastrum, Hyacinthus, Iris, Lilium, Narcissus, Ranunculus, Tulipa,...)	fleurs à bulbes, à tubercules et à rhizomes	Bloembollen, –knollen en -rhizomen	
	fleurs à bulbes, à tubercules et à rhizomes (plein air)	Bloembollen, –knollen en -rhizomen (open lucht)	
	fleurs à bulbes, à tubercules et à rhizomes (sous protection)	Bloembollen, –knollen en -rhizomen (onder bescherming)	
	Bulbes, tubercules ou rhizomes de plantes ornementales	Bollen, knollen of rhizomen van sierplanten	Traitement des bulbes, ... avant plantation Behandeling van de bollen, ... voor het planten
If necessary, tests can be done for those crops	graminées ornementales	Siergrassen	
If necessary, tests can be done for those crops	Cactées et plantes grasses	Cactussen en succulenten	
4 th subgroup: Annual ornamental plants (including Chrysanthellum,...)	Plantes ornementales annuelles	Sierplanten (eenjarige)	ex : Chrysanthellum, Petunia, Salvia, Tagetes,...
	Plantes ornementales annuelles (plein air)	Sierplanten (eenjarige) (open lucht)	
	Plantes ornementales annuelles (sous protection)	Sierplanten (eenjarige) (onder bescherming)	

The diseases/pests which are indicated in bold in the tables herebelow are already available in the authorizations database (IGMP). The others will be made available in function of the dossiers which are submitted.

2.6.1 Biological dossier of fungicides

Efficacy and selectivity have to be tested on a sufficient numbers of crop species

Possible crop-pest combinations		Efficacy testing	Selectivity testing
Pest (entry group)	Crop		
Fungi			
<i>Albugo</i> Rouille blanche Witte roest	not woody, perennial plants	1 perennial species	1 perennial species
<i>Alternaria</i> Alternariose (pl orn.) <i>Alternaria</i> (sierpl.)	ornamentals	1 species	1 species /subgroup
<i>Armillaria</i> Armillaire Honingzwam	Trees and shrubs	1 species	1 species
<i>Ascochyta</i> <i>Ascochyta</i> (pl. orn.) <i>Ascochyta</i> (sierpl.)	ornamentals	1 species	1 species /subgroup
<i>Blumeriella jaapii</i> / <i>Cylindrosporium padi</i> cylindrosporiose/ anthracnose (cerise/griotte) bladvlekkenziekte/ bladvalziekte (kers/kriek)	Broadleaf Trees and shrubs	1 Prunus	1 Prunus
<i>Botrytis cinerea</i> Pourriture grise Grauwe schimmel	ornamentals	1 species	1 species /subgroup
<i>Cercospora</i>	ornamentals	1 Tilia, Lonicera or ericaceae	1 Ericaceae, Lonicera or ericaceae
<i>Chondrostereum purpureum</i> Plomb des arbres fruitiers Loodglansziekte	Broadleaf trees and shrubs	1 species	1 species
<i>Cladosporium spp</i>	ornamentals	1 species	1 species /subgroup
<i>Colletotrichum</i>	ornamentals	1 species	1 species /subgroup
<i>Coniothyrium</i>	ornamentals	1 Rosa	2 Rosa (shrub and 'cut flower')
<i>Coriolus versicolor</i> Carie de la tige (framboisier, orn) Zacht witrot (framboos, sierpl)	Broadleaf trees and shrubs	1 species	1 species

Possible crop-pest combinations		Efficacy testing	Selectivity testing
Pest (entry group)	Crop		
<i>Cylindrocladium spp</i>	ornamentals	1 species	1 species /subgroup
<i>Dothichiza populea</i> Chancre à dothichiza du peuplier populierenschorsbrand	Broadleaf trees and shrubs	1 Populus	1 Populus
<i>Didymascella thujina</i> Brunissure cryptogamique Naaldverbruining	Coniferous trees and shrubs	1 Thuja plicata 'Atrovirens'	1 Thuja plicata
<i>Diplocarpon rosae</i> Maladie des taches noires du rosier Sterrenroetdauw op roos	Broadleaf trees and shrubs	1 Rosa	2 Rosa (shrub and 'cut flower')
<i>Erysiphe</i> Oïdium (pl. orn.) Echte meeldauw (sierpl.) (see remark 1, bottom of this table)	ornamentals	2 crop species (2 different erysiphales spp.)	1 species/subgroup
<i>Exobasidium vacinnii</i> Fausse cloque de l'azalée Oortjesziekte (azalea)	Broadleaf trees and shrubs	1 Azalea	1 Ericaceae
<i>Fusarium</i> Fusariose (pl. orn.) Fusarium (sierpl.)	ornamentals	1 species	1 species /subgroup
<i>Gloesporium (Gnomonia)</i>	broadleaf trees and shrubs	1 species (Platanus or Tilia)	1 species /subgroup
<i>Glomerella</i>	ornamentals	1 species	1 species /subgroup
<i>Guignardia aesculi</i> Maladie des taches rouges du marronnier Bladvlekkenziekte (Guignardia) op paardenkastanje	Trees and shrubs	1 Aesculus	1 Aesculus
<i>Helminthosporium</i>	ornamentals	1 species (pot plant)	1 species /subgroup
<i>Kabatina juniperi</i>	Coniferous trees and shrubs	1 species (coniferous)	1 species (coniferous)
<i>Lophodermium seditiosum</i> rouge cryptogamique du pin Dennenschotziekte	Coniferous trees and shrubs	1 Pinus	1 Pinus

