

**EXTRAPOLATION TABLE for EFFECTIVENESS of FUNGICIDES****► DISEASES ON STONE 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 STONE FRUIT:**

PRNPS peach *Prunus persica* including PRNPN nectarine *P. persica* var. *nucipersica* (and similar hybrids), PRNAR apricot *P. armeniaca*, PRNDU almond *P. dulcis*, PRNDO plum *P. domestica*, PRNDD damson plum *P. damascene*, PRNDS Mirabelle *P. domestica* var. *syriaca*, PRNDI greengage (reine-claude) *P. domestica* subsp. *italic*, PRNDT bullace *P. domestica* subsp. *insititia*, PRNSN sloe *P. spinosa*, PRNSC Japanese plum *P. salicina*, PRNAV sweet cherry *P. avium*, PRNCE sour cherry *P. cerasus*

| Pests   |                         | Crops: within stone fruits |                                   | Crops: outside stone fruits  |   |
|---|-------------------------|----------------------------|-----------------------------------|--|---|
| 1<br>Pathogen species   | 2<br>Disease group name | 3<br>Indicator crops       | 4<br>Extrapolation to other crops | 5<br>Data from these crops can support the indicator crops (reduced data or no data *) | 6<br>Extrapolation to crops (reduced or no data*) |
| <i>Podosphaera pannosa</i><br>SPHRPA or <i>Podosphaera</i> spp. PODOSP  | Powdery mildew          | Peach PRNPS or Cherry      | Stone fruit                       | Pome fruit<br>Roses  | Avocado PEBAM,<br>Mango MNGIN,<br>Papaya CIAPA    |
| <i>Venturia carpophila</i> VENTCA                                       | Scab                    | Peach PRNPS or Almond      | Stone fruit                       |  |   |
| <i>Blumeriella jaapii</i><br>(= <i>Blumeriella hiemalis</i> )<br>BLUMJA | Leaf spot               | Cherry                     | Stone fruit                       |  |   |

|   |  |   |   |  |  |
|---|--|---|---|--|--|
| <i>Polystigma rubrum</i> POLTRU   | Leaf spot                              | Plum  | Stone fruit                             |  |  |
| <i>Apiognomonia erythrostoma</i> GNOMER   | Leaf spot (or scorch)                  | Apricot PRNAR or Cherry                     | Apricot PRNAR, Cherry                   |  |  |
| <i>Stigmina carpophila</i><br>(= <i>Wilsonomyces carpophilus</i> ) STIGCA   | Leaf spot (shot hole disease)          | Cherry or Apricot PRNAR                     | Other relevant Stone fruits             |  | Ornamental Prunus  |
| <i>Mycosphaerella</i> spp.<br>MYCOSP<br>(mainly <i>M. cerasella</i><br>MYCOCE and <i>M. pruni-persicae</i> MYCOPE)  | Leaf spot                              | Cherry or Peach PRNPS                       | Cherry, Peach PRNPS,<br>Nectarine PRNPN | Citrus ( <i>M. citri</i> MYCOCI),<br>Pear ( <i>M. pyri</i> MYCOPY) | Citrus ( <i>M. citri</i> MYCOCI), Pear<br><i>M. pyri</i> MYCOPY) |
| <i>Taphrina</i> spp. TAPHSP<br>(mainly <i>T. deformans</i><br>TAPHDE)   | Leaf curl                              | Peach PRNPS or<br>Nectarine PRNPN           | Other relevant Stone fruits             |  |  |
| <i>Tranzschelia</i> spp. 1TRANG<br>(mainly <i>T. discolor</i> TRANDI,<br><i>T. pruni-spinosae</i> TRANPS)   | Rust                                   | Plum or Peach PRNPS                         | Other relevant Stone fruits             |  | Raspberry RUBID, Sweet almond PRNDU                              |
| <i>Monilinia</i> spp. MONISP<br>mainly <i>M. laxa</i> MONILA  | Blossom & twig blight<br>and Fruit rot | Peach PRNPS or apricot<br>or Plum or Cherry | Other relevant Stone fruits             | Apple MABSD, Pear PYUCO, Quince CYDOB,                             | Blueberry ( <i>M. vaccinii-corymbosi</i> MONIVC),                |
| <i>Glomerella cingulata</i><br>GLOMCI and <i>Glomerella acutata</i> COLLAC causing<br>“bitter rot” on pome fruits and<br>anthracnose of stone fruits<br><i>Gloeosporium coryli</i> on nuts<br>(= <i>Neofabraea malicorticis</i><br>= <i>Cryptosporiopsis</i> sp.)<br>PEZIMA | Fruit rot, Antracnose                  | Peach PRNPS or Cherry                       | Other relevant Stone fruits             | Pear PYUCO   | Common walnut IUGRE  |
| <i>Botryosphaeria obtusa</i><br>BOTSOB<br><i>B. dothidea</i> BOTSDO (“white mold”)  | Fruit rot                              | Peach PRNPS                                 | Other relevant Stone fruits             | Grape VITVI, Quince CYDOB, Pear PYUCO,                             |  |

