Thiamethoxam

NOTIFICATION OF AN ACTIVE SUBSTANCE UNDER COMMISSION REGULATION (EU) 844/2012

DOCUMENT M-CA, Section 9

Ecotoxicological Studies

LITERATURE DATA

Version history[1]

Date	Data points containing amendments or additions and brief description	Document identifier and version number

[1] It is suggested that applicants adopt a similar approach to showing revisions and version history as outlined in SANCO/10180/2013 Chapter 4 How to revise an Assessment Report

Table of Contents

CA 9 LITERATURE DATA

CA 9.1 Title

This document is a Literature Review Report for Thiamethoxam, relevant metabolite(s) and EU representative formulations A9584C (Actara 25WG®) and A9567R (Cruiser 600FS®).

CA 9.2 Author(s) of the review

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CA 9.3 Summary: A brief summary indicating the purpose of the report, the methodology employed and the results obtained

This report summarises the search for "scientific peer-reviewed open literature on thiamethoxam and its metabolites dealing with ecotoxicological data which may impact health, the environment and non-target species published within the last ten years before the date of submission of the dossier" in accordance with Article 8(5) of Regulation (EC) No. 1107/2009.

The exact search strategy is detailed in the Tables 9.5-1 to 5 but a summary of the methodology employed is given below.

1. A very broad search was conducted in 16 scientific source databases (detailed in Table 9.5-2) for thiamethoxam and its metabolites using the search terms listed in CA 9.5.1.
2. Duplicates titles from between the data bases were automatically removed from the output.
3. A rapid assessment of the titles was conducted to remove any additional duplicates and any obviously irrelevant titles (where enough information was available from the title alone).
4. A further rapid assessment was conducted using summary abstracts and any clearly irrelevant titles were removed.
5. A detailed assessment of the full-text documents for the remaining titles was conducted using the criteria developed for study relevance (see Table 9.4.2-1).
6. Any relevant papers were highlighted and assessed for reliability.

During the review of the original search, it was noted that the search term 'clothianidin' was not included. As this is a relevant metabolite of thiamethoxam, a separate search was conducted with this search term to ensure all potentially relevant open literature was reviewed.

An overview of the results is summarised in the table below and full details are provided in Section 9.5.

Data requirement(s) captured in the search	**Number of results**			
	Initial search	**Top-up search**	**Clothianidin search**	**Total**
Total number of *summary records* retrieved after *all** searches of peer-reviewed literature (excluding duplicates)	1819	94	735	2648
Number of *summary records* excluded from the search results after rapid assessment for relevance**	1531	74	673	2278
Total number of *full-text* documents assessed in detail*	288	20	62	370
Number of *studies* excluded from further consideration after detailed assessment for relevance	261	17	52	330
Number of *studies* not excluded for relevance after detailed assessment (i.e. relevant studies and studies of unclear relevance)	27	3	10	40

*both from bibliographic databases and other sources of peer-reviewed literature
**aligned with EFSA Journal 2011; 9(2):2092: rapid assessment means exclusion of "obviously irrelevant records" based on titles.

CA 9.4 Protocol

CA 9.4.1 Statement of the objective of the review

The review has the objective of identifying "scientific peer-reviewed open literature on Thiamethoxam dealing with ecotoxicology studies which may impact health, the environment and non-target species and published within the last *ten* years before the date of submission of the dossier" in accordance with Article 8(5) of Regulation (EC) No. 1107/2009.

CA 9.4.2 Criteria for relevance with which decisions to select studies in the dossier were made

Table 9.4.2-1: List of criteria for relevance for each data requirement

Data requirements(s) (indicated by the correspondent CA data point (s))	Criteria for relevance
Ecotoxicological studies (CA 8.1 to 8.15)	Laboratory Studies 1. Well defined test material (including purity/content) 2. Number of organisms per group sufficient to establish a statistical significance 3. Applicable test species 4. Test organisms are not previously exposed to the test material or other contaminants 5. Several dose levels tested, at least 3, including a negative control, to establish a dose-response, unless the study design is specifically a limit test. Control must be run concurrently with treatments and mortality to be within test validity criteria. 6. Exposure route is clearly defined, is environmentally relevant and, if appropriate, suitably quantified. 7. If conducted, analytical confirmation of dosing or sufficient information provided to determine concentrations were within acceptable range (e.g. 80-120%) of nominal targets. 8. Effects are related to single test item, and a quantitative relationship exists between the reported endpoint and risk assessment endpoints of growth, mortality, behaviour and/or reproduction. 9. Sufficient experimental information provided to substantiate and evaluate whether the study conclusions and endpoints are robust. 10. Study conditions should not differ significantly from recommended protocols. 11. Study conditions should not interfere with the interpretation of the study results. Field Studies 12. Appropriate and relevant geoclimatic conditions (setting), appropriate application method and rates (exposure) and observation data (biological relevance) to derive endpoints. 13. Well defined test material (including purity/content) 14. Applicable test species 15. Exposure route is clearly defined, is environmentally relevant and, if appropriate, suitably quantified. 16. Sufficient experimental information provided to substantiate and evaluate whether the study conclusions and endpoints are robust (e.g. pre-treatment details, characterisation of physico-chemical parameters, replication, statistical methods and appropriate sampling regime). 17. Study conditions should not differ significantly from recommended protocols, if available for field study. Study conditions should not interfere with the interpretation of the study results

* Recommended protocols under each data point include but are not limited to those listed in the Commission Communications 2013/C 95/01 and 2013/C 95/02

CA 9.5 Search methods

Date of initial search	19 January 2015
Date of most recent update to search	27 April 2015
Date of ‘clothianidin’ term search	27 April 2015
Date span of the search	10 years

Table 9.5-1: Detailed Search Parameters for Ecotoxicological studies (CA 8.1 to 8.15)

