

EXTRAPOLATION TABLE for EFFECTIVENESS of FUNGICIDES ► DISEASES ON POME FRUIT

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 TABLE for EFFECTIVENESS of FUNGICIDES

► DISEASES ON POME FRUIT:

MABSD apple *Malus domestica*, PYUCO pear *Pyrus communis*, CYDOB quince *Cydonia oblonga*, MABSY crab-apple *Malus sylvestris*, EIOJA loquat *Eryobotria japonica*, MSPGE medlar *Mespilus germanica*, PYUPC Nashi pear *Pyrus pyrifolia* var. *culta*, ABOME black chokeberry *Aronia melanocarpa*, SOUSS mountain ash *Sorbus* sp.

Pest		Crops: within the pome fruits		Crops: outside the pome fruits	
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>Podosphaera leucotricha</i> PODOLE <i>Phyllactinia guttata</i> PHYLGU	Powdery mildew	Apple MABSD	Pome fruit		Peach PRNPS, Common hazel CYLAV
<i>Venturia inaequalis</i> VENTIN <i>Venturia pyrina</i> VENTPI <i>Venturia carpophila</i> VENTCA	Scab	Apple MABSD	Pome fruit		Sweet almond PRNDU
<i>Diplocarpon mespili</i> DIPCMA	Leaf spot (or blight)	Pear PYUCO	Quince CYDOB		Sweet chestnut CSNSA
<i>Phoma pomorum</i> PHOMPO	Leaf spot	Apple MABSD	Pear PYUCO	Cherry	Sweet chestnut CSNSA

<i>Alternaria mali</i> ALTEMA (leaf and fruit blotch) or <i>Alternaria alternata</i> ALTEAL	Leaf spot (or blotch)	Apple MABSD	Pear PYUCO		
<i>Monilinia fructigena</i> MONIFG (“brown rot”) also caused by <i>M. laxa</i> MONILA	Blossom and twig blight, Fruit rot	Apple MABSD	Other relevant Pome fruits	Stone fruit	Stone fruit
<i>Glomerella cingulata</i> GLOMCI and <i>Glomerella acutata</i> COLLAC causing “bitter rot” on pome fruits and anthracnose of stone fruits <i>Gloeosporium coryli</i> on nuts(= <i>Cryptosporiopsis</i> sp., <i>Neofabraea malicorticis</i>) PEZIMA	Fruit rot, Anthracnose, Pre-harvest treatments	Apple MABSD	Other relevant Pome fruits	Stone fruit Strawberry FRASS	Common walnut IUGSS Common hazel CYLAV
<i>Fusarium</i> sp., <i>Aspergillus</i> sp.	Fruit rot, Post-harvest treatments	Apple MABSD and Pear PYUCO	Pome fruits		Banana MUBSS, Citrus CIDSS
<i>Neofabraea alba</i> PEZIAL (= <i>Pezicula alba</i>) <i>N. malicorticis</i> PEZIMA	Fruit rot (bullseye rot)	Apple MABSD	Pear PYUCO, Quince CYDOB		
<i>Phyllachora pomigena</i> GLODPO	Sooty blotch	Apple MABSD or Pear PYUCO	Quince CYDOB	Citrus	Citrus
<i>Penicillium</i> spp. PENISP mainly <i>P. expansum</i> PENIEX (“blue mold”)	Postharvest fruit rot	Apple MABSD or Pear PYUCO	Other relevant Pome fruits	Citrus	Citrus, Figs FIUCA, Pomegranate PUNGR
<i>Botryosphaeria obtusa</i> BOTSOB <i>B. dothidea</i> BOTSDO (“white mold”)	Fruit rot, Frog eye leaf spot	Apple MABSD	Other relevant Pome fruits	Plum PRNDO	
<i>Neonectria galligena</i> (“eye rot”) NECTGA	Fruit rot	Apple MABSD or Pear PYUCO	Other relevant <i>Malus</i> and <i>Pyrus</i> species		

<i>Neonectria galligena</i> NECTGA	Cankers	Apple MABSD or Pear PYUCO	Other relevant Pome fruit		Ornamentals
<i>Pezicula</i> spp. PEZISP (= <i>Neofabrea</i>) (mainly <i>N. alba</i> PEZIAL or <i>N. malicorticis</i> PEZIMA)	Cankers	Apple MABSD	Pear PYUCO, Quince CYDOB		Plum, Peach, Ornamentals
<i>Diaporthe eres</i> DIAPER ("Phomopsis canker" also on fruits)	Cankers	Apple MABSD	Pear PYUCO, Quince CYDOB	Cherry, Plum PRNDO,	Ornamentals
<i>Valsa cincta</i> VALSCI or <i>V.</i> <i>leucostoma</i> VALSLE or <i>V. ceratosperma</i> VALSCE	Cankers	Pear PYUCO	Apple MABSD	Relevant <i>Prunus</i> species	Ornamentals
<i>Eutypa lata</i> EUTYLA	Cankers	Apple MABSD	Other relevant Pome fruits	Grape VITVI	Apricot PRNAR Ornamentals
<i>Spilocaea oleaginae</i> (= <i>Cycloconium oleaginum</i>) CYCLOL	Olive knot	Malus sp. MABSS			Olive OLVSS

The following extrapolation possibilities are proposed to be addressed in tables covering generic pests

<i>Botryotinia fuckeliana</i> BOTRCI	Fruit rot	Apple MABSD	Other relevant Pome fruits	Grape, Plum, Cherry, Apricot, Nectarine	Figs FIUCA, kiwi ATIDE, citrus, Common hazel CYLAV
<i>Pseudomonas syringae</i> pv <i>avellanae</i> PSDMSY	Bacterial canker	Apple MABSD, Pear PYUCO			Sweet almond PRNDU
<i>Erwinia chrysanthemi</i> ERWICH	Bacterium disease	Apple MABSD			Pineapple ANHCO
<i>Phytophthora</i> spp. PHYTSP mainly <i>P. cactorum</i> PHYTCC or <i>P. syringae</i> PHYTSY	Fruit rot	Apple MABSD	Other relevant Pome fruits		Figs FIUCA, citrus, avocado PEBAM, kiwi ATIDE, common walnut IUGSS