Possible crop-pest combinations		Efficacy testing	Selectivity testing
Pest (entry group)	Crop		
<p><i>Marsonnina spp</i> brunissure des feuilles du peuplier - anthracnose du saule bladvlekkenziekte (Marsonnina) op populier en wilg</p> <p>(see remark 2, bottom of this table)</p>	Broadleaf trees and shrubs	1 species (1 Populus or 1 Salix)	1 species (1 Populus or 1 Salix)
<p><i>Monilia fructigena, M. laxa</i> Moniliose (bouquets floraux et rameaux) Tak- en bloesemsterfte)</p>	broadleaf trees and shrubs	1 Prunus	1 Prunus
<p><i>Nectria cinnabarina</i> Maladie du corail (groseilliers, pl. orn.) Rode puitjesziekte (aalbessen, sierpl.)</p> <p>(see remark 3, bottom of this table)</p>	Trees and shrubs	1 species	1 species
<p><i>Nectria galligena</i> Chancre, pourriture de l'oeil (pommiers, poiriers) Kanker, neusrot (appel, peer)</p> <p>(see remark 3, bottom of this table)</p>	Trees and shrubs	1 species	1 species
<p><i>Ophiostoma novo-ulmi</i> graphiose de l'orme Iepenziekte</p>	broadleaf trees and shrubs	1 Ulmus	1 Ulmus
<p><i>Ovulinia azaleae</i> ovulinia de l'azalée ovulinia (azalea)</p>	broadleaf trees and shrubs	1 Azalea	1 Azalea
<p><i>Pestalotia (Pestallotiopsis)</i></p>	ornamentals	1 species	1 species /subgroup
<p><i>Phialophora</i></p>	ornamentals	1 sensitive species (pot plant)	1 sensitive species (pot plant)
<p><i>Phoma (Phomopsis)</i> phoma (pl. orn.) phoma (sierpl.)</p>	ornamentals	1 species	1 species /subgroup

Possible crop-pest combinations		Efficacy testing	Selectivity testing
Pest (entry group)	Crop		
<p><i>Phytophthora cinnamomi</i> Mildiou des racines (pl. orn.) Valse meeldauw, Wortelphytophthora, (sierpl.)</p> <p>(see remark 4, bottom of this table)</p>	ornamentals	1 root-sensitive species	1 species / subgroup
<p><i>Phytophthora, Peronospora spp.</i></p> <p>Mildiou des feuilles et tiges (plantes ornementales) Blad- en tak-phytophthora en valse meeldauw (sierplanten)</p> <p>(see remark 5, bottom of this table)</p>	ornamentals	1 species for Phythophthora and/or 1 species for Peronospora	1 species / subgroup
<i>Pleiochaeta</i>	broadleaf trees and shrubs	1 Cytisus	1 sensitive species
<i>Pycnosysanus (Bribosia) azaleae</i>	broadleaf trees and shrubs	1 Rhododendron	1 Rhododendron
<p><i>Pythium</i>,... Fontes de semis kiemschimmels</p>	ornamentals	1 species	1 species /subgroup
<p><i>Ramularia</i> Ramulariose Ramularia-bladvlekkenziekte</p>	ornamentals	1 species	1 species/subgroup
<p><i>Rhizoctonia</i> rhizoctone rhizoctonia</p>	ornamentals	1 species (preferably on young seedlings or cuttings)	1 species /subgroup
<p><i>Rhytisma</i> maladie des taches noires de l'érable inktvlekkenziekte (Acer)</p>	Broadleaf trees and shrubs	1 Acer	1 Acer
<p><i>Puccinia, Uromyces, Phragmidium</i> rouille (pl. orn.) roest (sierpl.)</p>	ornamentals	1 Dendranthemum + 1 broadleaf tree/shrub (Salix, Populus or Hypericum)	1 species /subgroup
<p><i>Sclerotinia minor (S. sclerotiorum)</i> sclérotiniose Sclerotienrot (sclerotinia)</p>	ornamentals	1 species	1 species/subgroup
<p><i>Septoria</i> septoriose (pl. orn.) septoria (sierpl.)</p>	ornamentals	1 species	1 species /subgroup

Possible crop-pest combinations		Efficacy testing	Selectivity testing
Pest (entry group)	Crop		
<i>Stemphylium</i> Stemphyliose (ornamentales) Stemphyliose (sierplanten)	ornamentals	1 species	1 species /subgroup
<i>Stigmina carpophila</i> Maladie criblée Hagelschotziekte	Broadleaf trees and shrubs	1 Prunus	1 Prunus
<i>Taphrina spp.</i> Cloques Krulziekte	Broadleaf trees and shrubs	1 species	1 species
<i>Thielaviopsis,</i> <i>Cylindrocarpon</i> Maladies des racines (pl. orn.) Wortelziekten (sierpl.)	ornamentals	1 species	1 species /subgroup
<i>Venturia spp., Spilocaea spp.</i> Tavelure (ornamentales) Schurft (sierplanten) (see remark 6, bottom of this table)	broadleaf trees and shrubs	1 species	1 species
<i>Verticillium</i> Verticilliose Verwelkingsziekte	ornamentals	1 species	1 species /subgroup
<i>Volutella buxii</i>	broadleaf trees and shrubs	1 Buxus	1 Buxus

1) Erysiphales (oïdium, echte meeldauw)

In the past, more attention was given to the powdery mildew in rose *Sphaerotheca pannosa*. Rose cultivation is less important today.

It is not feasible to test fungicides for efficacy against all powdery mildew species. It is proposed to limit the efficacy tests to 2 Erysiphales species. An extended table of Erysiphales species on various crops is given at the end of this document.

2) Marsonnina spp

- Marsonnina brunnea on Populus
- Marsonnina salicicola on Salix

3) Nectria

- N. cinnabarina on Populus, Tilia, Aesculus, Pinus,...
- N. galligena on Fagus, Betula, Ulmus, Sorbus, ...

4) Phytophthora, Peronospora spp. (Mildiou des feuilles et tiges, Blad- en tak-phytophthora en valse meeldauw)

The main Phytophthora on leaves and stem organs are *P. cactorum*, *P. citricola*, *P. ramorum*.