Search Strategy	
L1	QUE (153719-23-4 OR (A(W)97565N) OR A97565N OR A9765N)
L2	QUE (ACTARA(W)(25WG OR (25(W)WG) OR 2GR OR (2(W)GR)))
L3	QUE ((A(W)9765N) OR (ADAGE(W)(5FS OR (5(W)FS))) OR TIAMETHOXAM?)
L4	QUE (THIAMETHOXAM? OR CGA293343 OR (CGA(W)293343) OR DIACLODEN?)
L5	QUE ((CRUISER(W)(350FS OR (350(W)FS) OR 5FS OR (5(W)FS))))
L6	QUE ((CRUISER(W)(A9765 OR (A(W)9765))) OR THIAMETOXAM?)
L7	QUE ((ACTARA OR CRUISER OR FLAGSHIP OR ADAGE)(10A)INSECTICID?)
L8	QUE L1-7 THIAMETHOXAM
L9	QUE (135018-15-4 OR 153719-38-1 OR 120740-08-1 OR 131748-59-9)
L10	QUE (915125-06-3 OR 634192-72-6 OR 902493-06-5 OR 902493-08-7)
L11	QUE (4245-76-5 OR 868542-26-1 OR 635283-91-9 OR 939773-18-9)
L12	QUE (CGA265307 OR CGA282149 OR CGA309335 OR CGA322704)
L13	QUE (CGA(W)(265307 OR 282149 OR 309335 OR 322704))
L14	QUE (CGA353042 OR CGA353968 OR CGA355190 OR NOA404617)
L15	QUE ((CGA(W)(353042 OR 353968 OR 355190)) OR (NOA(W)404617))
L16	QUE (NOA405217 OR NOA407475 OR NOA421275 OR NOA459602)
L17	QUE (NOA(W)(405217 OR 407475 OR 421275 OR 459602))
L18	QUE (SYN501406 OR (SYN(W)501406))
L19	QUE (N(2W)2(W)CHLOROTHIAZOL(W)5(W)YL(W)METHYL(2W)N(2W) METHYLGUANIDINE?)
L20	QUE (3(W)METHYL(W)4(W)NITROIMINO(W)TETRAHYDRO(W)1(W)3(W)5(W) OXADIAZINE)
L21	QUE (2(W)CHLORO(W)5(W)THIAZOLYL(2W)METHYLAMINE)
L22	QUE (2(W)CHLORO(W)5(2W)AMINOMETHYL(W)THIAZOLE)
L23	QUE (2(W)CHLORO(W)5(W)THIAZOLEMETHANAMINE)
L24	QUE (2(W)CHLORO(W)5(W)THIAZOLEMETHYLAMINE)
L25	QUE (5(2W)AMINOMETHYL(2W)2(W)CHLOROTHIAZOLE)
L26	QUE (150221-74-2 OR (1(W)METHYL(W)3(W)NITROGUANIDINE))
L27	QUE (N(W)METHYL(W)N(2W)NITROGUANIDINE)
L28	QUE ((N(W)METHYL(W)N(2W)NITRO)(2A)GUANIDINE)
L29	QUE (5(2W)5(W)METHYL(W)4(W)NITROIMINO(2W)1(W)3(W)5(W)OXADIAZINAN)
L30	QUE (L29(W)3(W)YLMETHYL(W)THIAZOLE(W)2(W)SULFONATE)
L31	QUE (5(2W)N(2W)METHYL(W)N(3W)NITRO(W)GUANIDINOMETHYL)
L32	QUE (L31(2W)THIAZOLE(W)2(W)SULFONATE)
L33	QUE (L9-L29 OR L30 OR L32) THIAMETHOXAM METABOLITES
Plus	
L1	QUE (210880-92-5 OR CLOTHIANIDIN? OR 205510-53-8 OR (TITAN(W)ST))
L2	QUE (CLUTCH OR DANTOP OR DANTOTSU OR PONCHO OR ARENA)
L3	QUE (L2(10A)(INSECTICID? OR NEONICOTIN?))
L4	QUE (PONCHO(W)(250 OR 600)) OR (TAKELOC(W)(CLMN OR MC OR MC50#))
L5	QUE (DANTOTSU(W)(16WSG OR (16(W)WSG)))
L6	QUE (L1 OR L3-5)
Plus	
L1	QUE (RIPARIAN? OR REPTILE? OR SNAKE? OR LIZARD?)
L2	QUE (TORTOISE? OR TURTLE? OR TERRAPIN? OR CROCODIL?)
L3	QUE (ALLIGATOR? OR CAIMAN? OR GHARIAL? OR HOVERFLIES)
L4	QUE ((MEADOW#(W)VOLE#) OR PSEUDOKIRSCHNERIELLA)
L5	QUE (RHAPHIDOCELIS OR NITZSCHIA OR CYCLOTELLA OR MICROCYSTIS)
L6	QUE (OSCILLATORIA OR APHANIZOMENON OR ANKISTRODESMUS)

Search Strategy		
L7	QUE	(TEILINGRIA OR MONORAPHIDIUM OR RADIOCOCCACAE OR TETRASPORALES)
L8	QUE	(TETRAEDRON OR TREUBARIA OR WILLEA OR COSMOCLADIUM)
L9	QUE	(HYPOASPIS OR (SOIL(3A)MICROORGAN?) OR ECHINOCHLOA OR SPARTINA)
L10	QUE	(SALVINIA OR NAJAS OR CALLITRICHE OR MYOSOTIS OR STRATIOTES)
L11	QUE	(HIPPURUS OR PERSICARIA OR CLOEON? OR CORBICULA?)
L12	QUE	(NEOCARIDINIA? OR NEOCARIDINA? OR MYSID? OR CICHLIDAE)
L13	QUE	(CICHLID# OR LEPOMIS? OR SERRANIDAE OR PERCIFORMES)
L14	QUE	(ICTALURUS? OR POECILIA? OR ORYZIAS? OR GASTEROSTEUS?)
L15	QUE	(GASTEROSTEIDAE OR SALVELINUS OR BRACHYDANIO? OR CARASSIUS?)
L16	QUE	(MISGUMUS? OR CYPRINODON? OR FUNDULUS? OR MISGURNUS?)
L17	QUE	(BREAM OR ROTIFER# OR GAMMARUS OR GAMMARID? OR MAYFLY?)
L18	QUE	(BIVALVE# OR MUSSEL# OR MOLLUSK# OR MOLLUSC# OR BUFO)
L19	QUE	(NEWT# OR SCALLOP# OR CLAM# OR GAMBUSIA OR OREOCHROMIS)
L20	QUE	(OSTRAC? OR TUBIFEX? OR TURBELLARIA OR COPEPODA)
L21	QUE	(PREDACE? OR PREDACI? OR PARASITOID? OR APIS OR APIDAE)
L22	QUE	(BOMBUS OR BOMBINAE OR WORM# OR LUMBRICIDAE OR LUMBRICUS)
L23	QUE	(ALLOBOPHORA? OR DENDROBAENA? OR APORRECTODEA? OR DENDRODRILUS?)
L24	QUE	(EISENIA? OR OCTOLASION? OR (LACE(W)WING#) OR NEUROPTER?)
L25	QUE	(CARABID? OR CARBUS OR STAPHYLINID? OR COCCINEL? OR ADALIA?)
L26	QUE	(STETHORUS? OR SCYMNUS? OR WASP# OR VESPIDAE OR SPHECOIDEA)
L27	QUE	(SPHECIDAE OR STIZIDAE OR OPIUS OR (ICHNEUMON(W)FL?))
L28	QUE	(ICHNEUMONID? OR BRACONID? OR CHALCID? OR CYNIP? OR APHIDI?)
L29	QUE	(EUCOILID? OR IBALIID? OR FIGITID? OR EURYTOM? OR TORYM?)
L30	QUE	(ORYM? OR EUCHARIT? OR PERILAMP? OR PTEROMAL? OR CHRYSOLAMP?)
L31	QUE	(EUPELM? OR ENCYRT? OR SIGNIPHOR? OR APHELIN? OR ELASMID?)
L32	QUE	(ELASMUS OR TETRACAMP? OR MYMAR? OR HELOR? OR PROCTOTRUP?)
L33	QUE	(DIAPRI? OR SCELION? OR PLATYGASTR? OR PLATYGASTER?)
L34	QUE	(CERAPHRON? OR MEGASPIL? OR ARANE? OR OPILION? OR PHALANG?)
L35	QUE	(ARACHNID? OR HARVESTM? OR DADDYLONGLEG? OR (DADDY(W)LONG (W)LEG?))
L36	QUE	((DADDY(W)LONGLEG?) OR COLLEMB? OR (SPRING(W)TAIL?) OR CYDNODROMUS?)
L37	QUE	(PARDOSA? OR ORIUS? OR TYPHLODROM? OR PHYTOSEIULUS? OR SYRPHID?)
L38	QUE	(METASYRPHUS? OR SYRPHUS? OR EUPEODES? OR EPISYRPHUS? OR SYRPHIAN?)
L39	QUE	(EPISTROPHE? OR AMBLYSEIUS? OR POECILUS? OR TRECHUS? OR BEMBIDION?)
L40	QUE	(NEBRIA? OR PTEROSTICHUS? OR CALOSOMA? OR TACHYPORUS? OR NABIDAE?)
L41	QUE	(GEOCORIS? OR HYMENOPT? OR HAEMATOLOECHA? OR CHRYSOPID? OR SYMPHYTA?)
L42	QUE	(OULEMA? OR APHYTIS? OR BATHYPLECTES? OR LINPHIIDAE? OR LYNPHIIDAE?)
L43	QUE	(LINYPHIIDAE? OR ERIGONE? OR BATHYPHANTES? OR MEIONETA? OR OEDOTHORAX?)
L44	QUE	(LEPTHYPHANTES? OR LYCOSID? OR LYCOSA? OR CHRYSOPA? OR DACNUSA?)
L45	QUE	(CYRTORHINUS? OR CRYPTOLAEMUS? OR ZETZELLIA? OR LEPTOMASTIX?)
L46	QUE	(TRICHOGRAMMA? OR ENCARSIA? OR MACROLOPHUS? OR CHRYSOPERLA?)
L47	QUE	(ALEOCHARA? OR CHRYSOPID# OR CHRYSOPIDAE OR DIABROTICA)
L48	QUE	(PALEXORISTA? OR MAMMAL## OR ANIMAL? OR RABBIT? OR RODENT#)
L49	QUE	(BLACKBIRD# OR (BLACK(W)BIRD#) OR ((TURDUS OR T)(W)MERULA))
L50	QUE	(CHAFFINCH? OR ((FRINGILLA OR F)(W)COELEBS) OR GREENFINCH?)
L51	QUE	(((CARDUELIS OR C)(W)CHLORIS) OR SONGTHRUSH?)
L52	QUE	((SONG(W)THRUSH?) OR ((TURDUS OR T)(W)PHILOMELOS) OR WREN#)
L53	QUE	(((TROGLODYTES OR T)(W)TROGLODYTES) OR (WILLOW(W)WARBLER#))
L54	QUE	(((PHYLLOSCOPUS OR P)(W)TROCHILUS) OR (GREAT(W)TIT#))

