EXTRAPOLATION TABLE for EFFECTIVENESS of INSECTICIDES
►PESTS IN STRAWBERRIES

INTRODUCTION

The table provides detailed lists of acceptable extrapolations organized by crop groups[1], 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.

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[1] In this table the crop group is constituted by a single crop FRASS *Fragaria* sp.

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 <u>not</u> 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 INSECTICIDES
►PESTS IN STRAWBERRIES
FRASS *Fragaria* sp.

Pests		Crops: Strawberry		Crops: outside Strawberry	
1 **Pest species**	**2** **Pest 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*)**
Aphis gossypii APHIGO, *Rhodobium porosum* METOPO <u>(for protected conditions)</u>, *Chaetosiphon fragaefolii* CHTSFR, *Fimbriaphis fimbriata* FIMBFI, *Macrosiphum rosae* MACSRO, *Aphis fabae* APHIFA	Aphids	Strawberry FRASS (protected conditions)	Strawberry FRASS (field conditions)	Ornamentals, Lettuce LACSA	Ornamentals, Tomato LYPES Cucumber CUMSC
Anthonomus rubi ANTHRU	Blossom weevil	Strawberry FRASS			Blackberry RUBFR, Raspberry RUBID, *Byturus tomentosus* BYTUTO in raspberry
Otiorhynchus sulcatus OTIOSU, *Phyllobius pomaceus* PLLBPM	Weevils (adults)	Strawberry FRASS		Tree nursery* (adults)	Grape VITSS, Peach PRNPS (protected conditions), Crops for seed production, Perennial ornamentals

Tetranychus urticae TETRUR	Mites	Strawberry FRASS		Cucumber CUMSC Tomato LYPES Apples MABSD Ornamentals	Herbs, crops for seed production, Ornamentals Apple MABSD, Cucumber CUMSC
Phytonemus pallidus subsp. fragariae (*Tarsonemus pallidus*) TARSPA	Mites	Strawberry FRASS		Ornamentals	Crops for seed production Ornamentals
Frankliniella occidentalis FRANOC, *Thrips tabaci* THRITB*, Thrips fuscipennis* THRIFU	Thrips	Strawberry FRASS (protected conditions)	Strawberry FRASS (field conditions)	Ornamentals, Solanaceae	Rubus sp. RUBSS, Vitis sp. VITSS, Peach sp. Herbs, Crops for seed production, Tomato LYPES
Cixius wagnerii CIXIWA	Leafhoppers	Strawberry FRASS		Ornamentals Potato	Herbs, Crops for seed production, Celeriac APUGR
Drosophila suzukii DROSSU		Strawberry FRASS		Bush fruit, Cherries	Bush fruit, Cherries Plum PRNDO, Elderberry 1SAMG
The following extrapolation possibilities are proposed to be addressed in tables covering generic pests					
Otiorhynchus sulcatus OTIOSU, *Phyllobius pomaceus* PLLBPM	Weevils (larvae)	Strawberry FRASS		Tree nursery* (larvae)	Grape VITSS, Peach PRNPS (indoor), Perennial ornamentals
Autographa gamma PYTOGA, *Cacoecimorpha pronubana* TORTPR *Plusia* sp. PLUSSP *Plutella xylostella* PLUTMA *Sparganothis pilleriana* SPARPI	Caterpillars	Strawberry FRASS		Apples, ornamentals	Ornamentals, Crops for seed production
Trialeurodes vaporariorum TRIAVA, *Bemisia tabaci* BEMITA	Whiteflies	Strawberry FRASS		Ornamentals	Tomato LYPES, Cucumber CUMSC

Agrotis sp. AGROSP	Cutworms	Strawberry FRASS	Vegetables		Seeds crops, Vegetables
Meloidogyne hapla MELGHA *Pratylenchus penetrans* PRATPE, *Ditylenchus dipsaci* DITYDI, *Longidorus* spp. *Xiphinema* spp. (vectors of virus; ArMV and SLRSV)	Nematodes	Strawberry FRASS		Soil treatment prior to any other susceptible crop	Soil treatment prior to any other susceptible crop
Aphelenchoides fragariae, *Aphelenchoides ritzemabosi*,	Nematodes	Strawberry FRASS		Ornamentals	Ornamentals, seeds crops
Plagiognatus arbustorum, *Lygus rugulipennis*, *L pabulinus*	Bug	Strawberry FRASS		Cucumber CUMSC	Cucumber CUMSC