The downy mildew species in ornamentals are *Peronospora*. Other genera are less important (*Bremia*, *Plasmopara*, *Basidiophora*)

5) Phytophthora spp. (Mildiou des racines, Wortelphytophthora)

The main Phytophthora on root organs are *P. cinnamoni* and *P. cryptogea*. They can also cause foot rot

6) Venturia spp., Spilocaea spp (Tavelure, Schurft)

The most common species on ornamental trees and shrubs are :

- *Venturia inaequalis* on *Malus* (sierappel, pommier ornamental) and occasionally on *Sorbus* (lijsterbes, sorbier) and *Crataegus* (meidoorn, aubépine)
- *Venturia pirina* on *Pyrus* (sierpeer, poirier ornamental)
- *Venturia saliciperda* on *Salix* (wilg, saule)
- *Spilocaea pyracanthae* on *Pyracantha* (vuurdoorn, *Pyracantha*)

2.6.2 Biological dossier of acaricides

Efficacy :At least one species/ entry group has to be tested to grant the authorization.

Ex : efficacy test on 1 tarsonemid species would be sufficient to grant the authorization on Tarsonemidae in ornamentals

The selectivity has to be tested on a sufficient numbers of crop species.

Possible crop-pest combinations		Efficacy testing	Selectivity testing
Pest (entry group)	Crop		
Mites			
<i>Tetranychidae (Tetranychus, Panonychus,...)</i> Acariens tétranyques Spintmijten	ornamentals	1 mite species tested	1 plant species/subgroup
<i>Tarsonemus</i> Tarsonèmes (pl. ornem) Weekhuidmijten (sierpl.)	ornamentals	1 mite species tested	1 plant species/subgroup
<i>Eriophyidae</i> Phytoptes (pl. orn.) Gal- en roestmijten(sierpl.)	ornamentals	1 mite species tested	1 plant species/subgroup
Myriapoda			
<i>Blaniulus, Iulus, Scutigera</i> Blaniules et scutigérelles Miljoen- en duizendpoten	ornamentals	1 myriapod species	1 plant species/subgroup

2.6.3 Biological dossier of insecticides

Efficacy : At least one species/ entry group has to be tested to grant the authorization.
The entry groups are the Collembola, Anthonomus, ...

The selectivity has to be tested on a sufficient numbers of crop species.

Possible crop-pest combinations		Efficacy testing	Selectivity testing
Pest (entry group)	Crop		
Insects			
Collembola			
Collembola Collemboles Collembolen	ornamentals	1 insect species tested	1 plant species/subgroup
Coleoptera			
Anthonomus Anthonomes Bloesemkevers	ornamentals	1 insect species tested	1 plant species/subgroup
Polydrusus, Phyllobius Charançons des feuilles Bladrandkevers (see remark 1, bottom of this table)	ornamentals	1 insect species (adult and/or larvae) tested	1 plant species/subgroup
Agriotes Taupins Ritnaalden	ornamentals	1 insect species tested	1 plant species/subgroup
Buprestidae Buprestes Prachtkevers (see remark 2, bottom of this table)	broadleaf trees & shrubs	1 insect species tested	1 plant species/subgroup
Chrysomelidae Chrysomèles Haantjes (see remark 3, bottom of this table)	ornamentals	1 insect species tested	1 plant species/subgroup
Hylobius abietis Hylobe du pin Grote dennensnuitkever	coniferous trees and shrubs	1 insect species tested	1 plant species/subgroup
Melolontha Vers blancs Engerlingen (see remark 4, bottom of this table)	ornamentals	1 insect species tested	1 plant species/subgroup

Possible crop-pest combinations		Efficacy testing	Selectivity testing
Pest (entry group)	Crop		
Otiorrhynchus Otiorrhynques Lapsnuitkevers (see remark 1, bottom of this table)	ornamentals	1 insect species tested	1 plant species/subgroup
Scolytus Scolytes Spintkever/bastkever	shrubs and trees	1 insect species tested	1 plant species/subgroup
Halticini Altises Aardvlooiën	ornamentals	1 insect species tested	1 plant species/subgroup
Diptera			
Agromyzidae Mouches mineuses Mineervliegen	ornamentals	1 insect species tested	1 plant species/subgroup
Cecidomyidae Cécidomyies (pl. orn) Galmuggen (sierpl)	ornamentals	1 insect species tested	1 plant species/subgroup
Sciaridae Mouches des terreaux Rouwmuggen (see remark 5, bottom of this table)	ornamentals	1 insect species tested	1 plant species/subgroup
Tipulidae Tipules Emelten	ornamentals	1 insect species tested	1 plant species/subgroup
Heteroptera			
Miridae Punaises Wantsen	ornamentals	1 insect species tested	1 plant species/subgroup
Homoptera			
Aphididae Pucerons Bladluizen (see remark 6, bottom of this table)	ornamentals	1 'easy' + 1 'difficult' species tested	1 plant species/subgroup
Cicadellidae Cicadelles Cicaden	ornamentals	1 insect species tested	1 plant species/subgroup

Possible crop-pest combinations		Efficacy testing	Selectivity testing
Pest (entry group)	Crop		
<p>Adelgidae Chermès galligènes des conifères Galluizen (chermes-, sparapp, ...</p> <p>(see remark 7, bottom of this table)</p>	Coniferous trees and shrubs	1 Adelges spp or 1 Pineus spp	1 plant species/subgroup
<p>Eriosoma Pucerons lanigères Bloedluizen</p> <p>(see remark 8, bottom of this table)</p>	broadleaf trees & shrubs	1 insect species tested : Erisoma lanigerum	1 plant species/subgroup
<p><i>Pemphigidae</i> (ex. <i>E. lanigerum</i>) & <i>Rhizoeus spp</i> Puceron des racines (orn.), Wortelluizen (sierpl.)</p> <p>(see remark 9, bottom of this table)</p>	ornamentals	1 insect species tested	1 plant species/subgroup
<p><i>Psyllidae, Triozidae, Carsidaridae, Spondyliaspidae</i> Psylles (plantes ornementales) Bladvlooien (sierplanten)</p> <p>(remplace Psylla buxi Psylle du buis Buxusbladvlo)</p> <p>(see remark 10, bottom of this table)</p>	broadleaf trees & shrubs	1 insect species tested	1 plant species/subgroup
<p>Trialeurodes Mouche blanche/aleurode Witte vlieg</p> <p>(see remark 11, bottom of this table)</p>	ornamentals	1 insect species tested	1 plant species/subgroup
<p>Coccoidae Cochenilles Wol- dop- en schilduizen</p> <p>(see remark 12, bottom of this table)</p>	ornamentals	1 insect species tested	1 plant species/subgroup