Search Strategy		
L55	QUE	(((PARUS OR P)(W)MAJOR) OR ROBIN# OR GOLDFINCH?)
L56	QUE	(((ERITHACUS OR E)(W)RUBECULA) OR DUNNOCK#)
L57	QUE	(((CARDUELIS OR C)(W)CARDUELIS) OR LINNET#)
L58	QUE	(((PRUNELLA OR P)(W)MODULARIS) OR SKYLARK# OR (SKY(W)LARK#))
L59	QUE	((HEDGE(W)(SPARROW# OR ACCENTOR#)))
L60	QUE	(((CARDUELIS OR C)(W)CANNABINA) OR ((ALAUDA OR A)(W)ARVENSIS))
L61	QUE	((RED(W)LEGGED(W)PARTRIDGE#) OR ((ALECTORIS OR A)(W)RUFA))
L62	QUE	((MEADOW(W)PIPIT#) OR MEADOWPIPIT# OR ((ANTHUS OR A)(W) PRATENSIS))
L63	QUE	(LAPWING# OR ((VANELLUS OR V)(W)VANELLUS) OR PEEWIT#)
L64	QUE	(STARLING# OR ((STURNUS OR S)(W)VULGARIS))
L65	QUE	((TURTLE(W)DOVE#) OR ((STREPTOPELIA OR S)(W)TURTUR))
L66	QUE	(YELLOWHAMMER# OR (YELLOW(W)HAMMER#) OR (YELLOW(W)WAGTAIL#))
L67	QUE	(((EMBERIZA OR E)(W)CITRINELLA) OR (YELLOW(W)WAG(W)TAIL#))
L68	QUE	(((MOTACILLA OR M)(W)FLAVA) OR (FAN(W)TAILED(W)WARBLER#))
L69	QUE	((GREY(W)LAG(W)G!!SE) OR ((ANSER OR A)(W)ANSER))
L70	QUE	(REEDBUNTING# OR (REED(W)BUNTING#) OR ((EMBERIZA OR E)(W) SCHOENICLUS))
L71	QUE	(CHAFFINCH? OR BLUETIT? OR (BLUE(W)TIT?))
L72	QUE	(((PARUS OR P)(W)CAERULEUS) OR (SYLVIA(W)COMMUNIS))
L73	QUE	(((GALERIDA OR G)(W)CRISTATA) OR (TREE(W)SPARROW#))
L74	QUE	(((COTURNIX OR C)(W)COTURNIX) OR (GREY(W)PARTRIDGE#))
L75	QUE	(((PERDIX OR P)(W)PERDIX) OR ((PHASIANUS OR P)(W)COLCHICUS))
L76	QUE	(((MILIARIA OR M)(W)CALANDRA?) OR GREYLAGG!!SE)
L77	QUE	((GREYLAG(W)G!!SE) OR ((COLUMBA OR C)(W)PALUMBUS?))
L78	QUE	(((STREPTOPELIA OR S)(W)(ORIENTALIS? OR RISORIA?)))
L79	QUE	(((MOTACILLA OR M)(W)ALBA?) OR (CRESTED(W)LARK#))
L80	QUE	((WHITE(W)WAGTAIL#) OR (WOOD(W)PIGEON#) OR (BIRD(W)LIFE))
L81	QUE	((SONG(W)BIRD#) OR VANELLUS? OR (PEE(W)WIT#))
L82	QUE	(AVIFAUNA? OR (AVI(W)FAUNA?) OR SONGBIRD?)
L83	QUE	(ORNITHOLOG? OR PASSERINE? OR WOODPIGEON#)
L84	QUE	(((PASSER OR P)(W)MONTANUS) OR QUAIL# OR (CALANDRA(W)LARK#))
L85	QUE	(CISTICOLA? OR (Z(W)CISTICOLA?) OR BIRDLIFE)
L86	QUE	(GEESE OR GOOSE OR SPARROWS OR PIGEONS OR LARK#)
L87	QUE	(WARBLER# OR PARTRIDGE# OR BUNTING# OR WAGTAIL#)
L88	QUE	(WHITETHROAT# OR PIED# OR (WHITE(W)THROAT#))
L89	QUE	((FORAGING OR FARMLAND OR GRASSLAND)(3A)BIRD#)
L90	QUE	(BLUEBIRD# OR (ROCK(W)PTARMIGAN#) OR (BLACK(W)REDSTART#))
L91	QUE	((PREDATOR? OR NONTARGET? OR (NON(W)TARGET))(3A)BIRD#)
L92	QUE	((CORN(W)BUNTING#) OR SERINS OR SERINUS)
L93	QUE	(L49 OR L50 OR L51 OR L52 OR L53 OR L54 OR L55 OR L56 OR L57 OR L58 OR L59 OR L60 OR L61 OR L62 OR L63 OR L64 OR L65 OR L66 OR L67 OR L68 OR L69 OR L70 OR L71 OR L72 OR L73 OR L74 OR L75 OR L76 OR L77 OR L78 OR L79 OR L80 OR L81 OR L82 OR L83 OR L84 OR L85 OR L86 OR L87 OR L88 OR L89 OR L90 OR L91 OR L92)
L94	QUE	L93 NOT (JAPANESE? OR JAPONICA?)
L95	QUE	(((SMALL OR WILD)(3A)MAMMAL#) OR (WILD(3A)ANIMAL?))
L96	QUE	(VOLE# OR GLIS OR DORMOUSE OR DORMICE OR ELIOMY#)
L97	QUE	(LEROT# OR LAGOMORPH# OR LEPORID? OR LEPUS OR ORYCTOLAGUS?)
L98	QUE	(HARE# OR SORICIDAE? OR SOREX? OR NEOMY# OR CROCIDURA?)
L99	QUE	(SHREW# OR WOODMOUSE OR WOODMICE OR APODEMUS? OR MICROTUS?)
L100	QUE	(CLETHRIONOMYS? OR CRICETIDAE? OR MICROTIN?)
L101	QUE	(RAPTOR# OR MARMOSET# OR GOPHER# OR GRASSCUTTER#)
L102	QUE	((PREDATOR? OR NONTARGET? OR (NON(W)TARGET?))(3A)MAMMAL#)
L103	QUE	((WOOD(W)(MOUSE OR MICE)) OR ARVICOLA?)
L104	QUE	(MEADOW#(W)VOLE#)
L105	QUE	(L95 OR L96 OR L97 OR L98 OR L99 OR L100 OR L101 OR L102 OR L103

