

EXTRAPOLATION TABLE for EFFECTIVENESS of FUNGICIDES

► DISEASES ON FLOWER BULBS AND -TUBERS AND BULB- AND TUBER FLOWER CROPS

INTRODUCTION

The table provides detailed lists of acceptable extrapolations organized by crop groups, for regulatory authorities and applicants, in the context of the registration of plant protection products for minor uses. The table should be used in conjunction with the EPPO Standard PP1/257(1) - *Efficacy and crop safety extrapolations for minor uses*. It is important to ensure that expert judgment and regulatory experience are employed when using these tables. EPPO excludes liability as to the reliability of the information provided through these tables.

The scope for extrapolation may be extended as data and experience with a certain plant protection products increases. The applicant should always provide appropriate justification and information to support the proposed extrapolation. For example, comparability of target biology may be a relevant factor, either in extrapolating to other target species or for the same target onto another crop. For crops, factors such as comparable growth habit, structure etc. should be considered.

TABLE FORMAT

The main pest species for the crop group are listed in Column 1 (although this is not exhaustive), and the pest group to which they belong is specified in Column 2. Companies may choose if they wish to provide data only for individual named species, which would then appear individually listed on the label. But underlined species have been identified as key major targets and as such it is advisable to generate data on these. Furthermore, data on these species then allow a claim to be made for the whole pest group (as specified in Column 2), if required. If a claim for the whole pest group is required but there is no underlined species, then data must be generated on all listed species.

Column 3 indicates the key indicator crop(s) for the crop group. In some instances this may be only one specified crop. In other cases, when separated by an 'or', the company may choose from a range of alternatives within the group. Data generated on crops in Column 3 may be used to extrapolate to all crops listed in Column 4. However, it is preferable to have data on several of the crops within the crop group, but data on the indicator crop should be available.

Column 5 identifies whether data on other crops against the same target may help to reduce the amount of required data on the indicator crop. It may be possible for a direct extrapolation without the need for further data on the indicator crop (marked with an asterisk (*)). However, this is dependent on the extent of available data and similarity of crop/target biology. The company should provide an appropriate reasoned case when wanting to use supporting data from other crop groups.

Column 6 gives examples of acceptable extrapolations for a particular pest claim onto other minor use crops. This is not a comprehensive list. Whether extrapolation may be direct (no data, marked with an asterisk (*)), or require additional supporting data on the minor use crop, will again be dependent on the extent and relevance of the existing database and companies should provide an appropriate reasoned case. If the crop is considered to be a major crop in some countries then it may not be appropriate to include in this column, and further data would be required. Companies will need to justify the status of the major crop/minor use.

EXTRAPOLATION REGARDING PROTECTED/OUTDOOR SITUATIONS

Please note that where crops may be grown in both protected and field situations, and where significant differences are expected in pest relevance or crop agronomy between indoor and outdoor situations, it is important to generate a proportion of the data on crops grown in both situations to ensure the product has been tested under a suitable range of typical and challenging conditions.

EXTRAPOLATION TABLE for EFFECTIVENESS of FUNGICIDES

► DISEASES ON FLOWER BULBS AND -TUBERS AND BULB- AND TUBER FLOWER CROPS

Pest ^a		Crop: within Flower bulbs and -tuber crops		Crops: outside Flower bulbs and -tuber crops	
1 Pathogen species	2 Disease group name	3 Indicator crops	4 Extrapolation to other crops	5 Data from these crops can support the indicator crops (reduced data or no data *)	6 Extrapolation to crops (reduced or no data*)
<i>Botrytis</i> spp (<i>Botrytis tulipae</i> BOTRTU, <i>B. elliptica</i> BOTREL, <i>B. gladiolorum</i> SCLEDR and other <i>Botrytis</i> species)	Grey mould (<i>Botrytis</i> spp)	Tulip TULSS and Lily LILSS and Gladiolus GLASS	All flower bulb and flower tubercrops and bulb flowers	Any relevant ornamental	Any relevant ornamental
<i>Fusarium</i> spp (<i>Fusarium oxysporum</i> f.sp. <i>tulipae</i> FUSATU, <i>Fusarium oxysporum</i> f.sp. <i>gladioli</i> FUSAGL)	<i>Fusarium</i> spp.	Tulip TULSS and Gladiolus GLASS bulb or tuber treatment, forcing culture	All forcing culture flower bulb and flower tuber crops and bulb flowers	Any relevant ornamental	Any relevant ornamental
<i>Fusarium</i> spp (<i>Fusarium oxysporum</i> f.sp. <i>tulipae</i> FUSATU, <i>Fusarium oxysporum</i> f.sp. <i>gladioli</i> FUSAGL)	<i>Fusarium</i> spp.	Tulip TULSS and Gladiolus GLASS bulb or tuber treatment, outdoor culture	All outdoor culture flower bulb and flower tuber crops and bulb flowers	Any relevant ornamental	Any relevant ornamental

<i>Pythium</i> spp. 1PYTHG	<i>Pythium</i> spp.	Hyacinth HYASS <u>and</u> crocus 1CVOG <u>or</u> Iris IRISS outdoor culture, soil treatment	All outdoor culture soil treatment flower bulb and flower tuber crops and bulb flowers	Any relevant crop*	Any relevant crop*
<i>Pythium</i> spp. 1PYTHG	<i>Pythium</i> spp.	Tulip TULSS forcing culture, soil or substrate treatment	Forcing culture Iris IRISS and Lilly LILSS	Any relevant ornamental*	Any relevant ornamental *
<i>Rhizoctonia</i> spp (<i>Rhizoctonia tuliparum</i> SCLOTU)	<i>Rhizoctonia</i> spp.	Tulip TULSS outdoor production, soil treatment	All production culture of flower bulb and flower tuber crops in open field		
<i>Rhizoctonia solani</i> RHIZSO	<i>Rhizoctonia</i> spp.	Lily LILSS outdoor production, soil treatment	All production culture and forcing culture of flower bulb and flower tuber crops in open field		
<i>Rhizoctonia solani</i> RHIZSO	<i>Rhizoctonia</i> spp.	Lily LILSS <u>or</u> Tulip TULSS outdoor production, dip treatment	All production culture and forcing culture of flower bulb and flower tuber crops in open field		

^a The following pathogens were considered with respect to this crop group but no extrapolation was found to be possible: *Aspergillus niger* (hyacinth), *Penicillium* spp (Hyacinth, lilly, tulip)