Hymenoptera			
<i>Formicidae</i> Fourmis Mieren	ornamentals	1 mite species tested	1 plant species/subgroup
<i>Tenthredinidae</i> Hoplocampes, tenthredes Zaagwespen, bastaardrupsen (see remark 13, bottom of this table)	Trees and shrubs	1 insect species tested	1 plant species/subgroup
Lepidoptera			
<i>Lymantriidae,</i> <i>Lasiocampidae</i> Lymantriides, Lasiocampiides, Donsvlinders (borstelrupsen, spinners) (see remark 14, bottom of this table)	trees and shrubs	1 insect species tested	1 plant species/subgroup
<i>Mamestra, Spodoptera,</i> <i>Autographa, Orthosia,</i> Chenilles défoliatrices Bladvretende rupsen	ornamentals	1 insect species tested	1 plant species/subgroup
<i>Agrotis, Noctua, Euxoa</i> Chenilles terricoles Aardrupsen	ornamentals	1 insect species tested	1 plant species/subgroup
<i>Cacoecia, Spilonata,</i> <i>Argyroplote, Pandemis</i> Tordeuses du feuillage bladrollers (see remark 15, bottom of this table)	ornamentals	1 insect species tested	1 plant species/subgroup
<i>Cheimatobia, Hibernia</i> Cheimatobie brumeuse, phalènes Spanners, wintervlinders (see remark 16, bottom of this table)	ornamentals	1 insect species tested	1 plant species/subgroup
<i>Yponomeutidae</i> Hyponomeutes Spinselmotten (see remark 17, bottom of this table)	Trees and shrubs	1 insect species tested	1 plant species/subgroup

<i>Thaumetopoeidae</i> Chenilles processionnaires processierupsen (see remark 18, bottom of this table)	Trees and shrubs	1 insect species tested	1 plant species/subgroup
<i>Cossidae</i> Zeuzère, Cossus Houtvlinders (see remark 19, bottom of this table)	broadleaf trees and shrubs	1 insect species tested	1 plant species/subgroup
<i>Sesiidae</i> Sésies Glasvlinders	broadleaf trees and shrubs	1 insect species tested	1 plant species
<i>Micro-lepidoptera</i> Chenilles mineuses Mineermotten (see remark 20, bottom of this table)	ornamentals	1 insect species tested	1 plant species/subgroup
Thysanoptera			
<i>Thysanoptera</i> Thrips Trips (see remark 21, bottom of this table)	ornamentals	1 insect species tested	1 plant species/subgroup

1) Curculionidae (Polydrusus spp, Phyllonius spp. Otiorrhynchus spp) (Charançons, Snuitkevers)

The most common species are :

- Othiorrhynchus sulcatus & O. ovatus
- Phyllobius calcaratus
- Polydrusus sericeus

The damages are caused by the larvae. The life cycles of those species are similar and consequently the insecticide treatments.

Other Curculionidae, like Anthonomus and Hylobius abietis, have a different life cycle.

2) Buprestidae (Buprestes, Prachtkevers)

The most common species is :

- Agrilus sinuatus – (perenringworm, perenprachtkever - agrile du Poirier) on ornamental fruit trees, Crataegus, Sorbus

3) Chrysomelidae (Chrysomèles, Haantjes)

The most common species are :

- *Crioceris lili* – leliehaantje – criocère du lis
- *Chrysomela* spp. – broadleaf trees and shrubs
- *Phyllodecta* spp (e.g. *Phyllodecta vitellinae*) – wilgenhaantje – chrysomèle cuivrée des saules
- *Agelastica alnu* – elzenhaantje – galéruque de l’aulne

4) Scarabaeidae (Melolontha vulgaris, Hoplia philanthus) (Hannetons, vers blancs, Engerlingen)

The most common species of the family Scarabaeidae present in ornamentals are :

- *Melolontha melolontha* (=vulgaris) – hanneton commun – meikever – present in all types of ornamentals)
- *Hoplia philanthus* – hoplia floricole – sallandkever (mainly present in lawn; this species becomes more and more present in lawn)
- *Phyllopertha horticola* – hanneton horticola – rozenkever (mainly present in lawn)

The damages are caused by the larvae.

5) Sciaridae (Mouches des terreaux, Rouwmuggen)

The taxonomic identification of these small flies (Diptera) is complex. The most important pest species are *Bradysia*, *Lycoriella* en *Sciara*

The most common species is :

- *Sciara* – varenrouwmug – mouche sciaride ou mouche des terreaux – larvae in substrate of crops under protection (mainly cuttings)

(known in the database as mushroom fly)

6) Aphididae, Lachnidae, Callaphididae (Pucerons, Blad- en takluizen)

The main leaf aphids and stem aphids are found in 3 families. The most important species are found herebelow. 1 ‘easy’ + 1 ‘difficult’ species should be tested for the entry group Aphids. The species which are ‘difficult’ to control are indicated by an asterisk.

1. Lachnidae (vnl. takluizen – pucerons des rameaux)

- *Cinara* spp : Stem aphid on coniferous trees
- *Tuberolachnus salignus* (dromedarisluis – gros puceron du saule)
- *Lachnus* spp (takluizen op ..., puceron des rameaux sur ...)