Search Strategy
OR L104)
L106 QUE (ECOTOX? OR LC50 OR ((LC OR EC OR LR)(W)50) OR EC50 OR LR50)
L107 QUE (ECO OR ECOL OR ECOLOG? OR ENV OR ENVIRONM? OR AQUATIC?)
L108 QUE (L107(5A)(TOX? OR RISK? OR IMPACT? OR EFFECT?))
L109 QUE (AQUATIC? OR FRESHWATER? OR (FRESH(W)WATER?))
L110 QUE (FLORA OR FAUNA OR BIOTA OR ORGANISM? OR INSECT?)
L111 QUE (ENVIRONM? OR LIFE OR INVERTEB? OR CRUSTACE? OR SPECIES)
L112 QUE (ENTOMOFAUNA OR (ENTOMO(W)FAUNA))
L113 QUE (L109(5A)(L110 OR L111 OR L112))
L114 QUE (MAGNA? OR (D(W)MAGNA?) OR CHIRONOM? OR BRACHIONUS?)
L115 QUE (LIMNEA? OR CRASSOSTREA? OR ALGA# OR FISH OR FISHES)
L116 QUE (ONCORHYNCHUS? OR SALMONIDAE? OR CYPRINUS? OR CYPRINID?)
L117 QUE (PIMEPHALES? OR PISCES OR TROUT OR SUNFISH? OR CARP)
L118 QUE (MINNOW? OR (F(W)MINNOW?) OR CATFISH? OR ZEBRAFISH?)
L119 QUE (GOLDFISH? OR (ZEBRA(W)DANIO#) OR GUPPY OR GUPPIES)
L120 QUE (KILLFISH? OR FATHEAD? OR BLUEGILL? OR SALMON#)
L121 QUE (THUNDERFISH? OR (WATER(W)(FLY OR FLEA?)) OR WATERFLEA?)
L122 QUE (FROG# OR AMPHIBIA? OR SHRIMP# OR PRAWN# OR CRAB# OR TOAD#)
L123 QUE (TADPOLE# OR CRAYFISH? OR SHELLFISH? OR LOBSTER#)
L124 QUE (OYSTER# OR SNAIL# OR RANA OR RANIDAE? OR PLANKTON?)
L125 QUE L106 OR L108
L126 QUE ((NONTARGET? OR (NON(W)TARGET?))(5A)(PLANT? OR FLORA?))
L127 QUE ((AQUATIC(3A)(PLANT? OR (PHYTO(W)TOX?) OR PHYTOTOX?)))
L128 QUE (SEDIMENT? OR HYDROSOIL? OR DUCKWEED? OR PONDWEED?)
L129 QUE (((DUCK OR POND)(W)WEED#) OR MACROPHYT? OR PERIPHYTON?)
L130 QUE (POTAMOGETON? OR CHAROPHYTA? OR ELODEA? OR HYDROCHARITA?)
L131 QUE (CERATOPHYL? OR CHLAMYDOMON? OR SELENASTRUM? OR CHLORELLA?)
L132 QUE (SCENEDESMUS? OR SKELETONEMA? OR NAVICULA? OR ANABAENA?)
L133 QUE (MYRIOPHYLLUM? OR GLYCERIA?)
L134 QUE (NONTARGET? OR (NON(W)TARGET?) OR BENEFICIAL?)
L135 QUE (EFFECT? OR INVERTEB? OR ORGANISM? OR ARTHROPOD? OR INSECT?)
L136 QUE (FAUNA OR SPECIES OR (ENTOMO(W)FAUNA?) OR ENTOMOFAUNA?)
L137 QUE ((L134(5A)(L135 OR L136)))
L138 QUE (PREDAT? OR (NATURAL(W)ENEM?) OR BEE OR BEES OR HONEYBEE#)
L139 QUE (BUMBLEBEE# OR ((HONEY OR BUMBLE)(W)BEE#) OR EARTHWORM?)
L140 QUE ((EARTH(W)WORM?) OR LADYBUG# OR LADYBEETLE# OR LADYBIRD#)
L141 QUE ((LADY(W)(BUG# OR BEETLE# OR BIRD#)) OR HOVERFLY)
L142 QUE (HOOVERFLIES OR SAWFLY OR SAWFLIES OR DRONEFLY)
L143 QUE (DRONEFLIES OR FLOWERFLY OR FLOWERFLIES OR LACEWING?)
L144 QUE (((HOVER OR DRONE OR FLOWER OR SAW)(W)(FLY OR FLIES)))
L145 QUE (SPIDER# OR SPRINGTAIL? OR (ROOT(W)WORM#) OR ROOTWORM#)
L146 QUE (L137 OR L138 OR L139 OR L140 OR L141 OR L142 OR L143 OR L144 OR L145)
L147 QUE (BIRD? OR AVES OR AVIAN? OR (AVI(W)FAUNA?) OR AVIFAUNA?)
L148 QUE (SONGBIRD? OR (SONG(W)BIRD?) OR ORNITHOLOG?)
L149 QUE (L147 OR L148)
L150 QUE ((WILD(3A)(LIFE OR ANIMAL#)) OR WILDLIFE OR SQUIRREL?)
L151 QUE (VOLE# OR SCIURUS OR GLIRID? OR GLIS OR DORMOUSE)
L152 QUE (DORMICE OR ELIOMYS OR LEROT# OR MUSTELID? OR MINK#)
L153 QUE (MUSTELINE# OR WEASEL? OR STOAT? OR MUSTEL? OR BADGER?)
L154 QUE (MELES OR MELINAE OR OTTER# OR LUTRA OR LUTRINAE)
L155 QUE (LAGOMORPH# OR LEPORID? OR LEPUS OR ORYCTOLAGUS OR HARE#)
L156 QUE (TALPA OR MOLE OR MOLES OR HEDGEHOG? OR (HEDGE(W)HOG?))
L157 QUE (CROCIDURA? OR SHREW# OR WOODMOUSE OR WOODMICE OR APODEMUS)
L158 QUE (MICROTUS OR ARVICOLA OR CLETHRIONOMYS? OR CRICETIDAE?)
L159 QUE (ERINACEUS OR ERINACEIDAE? OR SORICIDAE? OR SOREX)
L160 QUE (ENDOCRIN? OR HORMON?)

Search Strategy

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L161   QUE  (DISRUPT? OR MIMIC? OR MODULAT? OR DISORDER? OR DISEASE?)
L162   QUE  (L160(5A)L161)
L163   QUE  (DAPHNI? OR CERIODAPHNI? OR HYALELLA? OR ASSELLUS)
L164   QUE  L113 OR (L114 OR L115 OR L116 OR L117 OR L118 OR L119 OR L120 OR
L121 OR L122 OR L123 OR L124) OR L163
L165   QUE  (PHYTOPLANKTON? OR AUFWUCH# OR LEMNA? OR ARALES OR CHARA)
L166   QUE  (L126 OR L127 OR L128 OR L129) OR (L130 OR L131 OR L132 OR L133)
OR L165
L167   QUE  (NEOMYS OR MICROTINAE?)
L168   QUE  (L150 OR L151 OR L152 OR L153 OR L154 OR L155 OR L156 OR L157 OR
L158 OR L159) OR L167
L169   QUE  (LOACH? OR STICKLEBACK? OR MUMMICHOG# OR TILAPIA? OR ASELLUS)
L170   QUE  L164 OR L169
L171   QUE  L125 OR L170 OR L166 OR L146 OR L149 OR L168 OR L162
L172   QUE  (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8 OR L9 OR L10 OR L11
OR L12 OR L13 OR L14 OR L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22
OR L23 OR L24 OR L25 OR L26 OR L27 OR L28 OR L29 OR L30 OR L31 OR L32 OR L33
OR L34 OR L35 OR L36 OR L37 OR L38 OR L39 OR L40 OR L41 OR L42 OR L43 OR L44
OR L45 OR L46 OR L47 OR L48)
L173   QUE  (L171 OR L172 OR L94 OR L105)
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Table 9.5-2: Details of databases searched and justification for selection as well as number of hits per database