|  |                                   |  |   |                                  |   |
|--|-----------------------------------|--|---|----------------------------------|---|
| <i>Diaporthe eres</i> DIAPER<br>("Phomopsis canker" also on fruits)  | Cankers                           | Peach PRNPS                                    | Cherry, Plum,                                   | Pear PYUCO, Quince CYDOB         |   |
| <i>Valsa cincta</i> VALSCI or <i>V. leucostoma</i> VALSLE or <i>V. ceratosperma</i> VALSCE                     | Cankers                           | Peach PRNPS or Apricot PRNAR                   | Other relevant <i>Prunus</i> species            |                                  |   |
| <i>Chondrostereum purpureum</i> STERPU ("silver blight")   | Cankers (also leaf silver blight) | Plum or peach PRNPS                            | Cherry, Nectarine PRNPN, Almond, Apricot PRNAR  | Apple MABSD, Pear PYUCO,         |   |
| <i>Phomopsis amygdali</i> FUSCAM   | Cankers                           | Peach PRNPS                                    | Plum, Almond, Nectarine PRNPN, Apricot PRNAR    |                                  |   |
| <i>Eutypa lata</i> EUTYLA  | Cankers                           | Apricot PRNAR                                  | Almond, Plum                                    | Relevant Pome fruit, Grape VITVI | Grape VITVI, Walnuts IUGRE, Hazelnuts CYLAV, Citrus, Figs, FIUCA Currents |
| <i>Cytospora cincta</i> (= <i>Valsa cincta</i> ) VALSCI  | Dieback of fruit trees            | Apricot PRNAR, Peach PRNPS, Sweet almond PRNDU | Sweet almond PRNDU                              |                                  |   |
| <b>The following extrapolation possibilities are proposed to be addressed in tables covering generic pests</b> |                                   |  |   |                                  |   |
| <i>Pseudomonas syringae</i> pv <i>avellanae</i> PSDMSY   | Bacterial canker                  | Peach PRNPS, Sweet, almond PRNDU               | Plum, Cherry, apricot PRNAR, Sweet almond PRNDU |                                  |   |
| <i>Verticillium dahliae</i> VERTDA   | Verticillium wilt                 | Peach PRNPS, Sweet, almond PRNDU               | All cherry, apricot PRNAR, Sweet almond PRNDU   |                                  | Ornamentals   |

|   |                   |                                  |                             |   |  |
|---|-------------------|----------------------------------|-----------------------------|---|--|
| <i>Xanthomonas</i> sp. XANTSP,<br><i>Erwinia chrysanthemi</i><br>ERWICH             | Bacterium disease | Peach PRNPS                      |                             |   | Mango MNGIN,<br>Papaya CIAPA,<br>Pineapple<br>ANHCO, Citrus<br>CIDSS, Walnuts<br>IUGRE,<br>Ornamentals |
| <i>Botryotinia fuckeliana</i><br>BOTRCI   | Fruit rot         | Peach PRNPS                      | Other relevant Stone fruits | Grape, Pear PYUCO,<br>Quince CYDOB,<br>Common hazel CYLAV | Figs FIUCA, Kiwi<br>ATIDES, Citrus   |
| <i>Penicillium</i> spp. PENISP<br>mainly <i>P. expansum</i> PENIEX<br>("blue mold") | Fruit rot         | Cherry or Peach PRNPS<br>or Plum | Other relevant Stone fruits | Grape, Citrus   | Grape VITVI,<br>Citrus, Figs<br>FIUCA,<br>Pomegranate<br>PUNGR   |