2. Aphididae

- *Aphis fabae* : zwarte bonenluis – puceron noir de la fève = polyphageous, outdoor and under protection
- *Aphis gossypii* * katoenluis – puceron du melon et du coton = polyphageous, under protection.
- *Aphis* spp : Aphids which are found on numerous plant species; the most common species is *Aphis pomi* (groene appeltakluis – puceron vert du pommier et du poirier)
- *Elatobium abietinum* (groene sparrennaaldluis – puceron vert de l'épicea de Sitka) – *Picea*
- *Myzus cerasi* (zwarte kersenluis – puceron noir du cerisier – *Prunus*)
- *Myzus persicae* (groene perzikluis – puceron vert du pêcher) = polyphageous, outdoor and under protection
- *Rhodobium porosum** (gele rozenluis of tabaksperzikluis - ? – = polyphageous, mainly under protection.
- *Macrosiphum euphorbiae* (aardappeltopluis – puceron de la pomme de terre) = polyphageous, mainly under protection.
- *Aulacorthum solani* (boterbloemluis- puceron des serres et des pommes de terre) = polyphageous, mainly under protection, but also outdoor
- *Aulacorthum circumflexum* (gevlekte bladluis – puceron des serres) = polyphageous, outdoor and under protection

1. Callaphidae

- *Myzocallis* spp.: many species are monophageous e.g. on *Corylus*, *Quercus*, *Castanea*. The most common species is *Myzus coryli* (hazelnootbladluis – puceron jaune du noisetier)
- *Takecallis arundicolens* (bamboebladluis – puceron des bambous) = monophageous
- *Eucallipterus tillae* (lindenbladluis – puceron du tilleuil) = monophageous
- *Phyllaphis fagi** (beukenbladluis – Puceron des feuilles du hêtre) – monofaag
- *Euceraphis betulae* (berkenbladluis – puceron cendré du bouleau) = monophageous

7) Adelgidae (chermès des conifères, Coniferengalluizen)

The most common species are :

- Adelges (= Sachiaphantes) abietis (sparrengalluis – chermès de l'épicea) – on *Picea abies*
- Adelges (=Gilletella) cooleyi. Depending on the plant where the insect is found :
 - on *Picea sitchensis* (douglaswolluis – chermès des galles de l'épicea de Sitka)
 - on *Pseudotsuga menziesii* (douglaswolluis – chermès du sapin de Douglas)
- Adelges laricis (syn. *A. coccineus*) : Adelges viridis
Depending on the plant where the insect is found :
 - on *Larix* (larixwolluis – chermès des aiguilles de mélèze)
 - on *Picea abies* & *sitchensis* (ananasgalluis – chermès de la galle ananas de l'épicea)
- *Pineus pini* (wollige dennenluis – chermès du pin sylvestre) – present on 2-needle *Pinus*, mainly *Pinus sylvestris*
- *Pineus strobi* (=strobis) (wollige dennenluis – adelges du pin Wymouth, present on 2-needle *Pinus*, mainly *Pinus strobus* (Pin. Weymouth)

The taxonomy of the Adelgidae and the host-relationship of coniferous trees and gall aphids species is very complex. It is proposed that efficacy testing should be done on one Adelges species **or** one Pineus species.

8) Eriosoma lanigerum (Puceron lanigère , Appelbloedluis)

The insect is present on *Chaenomeles japonica*, *Cotoneaster*, *Malus*, *Crataegus*, *Pyracantha*, *Sorbus*,...

9) Pemphigidae (ex. *E. lanigerum*) & Rhizoeus spp (Puceron des racines, Wortelluizen)

The most common species are :

- *Eriosoma ulmi* (bessenwortelluis – Puceron des racines du groseillier)
- *Stagona pini* (dennenwortelluis – Puceron des racines du pin)

- *Rhizoecus falcifer* (wollige wortelluis...., Cochenille farineuse des racines de....) - under protection : ferns, palms
- *Rhizoecus cacticans* (wollige wortelluis ..., cochenille farineuse des racines de ...) – under protection : Cactaceae, Bromeliaceae, succulent plants

10) Psyllidae, Triozidae, Carsidaridae, Spondyliaspidae (Psylles, Bladvlooien)

The most common species are :

- Psyllidae
 - *Psyllopsiis fraxinii* (fraxinusbladvlo – psylle galligène du frêne)
 - *Psylla pyri* (Perenbladvlo – galligène du poirier)
 - *Psylla buxi* (buxusbladvlo – Psylle du buis)
 - *Cacopsylla fulguralis* (bladvlo op *Eleagnus* – psylle sur *Eleagnus*)
- Triozidae
 - *Trioza alacris* (laurierbladvlo – Psylle du laurier sauce)
- Carsidaridae & Spondyliaspidae
 - Not present under practical conditions

11) Aleyrodidae (Aleurodes, Witte vliegen)

The most common species are :

- *Trialeurodes vaporariorum* (kaswittevlief – aleurode des serres)
- *Bemisia tabaci* (tabakswittevlief – Mouche blanche du tabac)

Both species are polyphagous. They are mainly found in crops under protection .

12) Diaspididae, Coccidae, Eriococcidae, Pseudococcidae (Cochenilles, Wol-, dop- en schildluizen)

In some taxonomic systems the family Coccidae is subdivided in sub-families Diaspidinae, Lecaninae and en Coccinae. In other taxonomic systems the Diaspididae (schildluizen – diaspines : cochenilles à bouclier), Coccidae (dopluizen – cochenilles à carapace) – Eriococcidae (? - ?) andn Pseudococcidae (wolluizen – cochenilles farineuses) are considered as families. This last opinion was chosen herebelow.

The most common species are :

1. Diaspididae (schildluizen – diaspidines : cochenilles à bouclier)
 - *Aspidiotus nerii* (? – cochenille du laurier-rose) – mainly on crops under protection, e.g. *Nerium oleander*, *Dracaena*, palms
 - *Aspidiotus hederae* (? - ?) - mainly on crops under protection, e.g. *Hedera*, palms
 - *Carulaspis juniperi* (= *C. visci* – jebeverbesschildluis – cochenille à bouclier du genévrier) – on a few conifer species
 - *Pinnaspis aspidistrae* (varenschildluis – cochenille à bouclier des fougères) on crops under protection, e.g. ferns, palms
 - *Unaspis euonymi* (schildluis op *Euonymus* – cochenille du fusain)
 - *Lepidosaphis ulmi* (kommaschildluis – cochenille virgule du pommier) – mainly on outdoor crops e.g. *Malus*, *Buxus*, *Ceanothus*, *Cotoneaster*,...