Provider	Database	Justification	Limits applied	Number*			
				Initial search	Top-up search	Clothianidin search	Total
Host STN	MEDLINE	Contains information on every area of medicine providing comprehensive coverage from 1948 to present. Sources include journals and chapters in books or symposia. The database is updated 5 times each week with an annual reload and therefore stays very current in its cover.	10 years	260	7	140	407
	EMBASE	The database, covers worldwide literature in the biomedical and pharmaceutical fields, including biological science, biochemistry, human medicine, forensic science, pediatrics, pharmacy, pharmacology and drug therapy, pharmacoeconomics, psychiatry, public health, biomedical engineering and instrumentation, and environmental science. Sources include more than 4,000 journals from approximately 70 countries, monographs, conference proceedings, dissertations, and reports. The databases covers data from 1974-present and is updated daily.		33	2	22	57
	EMBAL	The database provides early access to bibliographic data and the abstracts for references that will appear in EMBASE. Bibliographic information for references is available in EMBAL for the latest 8 weeks of EMBASE data. The database covers the worldwide literature on the biomedical and pharmaceutical fields. Bibliographic information, abstracts, and author keywords are searchable. Sources include over 4,000 journals. The database covers current data and is updated daily.		2	0	1	3
	ESBIOBASE	A database providing comprehensive coverage of the entire spectrum of biological research worldwide. Coverage includes the following areas: applied microbiology, biotechnology, cancer research, cell & developmental biology, clinical chemistry, ecological & environmental sciences, endocrinology, genetics, immunology, infectious diseases, metabolism, molecular biology, neuroscience, plant and crop science, protein biochemistry, and toxicology. Records are selected from over 1,700 international scientific journals, books, and conference proceedings. The database covers the period 1994 - present and is updated weekly.		6	2	2	10
	AGRICOLA	A bibliographic database containing selected worldwide literature of agriculture and related fields. Coverage of the database includes agricultural economics and rural sociology, agricultural production, animal sciences, chemistry, entomology, food and human nutrition, forestry, natural resources, pesticides, plant science, soils and fertilizers, and water resources. Also covered are related areas such as biology and biotechnology, botany, ecology, and natural history. The database draws on bibliographies, serial articles, book chapters, monographs, computer files, serials, maps, audiovisuals, and reports. It covers the period 1970-present and is updated monthly.		8	1	1	10
	BIOSIS	A large and comprehensive worldwide life science database covers original research reports, reviews, and selected U.S. patents in biological and biomedical areas, with subject coverage ranging from aerospace biology to zoology. Sources include periodicals, journals, conference proceedings, reviews, reports, patents, and short communications. Nearly 6,000 life source journals, 1,500 international meetings as well as review articles, books, and monographs are reviewed for inclusion. It covers the period 1926 – present and is updated weekly.		109	17	70	196

Provider	Database	Justification	Limits applied	Number*			
				Initial search	Top-up search	Clothianidin search	Total
STN	CABA	Covers worldwide literature from all areas of agriculture and related sciences including biotechnology, forestry, and veterinary medicine. Sources include journals, books, reports, published theses, conference proceedings, and patents. It covers the period 1973-present and is updated weekly.	10 years	1080	47	301	1428
	CAPLUS	Covers worldwide literature from all areas of chemistry, biochemistry, chemical engineering, and related sciences including applied, macromolecular, organic, physical, inorganic, and analytical chemistry. Current sources include over 8,000 journals, patents, technical reports, books, conference proceedings, dissertations, product reviews, bibliographic items, book reviews, and meeting abstracts. Electronic-only journals and Web preprints are also covered. Cited references are included for journals, conference proceedings and basic patents from the U.S., EPO, WIPO, and German patent offices added to the CAS databases from 1999 to the present. Also provides early access to the bibliographic information, abstracts and CAS Registry Numbers for documents in the process of being indexed by CAS. Covers the period 1907 – present and is updated daily		271	14	160	445
	FSTA	The database provides worldwide coverage of all scientific and technological aspects of the processing and manufacture of human food products including basic food sciences, biotechnology, hygiene and toxicology, engineering, packaging, and all individual foods and food products. Sources include more than 2,200 journals, books, reviews, conference proceedings, patents, standards, and legislation. It covers the period 1969 – present and is updated weekly.		5	0	5	10
	FROSTI	The database contains citations to the worldwide literature on food science and technology including food and beverages, analytical methods, quality control, manufacturing, microbiology, food processing, health and nutrition, recipes, and additives. Sources include approximately 800 scientific and technical journals, bulletins, technical reports, conference proceedings, grey literature, and British, European (EP), U.S., Japanese, and international (PCT) patent applications. Covers the period 1972 – present and is updated twice weekly.		2	0	0	2
	GEOREF	Covers international literature on geology and geosciences. Sources include the Bibliography of North American Geology, Bibliography and Index of Geology Exclusive of North America, Geo-physical Abstracts, Bibliography of Fossil Vertebrates, selected records from Geoline and from geology sections of PASCAL and state and national geological surveys. Covers the period 1669 – present and is updated twice a month.		1	0	1	2
	TOXCENTER	Covers the pharmacological, biochemical, physiological, and toxicological effects of drugs and other chemicals. It is composed of the following subfiles: BIOSIS, CAplus, IPA and MEDLINE and sources include abstracts, books and book chapters, bulletins, conference proceedings, journal articles, letters, meetings, monographs, notes, papers, patents, presentations, research and project summaries, reviews, technical reports, theses, translations, unpublished material, web reprints. Covers the period 1907 – present and is updated weekly		0	0	0	0

Provider	Database	Justification	Limits applied	Number*			
				Initial search	Top-up search	Clothianidin search	Total
STN	PQSCITECH	Is a huge resource in all areas of science and technology from engineering to lifescience. The file is a merge of 25 STN databases formerly known as CSA databases (Cambridge Scientific Abstracts): AEROSPACE, ALUMINIUM, ANTE, AQUALINE, AQUASCI, BIOENG, CERAB, CIVILENG, COMPUAB, CONFSCI, COPPERLIT, CORROSION, ELCOM, EMA, ENVIROENG, HEALSAFE, LIFESCI, LISA, MATBUS, MECHENG, METADEX, OCEAN, POLLUAB, SOLIDSTATE, and WATER. Sources are journals, patents, books, reports, and conference proceedings spanning the period 1962 – present and it is updated monthly.	10 years	17	1	13	31
	PASCAL	The database provides access to the world's scientific and technical literature including physics and chemistry, life sciences (biology, medicine, and psychology), applied sciences and technology, earth sciences, and information sciences. French and European literature is particularly well represented. Approximately 5,000 journal titles are indexed. References to theses and to conference proceedings are also included. Spans the period 1977 to present and is updated weekly		6	0	3	9
	SCISEARCH	Is an international index to the literature covering virtually every subject area within the broad fields of science, technology, and biomedicine. SciSearch contains all the records published in Science Citation Index Expanded™ and additional records from the Current Contents series of publications. Bibliographic information and cited references from over 5,600 scientific, technical, and medical journals are contained in the database. Spans the period 1974 to present and is updated weekly.		17	3	15	35
	ANABST	Covers worldwide literature on analytical chemistry. The ANABSTR file contains bibliographic records with abstracts (since 1984) for documents reported in printed Analytical Abstracts. Sources for ANABSTR include journals, books, conference proceedings, reports, and standards. Spans the period 1980 to present and is updated weekly.		2	0	1	3

* Total number of summary records retrieved after removing duplicates

Table 9.5-3: Detailed Search Parameters for Web searches

Website name and service publisher	URL	Justification	Search terms	Limits applied	Number*
A web search has not been conducted as the database search reported above is considered to provide an adequately comprehensive search of the quality peer reviewed literature.					

* Total number of summary records or full-text documents retrieved after removing duplicates

Table 9.5-4: Detailed Search Parameters for Journal Table of Contents

Journal name	Journal URL or publisher	Dates, volumes and issues searched	Method of searching	Search terms	Number*
A search for journal table of contents has not been conducted as the database search reported above is considered to provide an adequately comprehensive search of the quality peer reviewed literature.					

* Total number of summary records or full-text documents retrieved after removing duplicates

Table 9.5-5: Detailed Search Parameters for Reference Lists

Bibliographic details of documents whose reference lists were scanned	Number*
A search for reference lists has not been conducted as the database search reported above is considered to provide an adequately comprehensive search of the quality peer reviewed literature.	

* Total number of summary records or full-text documents retrieved after removing duplicates

CA 9.6 Results

Table 9.6-1: Results of study selection process

Data requirement(s) captured in the search	Number of results			
	Initial search	**Top-up search**	**Clothianidin search**	**Total**
Total number of *summary records* retrieved after *all** searches of peer-reviewed literature (excluding duplicates)	1819	94	735	2648
Number of *summary records* excluded from the search results after rapid assessment for relevance**	1531	74	673	2278
Total number of *full-text* documents assessed in detail*	288	20	62	370
Number of *studies* excluded from further consideration after detailed assessment for relevance	261	17	52	330
Number of *studies* not excluded for relevance after detailed assessment (i.e. relevant studies and studies of unclear relevance)	27	3	10	40

*both from bibliographic databases and other sources of peer-reviewed literature
**aligned with EFSA Journal 2011; 9(2):2092: rapid assessment means exclusion of “obviously irrelevant records” based on titles.

The references that were assessed in detail are summarised below:

Table 9.6-2: List of references for all relevant and unclear studies listed by data point number

CA data point number	Author(s)	Year	Title	Source	Ref. ID
Initial search					
CA 8.1.1.1	Ivanova, R.; Hristev, H.; Genchev, A.	2013	Determining LD_{50} of the neonicotinoid insecticides Actara and Confidor in birds.	Agrarni Nauki (2013), Volume 5, Number 14, pp. 237-241	587
CA 8.1.2.1	Bednarska, A. J.; Edwards, P.; Sibly, R.; Thorbek, P.	2013	A toxicokinetic model for thiamethoxam in rats: implications for higher-tier risk assessment.	Ecotoxicology (2013) 22:548–557	61
CA 8.1.2.2	Ivanova, R.	2013	Study on the effect of Actara and Confidor on rabbits submitted to chronic intoxication.	Agrarni Nauki (2013), Volume 5, Number 14, pp. 253-257, 15 refs. ISSN: 1313-6577	581
CA 8.1.4	Berny, P.; Mastain, O.; Decors, A.; Poulsen, V.; Moinet, M.; Dunoyer, C.	2010	The SAGIR network in France: A 40-year active and passive toxicovigilance scheme for pesticide poisoning in wildlife	Toxicology Letters, (17 Jul 2010) Vol. 196, Supp. 1, pp. S322	284
CA 8.2.1	Elenka, G.; Stoyanova, S.; Velcheva, I.; Yanchevaa, V.	2014	Histopathological Alterations in Common Carp (*Cyprinus carpio* L.) Gills Caused by Thiamethoxam	Braz. Arch. Biol. Technol. v.57 n.6: pp. 991-996	312
CA 8.2.1	Fodor, M.	2012	The eco-toxicological influence of the pesticide/ insecticide thiamethoxam over some varieties of *Carassius auratus gibelio* Bloch.	Analele Universitatii din Craiova - Biologie, Horticultura, Tehnologia Prelucrarii Produselor Agricole, Ingineria Mediului (2012), Volume 17, pp. 885-890	673
CA 8.2.1	Kumar, V. A.; Janaiah, C.; Venkateshwarlu, P.	2010	Effect of thiamethoxam alters serum biochemical parameters in *Channa punctatus* (Bloch).	Asian Journal of Bio Science (2010), Volume 5, Number 1, pp. 106-110	962
CA 8.2.1	V. Kumar, V. Anil; Janaiah, C.; Venkateshwarlu, P.	2010	Impact of thiamethoxam on proteases, aminases and glutamate dehydrogenase in some tissues of freshwater fish, *Channa punctatus* (Bloch)	Bioscan (2010), 5 (1), 135-137	1660
CA 8.2.1	Kumar, V.; Anil, V.; Venkateshwarlu, P.; Janaiah, C.	2008	Exposure of sublethal concentration of thiamethoxam alters serum enzymes in fresh water fish, *Channa punctatus* (Bloch)	Bulletin of Pure and Applied Sciences, Section A: Zoology (2008), 27A (2), 131-137	1695
CA 8.2.2	Nath, S.; Bose, S. and Kundu, I.	2012	Effects of Thiamethoxam on Liver Protein of *Oreochromis niloticus* (Trewavas)	Proc Zool Soc (July-Dec 2012) 65(2):118–120	745
CA 8.2.2	Roy, B. and Nath, S.	2011	Some haematological investigations on *Oreochromis niloticus* (Trewavas) following exposure to Thiamethoxam.	Acta Zoologica Lituanica (2011), Volume 21, Number 4, pp. 301-305	821

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.2.2.1	Padilla S., Corum D., Padnos B., Hunter D.L., Beam A., Houck K.A., Sipes N., Kleinstreuer N., Knudsen T., Dix D.J. and Reif D.M.	2012	Zebrafish developmental screening of the ToxCast™ Phase I chemical library	Reproductive Toxicology (2012), 33 (2), 174-187.	1604
CA 8.2.4.2 8.3.2	Lee, K. Y.; Kim, Y. H.; Lee, J. W.; Song, M. K.; Nam, S. H.	2008	Toxicity of firefly, *Luciola lateralis* (Coleoptera: Lampyridae) to commercially registered insecticides and fertilizers.	Korean Journal of Applied Entomology (2008), Volume 47, Number 3, pp. 265-272	1198
CA 8.2.5.2	Stark, J.D.	2004	How closely do acute lethal concentration estimates predict effects of toxicants on populations?	Integrated Environmental Assessment and Management Volume 1, Number 2, pp. 109–1	255
CA 8.2.8	Anderson, J.C.; Dubetz, C.; Palace, V.P.	2015	Neonicotinoids in the Canadian aquatic environment: A literature review on current use products with a focus on fate, exposure, and biological effects	Science of the Total Environment 505 (2015) 409 – 422	13
CA 8.2.8	Barbee, G.C.; Stout, J.	2009	Comparative acute toxicity of neonicotinoid and pyrethroid insecticides to non-target crayfish (*Procambarus clarkii*) associated with rice-crayfish crop rotations.	Pest management science, (2009 Nov) Vol. 65, No. 11, pp. 1250-6.	170
CA 8.2.8	Morrissey, C.A.; Mineau, P.; Devries, J. H.; Sanchez-Bayo, F.; Liese, M.; Cavallaro, M. C.; Liber,K.	2015	Neonicotinoid contamination of global surface waters and associated risk to aquatic invertebrates: A review	Environment International 74 (2015) 291 - 303	262
CA 8.2.8	Smalling,K.L; Reeves, R.; Muth, E.; Vandever,M. Battaglin, W. A.; Hladik, M.L., Pierce, C.L.	2015	Pesticide concentrations in frog tissue and wetland habitats in a landscape dominated by agriculture	Science of the Total Environment 502 (2015) 80 – 90	263
CA 8.2.8	Stevens, M.M.; Helliwell, S.; Hughes, P.A.	2005	Toxicity of *Bacillus thuringiensis* var. israelensis formulations, spinosad, and selected synthetic insecticides to *Chironomus tepperi* larvae.	Journal of the American Mosquito Control Association, (December 2005) Vol. 21, No. 4, pp. 446-450.	292
CA 8.2.8	Păunescu, A.; Ponepal, C.M.; Drăghici,O.; Marinescu, Al. G.	2010	The influence of Reldan 40EC and Actara 25WG insecticides upon gall-bladder structure in *Rana (Pelophylax) ridibunda*	Lucrări ştiinţifice USAMVB, Seria B, vol. LIV, 2010	910
CA 8.2.8	Paunescu, A.; Ponepal, C. M; Octavian, D.M.; Gabriel, A.	2009	Research on the changes of some physiological parameters in *Rana ridibunda* under the action of the Actara 25WG insecticide.	Annals Food Science and Technology (2009), Volume 10, Number 2, pp. 644-647	1041
CA 8.2.8	Minakshi, R.; Mahajan, A. Y.	2013	Effect of thiamethoxam on oxygen consumption of the freshwater bivalve, *Lamellidens marginalis* (Lamarck)	The Bioscan 8(2): 469-472	1551