2. Coccidae (dopluizen – cochenilles à carapace)
 - chloropulvinaria floccifera (pulvinaire dopluis op.... – Pulvinaire du Houx) – mainly on outdoor crops e.g. Camellia, Taxus, Ilex
 - Pulvinaria regalis (Pulvinaire dopluis op ...- Pulvinaire du Marronnier d'Inde) – mainly on outdoor crops e.g. Acer, Aesculus hippocastanum, Cornus, Tilia, Magnolia, Skimmia, Ulmus,...
 - Eupulvinaria hydrangeae (Pulvinaire dopluis op Hydrangea – Cochenille pulvinaire de l'Hortensia) – mainly on outdoor crops e.g. Acer, Hydrangea, Tilia, Cornus, Viburnum
 - Coccus hesperidum (platte dopluis – Pou des Hespérides) – outdoor and on crops under protection, e.g. Ficus, Camellia, Citrus, Hedera, Laurus nobilis
 - Parthenolecanium pomericum (dopluis op Taxus - Cochenille à carapace de l'If) – monophagous on Taxus baccata
 - Saissetia coffeae (halvebol dopluis – Cochenille tortue des serres – crops under protection, e.g. Asparagus, Dianthus, Ficus, Orchideeën,...

3. Eriococcidae
 - No important species in this family (Cryptococcus fagi & Gossyparia ulmi)
4. Pseudococcidae (Cochenilles farineuses)
 - Planococcus citri (wolluis op – Cochenille farineuse de l'orange) – polyphagous, crops under protection

Rhizoecus spp is considered under the root aphids (wortelluizen – pucerons des racines).

13) Tenthredinidae, Argidae (Hoplocampes, tenthrèdes, Bladwespen – bastaardrupsen)

Both hymenoptera families have the same type of larvae (caterpillar-like)

The most common species are :

1. Tenthredinidae
 - Caliora spp (bastaardslakkenrups op ... - tenthrède-limaces des feuilles) - mainly on Tilia, Quercus, Rosaceae
 - Croesus septentrionalis (Elzenbladwesp – Tenthrède du noisetier), mainly on Corylus
 - Scolioneura betuleti (? - ?) - monophagous on Betula

- *Diprion pini* (= *Lophyrus pini*) (dennenbladwesp – Lophyre du pin) – monophagous on *Pinus*

2. *Argidae*

- *Arge* spp (bladwespen op – Tenthredes du- mainly on *Rosa*, *Berberis*, *Betula*, *Salix*)

14) Lymantriidae, Lasiocampidae (Lymantriïdes, Lasiocampiïdes, Donsvlinders (borstelrupsen), spinners)

The most common species are :

1. *Lasiocampidae*

- *Malacosoma neustria* (ringelrupsvlinder- Bombyx à livrée) – on several tree and shrub species
- *Poecilocampa populi* (Bombyx du peuplier - ?) – (less common)
- *Eriogaster lanestris* (Bombyx laineux – woldrager) – (less common)

2. *Lymantriidae*

- *Orgyia antiqua* (witvlakvlinder – Orgyie antique) – on several tree and shrub species
- *Euproctis chrysorrhoea* (Bastaardsatijnvlinder – Bombyx cul-brun) – on several tree and shrub species
- *Euproctis similis* (donsvlinder – Bombyx cul-doré) – on several tree and shrub species
- *Lymantria monacha* (nonvlinder – nonne) – on several tree and shrub species
- *Leucosoma salicis* (Bombyx du saule – satijnvlinder) (less common)
- *Lymantria dispar* = *Porthetria dispar* (Bombyx disparate (Spongieuse) – plakker) (less common)

15) Tortricidae (Tordeuses vraies, Echte bladrollers)

The most common species are :

- *Acleris* spp (e.g. *Acleris latifasciana* (*Acalla Schalleriana*) – azaleablادroller - -)
- *Adoxyphyes orana* – heggebladroller of vruchtbladroller – Tordeuse capua, - polyphagous, outdoor and under protection
- *Archips* spp – on broadleaf trees

- *Cacoecimorpha pronubana* – anjerbladroller – tordeuse de l'œillet - polyphageous, outdoor and under protection
- *Clepsis spectrana* (*costana*) – koolbladroller – tordeuse à quatre taches du rosier - polyphageous
- *Tortrix* spp (e.g. *Tortrix viridana* – eikenbladroller – tordeuse verte du chêne)
- *Phyaconia buoliana* – dennenlotrups – tordeuse de la pousse du Pin

16) Cheimatobia, Hibernia (Geometridae) Cheimatobie brumeuse, phalènes Spanners, wintervlinders

The most common species are :

- *Operophtera brumata* (*Cheimatobia brunata* – kleine wintervlinder) – Phalène hiémale
- *Erannis defoliaria* (*Hirbernia defoliaria*) – grote wintervlinder – phalène défeuillante ou hibernie
- Several other Geometridae species

17) Yponomeutidae (Hyponomeutes, Stippelmotten)

The most common species are :

- *Argyresthia* spp (E.g. *Argyresthia trifasciata* – jeneverbesmineermot – teigne des pousses de Thuja)
- *Yponomeuta* spp. – stippelmot op – hyponomeute de ...