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.2.8	Deng, L.; Zhang, L.; Zhang, Y.; He, W.; Feng, L.; Jiang, H.	2013	Acute immobilization of four neonicotinoid insecticides to *Daphnia magn*a Straus	Nongyao Kexue Yu Guanli (2013), 34 (6), 23-25	1576
CA 8.2.8	Brock, T.C.M. and Van Wijngaarden, R.P.A.	2012	Acute toxicity tests with *Daphnia magna, Americamysis bahia, Chironomus riparius* and *Gammarus pulex* and implications of new EU requirements for the aquatic effect assessment of insecticides	Environ Sci Pollut Res (2012) 19:3610 – 3618	1583
CA 8.2.8	Sánchez-Bayo, F.	2005	Comparative acute toxicity of organic pollutants and reference values for crustaceans. I. Branchiopoda, Copepoda and Ostracoda	Environmental Pollution 139 (2006) 385-420	1742
CA 8.2.8	Fothergill, K.; Tindall, K.	2010	Impact of the insecticide seed treatments, Cruiser and Dermacor on nontarget, aquatic invertebrates, in flooded rice fields	Conference: 33rd Rice Technical Working Group Meeting (RTWG 2010), Biloxi, Mississippi, 22 Feb 2010 - 25 Feb 2010	1786
CA 8.3.1	Stanley Johnson; Sah Khushboo; Jain S K; Bhatt J C; Sushil S N	2015	Evaluation of pesticide toxicity at their field recommended doses to honeybees, *Apis cerana* and A. *mellifera* through laboratory, semi-field and field studies.	Chemosphere, Vol. 119, pp. 668-74.	1
CA 8.3.1	Stewart, S. D. L., Gus, M.; Catchot, A. L.; Gore, J.; Cook, D.; Skinner, J.; Mueller, T. C.; Johnson, D.R.; Zawislak, J.; Barber, J.	2014	Potential exposure of pollinators to neonicotinoid insecticides from the use of insecticide seed treatments in the mid-southern United States.	Environmental science & technology, Vol. 48, No. 16, pp. 9762-9	4
CA 8.3.1	Williamson, S.; Willis, J.; Wright, G.A.	2014	Exposure to neonicotinoids influences the motor function of adult worker honeybees.	Ecotoxicology (London, England), (2014 Oct) Vol. 23, No. 8, pp. 1409-18.	7
CA 8.3.1	Oliveira, R.A.; Roat, T.C.; Carvalho, S.M.; Malaspina, O.	2014	Side-effects of thiamethoxam on the brain and midgut of the africanized honeybee *Apis mellifera (*Hymenopptera: Apidae).	Environmental toxicology, Vol. 29, No. 10, pp. 1122-33.	9
CA 8.3.1	Catae, A.F.; Roat, T.C.; De Oliveira, R.; Alves, N.; Cornelio Ferreira, R.; Malaspina, O.	2014	Cytotoxic Effects of Thiamethoxam in the Midgut and Malpighian Tubules of Africanized *Apis mellifera* (Hymenoptera: Apidae)	Microscopy research and technique, (2014 Apr) Vol. 77, No. 4, pp. 274-81	17
CA 8.3.1	Laycock, I.; Cotterell, K.C.; O'Shea-Wheller, T.A.; Cresswell, J.E.	2014	Effects of the neonicotinoid pesticide thiamethoxam at field-realistic levels on microcolonies of *Bombus terrestris* worker bumble bees.	Ecotoxicology and environmental safety, (2014 Feb) Vol. 100, pp. 153-8.	21
CA 8.3.1	Maxim, L., Arnold, G.	2010	Pesticides and bees	EMBO reports Vol 15/ No 1/ 2014	29

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.1	Sandrock, C.; Tanadini, M.; Tanadini, L.G.; Fauser-Misslin, A.; Neumann, P. ; Potts, S. G.	2014	Impact of chronic neonicotinoid exposure on honeybee colony performance and queen supersedure.	PloS one, (2014) Vol. 9, No. 8	31
CA 8.3.1	Sanchez-Bayo, F.; Goka, K.	2014	Pesticide Residues and Bees – A Risk Assessment	PloS one, (2014) Vol. 9, No. 4, pp. e94482.	33
CA 8.3.1	Thompson, H.M.; Wilkins, S.; Harkin, S.; Milner, S.; Walters, K.F.	2013	Neonicotinoids and bumblebees (*Bombus terrestris*): effects on nectar consumption in individual workers	Pest management science, (2014 Jul 30)	36
CA 8.3.1	Cressey, D.	2013	Europe debates risk to bees	Nature, (2013 Apr 25) Vol. 496, No. 7446, pp. 408	63
CA 8.3.1	Henry, M.	2013	Assessing homing failure in honeybees exposed to pesticides: Guez's (2013) criticism illustrates pitfalls and challenges.	Frontiers in physiology, (2013) Vol. 4, pp. 352.	64
CA 8.3.1	Dicks, L.	2013	Bees, lies and evidence-based policy	Nature, (2013 Feb 21) Vol. 494, No. 7437, pp. 283.	67
CA 8.3.1	Stoner, A.K.; Eitzer, B. D.	2013	Using a hazard quotient to evaluate pesticide residues detected in pollen trapped from honey bees (*Apis mellifera*) in Connecticut.	PloS one, (2013) Vol. 8, No. 10, pp. e77550.	79
CA 8.3.1	Pilling, E.; Campbell, P.; Coulson, M.; Ruddle, N.; Tornier, I.	2012	A four-year field program investigating long-term effects of repeated exposure of honey bee colonies to flowering crops treated with thiamethoxam.	PloS one, Vol. 8, No. 10, pp. e77193.	80
CA 8.3.1	Stoner, K.A.; Eitzer, B.D.	2012	Movement of soil-applied imidacloprid and thiamethoxam into nectar and pollen of squash (*Cucurbita pepo*).	PloS one, Vol. 7, No. 6, pp. e39114.	81
CA 8.3.1	Krupke, C.H.; Hunt, G.J.; Eitzer, B.D.; Andino, G.; Given, K.	2012	Multiple routes of pesticide exposure for honey bees living near agricultural fields.	PloS one, Vol. 7, No. 1, pp. e29268.	83
CA 8.3.1	Dively, G.P.; Kamel, A.	2012	Insecticide residues in pollen and nectar of a cucurbit crop and their potential exposure to pollinators.	Journal of agricultural and food chemistry, Vol. 60, No. 18, pp. 4449-56.	85
CA 8.3.1	Henry, M.; Beguin, M.; Requier, F.; Rollin, O.; Odoux, J.F.; Aupinel, P.; Aptel, J.; Tchamitchian, S.; Decourtye, A.	2012	A common pesticide decreases foraging success and survival in honey bees.	Science (New York, N.Y.), (2012 Apr 20) Vol. 336, No. 6079, pp. 348-50.	98
8.3.1	Badiou-Beneteau, A.; Carvalho, S. M.; Brunet, J-L.; Carvalho, G. A.; Bulete, A.; Giroud, B.; Belzunces, L. P.	2012	Development of biomarkers of exposure to xenobiotics in the honey bee *Apis mellifera*: application to the systemic insecticide thiamethoxam.	Ecotoxicology and environmental safety, (2012 Aug) Vol. 82, pp. 22-31.	104