18) Thaumetopoeidae (chenilles processionnaires, Processierupsen)

The most common species are :

- *Thaumetopoea pityocampa* – dennenprocessierups – Processionnaire du pin
- *Thaumetopoea processionea* – eikenprocessierups – Processionnaire du chêne

19) Cossidae (Zeuzère, Cossus, Houtvlinders)

The most common species are :

- *Zeuzera pyrina* – gestippelde houtvlinder – zeuzère – polyphageous on broadleaf trees

- *Cossus cossus* – wilgenhoutvlinder – cossus gâte – bois
- polyphageous on broadleaf trees

20) Micro-lepidoptera (Chenilles mineuses, Mineermotten)

The most common species are :

- *Stygmella* spp – mineermot op ... - teigne mineuse du ... Broadleaf trees and shrubs
- *Caloptilia azaleella* (azaleae) – azaleamotje – teigne des azalées
- *Caloptilia* spp – mineermot op ... - teigne du ... Broadleaf trees and shrubs
- *Phyllonorycter* spp. – mineermot op ... teigne mineuse du .. - Broadleaf trees and shrubs
- *Cameraria ohridella* – kastanjemineermot – mineuse du marronnier
- *Lyoneta clerkella* – bliksemschichtmineermot – teigne à mine sinueuse - Broadleaf trees and shrubs
- *Leucoptera scitella* (malifoliella) – damschiifmineermot – lécémiostome - Broadleaf trees and shrubs

21) Thysanoptera (Thrips, Thripsen)

The most common species are :

- *Dendrothrips ornatus* - ? – thrips des arbustes d'ornement, mainly on *Ligustrum* and *Syringa*
- *Frankliniella occidentalis* – californische trips – thrips californien, mainly under protection, but also outdoor
- *Thrips tabaci* – tabakstrips – thrips du tabac – outdoor and under protection
- *Heliothrips haemorrhoidalis* – zwarte kastrips – thrips des serres
- *Echinothrip americanus* - ? - ? – under protection and in the houses

2.6.4 Biological dossier of herbicides

Due to the large variety of crops and cropping systems (glasshouse – outdoor, pot plants, irrigation,...), a general procedure of testing cannot be established easily. It is necessary to clearly describe the testing conditions

The efficacy of these formulations is generally well known on the basis of studies on major crops. Selectivity testing is the key point in the evaluation of these formulations

The authorizations are preferably granted for large groups of weeds :

Graminées annuelles Eenjarige grasachtige onkruiden
Graminées vivaces Doorlevende grasachtige onkruiden
Dicotylées annuelles Eenjarige tweezaadlobbige onkruiden
Dicotylées vivaces Doorlevende tweezaadlobbige onkruiden

However, some weed species are considered as ‘difficult’ to control. Authorizations can be granted for particular weed species, specific use conditions

‘Problematic’ weeds in ornamental crops

Graminées annuelles Eenjarige grasachtige onkruiden	- <i>Poa annua</i> (straatgras, paturin annuel) - <i>Echinochloa crus galli</i> (hanepoot, panic pied-de-coq)
Graminées vivaces Doorlevende grasachtige onkruiden	- <i>Agropyron repens</i> (kweek, chiendent)
Dicotylées annuelles Eenjarige tweezaadlobbige onkruiden	- <i>Viola arvensis</i> (akkerviooltje, pensée des champs) - <i>Chenopodium album</i> (melganzevoet, chénopode blanc) - <i>Galinsoga parviflora</i> (klein knopkruid, galinsoge à petites fleurs) - <i>Stellaria media</i> (muur, mouron des oiseaux) - <i>Amaranthus spp.</i> (amaranten, amarantes) - <i>Epilobium spp.</i> (wilgenroosjes, épilobes) - <i>Urtica urens</i> (kleine brandnetel, ortie brûlante) - <i>Erigeron canadensis</i> (canadese fijnstraal, érigéron du Canada) - <i>Matricaria spp.</i> (kamilles, matricaires) - <i>Cardamine spp.</i> (springkruiden, cardamines) - <i>Sagina procumbens</i> (liggende vetmuur, sagine rampante) - <i>Senecio vulgaris</i> (klein kruiskruid, séneçon commun)
Dicotylées vivaces Doorlevende tweezaadlobbige onkruiden	- <i>Cirsium arvense</i> (akkerdistel, chardon des champs) - <i>Rorippa sylvestris</i> (akkerkers, cresson des champs) - <i>Ranunculus spp.</i> (boterbloemen, renoncules) - <i>Calystegia sepium</i> (haagwinde, liseron des haies)

	<ul style="list-style-type: none"> - <i>Oxalis spp.</i>(klaverzuring, oxalis) - <i>Sonchus</i> (melkdistel, laiteron) - <i>Geranium spp.</i> (ooievaarsbek, géranium) - <i>Taraxacum officinale</i> (paardebloem, pissenlit) - <i>Rumex acetosella</i> (schapezuring, petite oseille) - <i>Rumex obtusifolius</i> (ridderzuring, rumex à feuille obtuse) - <i>Salix spp.</i> (wilgenzaailingen, semis de saule) - <i>Aegopodium podagraria</i> (zevenblad, aegopode podagraire) - <i>Convolvulus arvensis</i> (akkerwinde, liseron des champs)
Pteridophyta	<ul style="list-style-type: none"> - <i>Equisetum arvense</i> (heermoes, prèle des champs) - <i>Marchantia polymorpha</i> (levermos, marchantia ou hépatique étoilée) - <i>Musci</i> (bladmos, mousse)

Possible crop-pest combinations		Efficacy testing	Selectivity testing
Pest (entry group)	Crop		
Weeds			
Graminées annuelles Eenjarige grasachtige onkruiden Graminées vivaces Doorlevende grasachtige onkruiden Dicotylées annuelles Eenjarige tweezaadlobbige onkruiden Dicotylées vivaces Doorlevende tweezaadlobbige onkruiden Or particular weed species	Ornamental trees and shrubs	Consider the requirements for broadleaf trees + coniferous trees	Consider the requirements for broadleaf trees + coniferous trees
	(see remark 1, bottom of this table)		
	Broadleaf trees and shrubs	1 crop species (if the efficacy on weeds or on a specific weed species is not known)	4 crop species
	coniferous trees and shrubs	1 crop species (if the efficacy on weeds or on a specific weed species is not known)	1 scale-conifer (Thuja, Chamaecyparis,...) + 1 needle-conifer (Picea, Pinus,...)
	Not woody ornamentals	Due to the large variety of crops and cropping systems (glasshouse – outdoor, pot plants, irrigation,...), a general procedure of testing cannot be easily established.	Due to the large variety of crops and cropping systems (glasshouse – outdoor, pot plants, irrigation,...), a general procedure of testing cannot be established easily.

1) Ornamental trees and shrubs (outdoor, protected)

The following parameters have to be considered and clearly described in the test protocol:

- Age of the crop plants
 - Seedling
 - In place for less than 1 growth season
 - In place for more than 1 growth season
- type of application
 - On the crop
 - ‘vegetative rust’
 - ‘growing plant’
 - Between the rows, not directly on the crop
- cultivation system
 - container
 - in the soil

2.6.5 Biological dossier of growth regulators :

Efficacy (and selectivity) have to be tested on a 2 crop species within each relevant subgroup.

Possible crop-pest combinations		Efficacy testing	Selectivity testing
Pest (entry group)	Crop		
Growth regulators			
croissance excessive des racines overmatige wortelvorming	Ornamentals or ornamental subgroup	2 plant species/subgroup	2 plant species/subgroup (if necessary)
croissance excessive des tiges ongewenste stengelgroei			
flétrissement précoce vroegtijdige verwelking			
Mauvaise ramification slechte vertakking			
levée faible lage opkomst			
Mauvaise mise à fleur slechte bloemzetting			
pédoncules floraux trop développés te lange bloemstelen			
développement racinaire insuffisant onvoldoende wortelvorming			

2.6.6 Biological dossier of nematicides

Soil disinfectants are authorized for 'Use which is not linked to a specific crop'. No specific authorization is granted in ornamentals

Authorizations for "common" nematicides can be granted in ornamentals

Possible crop-pest combinations		Efficacy testing	Selectivity testing
Pest (entry group)	Crop		
Nematoda			
<i>Nematoda</i> Nématodes Nématodes	Ornamentals	Testing should cover the main types of nematodes Free living nematodes, ex : Longidoridae, Pratylenchidae Root nematodes, ex : Heteroderidae, Meloidogynidae Stem nematodes, ex : Anguinidae Leafnematodes, ex : Aphelenchoïdes	1 plant species/subgroup

2.6.7 Biological dossier of bactericides

Possible crop-pest combinations		Efficacy testing	Selectivity testing
Pest (entry group)	Crop		
Bacteria			
<i>Agrobacterium</i>	Ornamentals	1 species	1 species /subgroup
<i>Corynebacterium (Rhodococcus)</i>	Ornamentals	1 species	1 species /subgroup
<i>Erwinia amylovora</i> Feu bactérien Bacterievuur	Broadleaf trees and scrubs	1 species	1 species /subgroup
<i>Erwinia carotovora</i> Pourriture bactérienne Bacterierot	ornamentals	1 species	1 species /subgroup
<i>Pseudomonas</i> Chancre bactérien Bacteriekanker	ornamentals	1 species	1 species /subgroup

2.6.8 Biological dossier of molluscicides, Rodenticides :

these products are authorized for 'Use which is not linked to a specific crop'. No specific authorization is granted in ornamentals.

3 Some definitions

- *Nursery (pépinières, boomkwekerij) :*

Plants protection products which are authorized in “ornamentals” or on “trees and shrubs” can be used in various situations including nurseries.

The following information should be added to clarify some uses

- Buffer zones should be established for ‘field crop’ and ‘vineyard’ scenarios if necessary.
- The ‘age’ of the crop can be mentioned under crop stage, e.g. when phytotoxicity is expected. This possibility still exists in the database.

It has been proposed to remove the uses ‘nursery’ from the database.

- *Lawns (gazons et pelouses, gazons en grasvelden)*

Specific authorizations are granted for lawns : mainly selective herbicides, some fungicides against ‘foot diseases’

- *Outdoor and under protection uses*

The authorizations are generally granted without specifying outdoor and indoor conditions. Deviations from this rule should be as limited as possible.

The authorizations can be restricted to outdoor or indoor use in the case of

- phytotoxicity,
- large differences in the application conditions (application rate, nb of applications, pests
- ...

- *Test protocols*

Testing has to be made according to the EPPO guidelines.

It is necessary to clearly describe the testing conditions :

Formulation name, a.s. concentrations, conditions of application (spray conc, spray volume, mode of application,...)

Crop species (cultivar,...)

Pest/ disease identification

Cropping conditions (glasshouse, outdoor, ..., environmental conditions (temperature, moisture, substrate ,....

Test guideline

Efficacy and selectivity results, failures.

	Erysiphe aquilegiae	
	Erysiphe cichoracearum	
	Erysiphe heraclei	
	Erysiphe horridula	
	Erysiphe knautiae	
	Erysiphe nitida	
	Erysiphe pisi	
	Erysiphe polygoni	
	Erysiphe polyphaga	
	Erysiphe ranuncoli	
	Erysiphe sp.	
	Microsphaera alni	
	Microsphaera alphitooides	
	Microsphaera berberidis	
	Microsphaera euonymi	
	Microsphaera juglandis	
	Microsphaera polonica	
	Microsphaera sp.	
	Phyllactinia corylea	
	Phyllactinia guttata	
	Phyllactinia sp.	
	Podosphaera aucupariae	
	Podosphaera clandestina	
	Podosphaera leucotricha	
	Podosphaera oxycanthae	
	Podosphaera sp.	
	Sphaerotheca fuliginea	
	Sphaerotheca fusca	
	Sphaerotheca humuli	
	Sphaerotheca macularis	
	Sphaerotheca mors-uvae	
	Sphaerotheca pannosa	
	Sphaerotheca sp.	
	Uncinula necator	
	Uncinula salicis	
	Uncinula sp.	
	Oidium chrysanthemi	
	Oidium sp.	
	Oidium violae	
Syringa		
Taraxacum		
Vitis		