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.1	Tapparo, A.; Giorio, C.; Marzaro, M.; Marton, D.; Solda, L.; Girolami, V.	2011	Rapid analysis of neonicotinoid insecticides in guttation drops of corn seedlings obtained from coated seeds.	Journal of environmental monitoring : JEM, Vol. 13, No. 6, pp. 1564-8.	108
CA 8.3.1	Tremolada, P.; Mazzoleni, M.; Saliu, F.; Colombo, M.; Vighi, M.	2010	Field trial for evaluating the effects on honeybees of corn sown using Cruiser and Celest xl treated seeds.	Bulletin of environmental contamination and toxicology, Vol. 85, No.3, pp. 229-34.	152
CA 8.3.1	Mommaerts, V.; Reynders, S.; Boulet, J.; Besard, L.; Sterk, G.; Smagghe, G.	2010	Risk assessment for side-effects of neonicotinoids against bumblebees with and without impairing foraging behavior.	Ecotoxicology (London, England), (2010 Jan) Vol. 19, No. 1, pp. 207-15.	154
CA 8.3.1	Decourtye, A.; Devillers, J.	2010	Ecotoxicity of neonicotinoid insecticides to bees.	Advances in experimental medicine and biology, (2010) Vol. 683, pp. 85-95.	159
CA 8.3.1	Girolami V; Mazzon L; Squartini A; Mori N; Marzaro M; Di Bernardo A; Greatti M; Giorio C;Tapparo A	2009	Translocation of neonicotinoid insecticides from coated seeds to seedling guttation drops: a novel way of intoxication for bees.	Journal of economic entomology, Vol. 102, No. 5, pp. 1808-15.	168
CA 8.3.1	Aliouane, Y.; El Hassani, A.K.; Gary, V.; Armengaud, C.; Lambin, M.; Gauthier, M.	2009	Subchronic exposure of honeybees to sublethal doses of pesticides: effects on behavior.	Environmental toxicology and chemistry / SETAC, (2009 Jan) Vol. 28, No. 1, pp. 113-22	183
CA 8.3.1	Aliouane, Y.; El Hassani, A.K.; Gary, V.; Armengaud, C.; Lambin, M.; Gauthier, M.	2008	Effects of sublethal doses of acetamiprid and thiamethoxam on the behavior of the honeybee (*Apis mellifera*).	Archives of environmental contamination and toxicology, (2008 May) Vol. 54, No. 4, pp. 653-61.	197
CA 8.3.1	A. L. Alarcon, M. Canovas, R. Senn, R. Correia	2005	The safety of thiamethoxam to pollinating bumble bees (*Bombus terrestris* L.) when applied to tomato plants through drip irrigation.	Communications in agricultural and applied biological sciences, Vol. 70, No. 4, pp. 569-79.	248
CA 8.3.1	Samson-Robert, O.; Fournier, V.; Labrie, G.; Chagnon, M.	2014	Neonicotinoid-contaminated puddles of water represent a risk of intoxication for honey bees.	PLoS ONE, (1 Dec 2014) Vol. 9, No. 12.	267
CA 8.3.1	Stokstad, E.	2013	Pesticides under fire for risks to pollinators.	Science, (2013) Vol. 340, No. 6133, pp. 674-676.	274
CA 8.3.1	Henry, M; Decourtye, A.	2013	Ecological relevance in honeybee pesticide risk assessment: Developing context-dependent scenarios to manage uncertainty.	Frontiers in Physiology, (2013) Vol. 4 APR. arn. Article 62.	275
CA 8.3.1	Cresswell J.E.; Thompson H.M	2012	Comment on "a common pesticide decreases foraging success and survival in honey bees".	Science, (21 Sep 2012) Vol. 337, No. 6101, pp. 1453-c	277
CA 8.3.1	Guez, D.	2013	A common pesticide decreases foraging success and survival in honey bees: Questioning the ecological relevance.	Frontiers in Physiology, (2013) Vol. 4 MAR. arn. Article 37.	276

CA data point number	Author(s)	Year	Title	Source	Ref. ID
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CA 8.3.1	Blatzheim, L.; Bower,C.; Polk, T.; Ikizo; Lu, D.; Karahn, A. Levinson, B.; Gune, N.; Cakmak, I.; Wells, H.; Hranitz J. M.	2014	The neonicotinoid pesticide thiamethoxam affects motor responses and foraging behaviour of honey bees.	SO Integrative and Comparative Biology, (2014) Vol. 54, No. Suppl. 1, pp. E244.	314
CA 8.3.1	Lodesani, M.; Mutinelli, F.; Liberta, A.; Porrini, C.	2013	The National Bee Monitoring Network In Italy (2009-2013).	Bulletin of Insectology, (JUN 2013) Vol. 66, No. 1, pp. 160.	328
CA 8.3.1	Blacquiere, T.; Smagghe, G.; van Gestel, C.; Cornelis, A.M.; Mommaerts, V.	2012	Neonicotinoids in bees: a review on concentrations, side-effects and risk assessment (vol 21, pg 973, 2012).	Ecotoxicology, (JUL 2012) Vol. 21, No. 5, pp. 1581.	342
CA 8.3.1	DeGrandi-Hoffman, G.; Sammataro, D.; Simonds; R.	2012	Are agrochemicals present in High Fructose Corn Syrup fed to honey bees (*Apis mellifera* L.)?.	Journal of Apicultural Research, (2012) Vol. 51, No. 4, pp. 371-372.	345
CA 8.3.1	Pohorecka, K.; Skubida, P.; Miszczak, A.; Semkiw, P.; Sikorski, P.; Zagibajlo, K.; Teper, D.; Koltowski, Z.; Skubida, M.; Zdanska, D.; Bober, A.	2012	Residues of neonicotinoid insecticides in bee collected plant materials from oilseed rape crops send their effect on bee colonies	Journal of Apicultural Science, Vol. 56, No. 2, pp. 115-134.	347
CA 8.3.1	Illarionov, A. I. ; Derkach, A. A	2008	Toxicity and Hazard of Neonicotinoids for Honeybees.	Agrokhimiya, (OCT 2008) No. 10, pp. 74-81.	390
CA 8.3.1	Thompson, H.M.; Fryday, S.L.; Harkin, S.; Milner, S.	2014	Potential impacts of synergism in honeybees (*Apis mellifera*) of exposure to neonicotinoids and sprayed fungicides in crops.	Apidologie (2014), Volume 45, Number 5, pp. 545-553, 30 refs	449
CA 8.3.1	Fauser-Misslin, A.; Sadd, B.M.; Neumann, P.; Sandrock, C.	2014	Influence of combined pesticide and parasite exposure on bumblebee colony traits in the laboratory.	Journal of Applied Ecology (2014), Volume 51, Number 2, pp. 450-459.	455
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CA 8.3.1	Costa, E. M.; Araujo, E. L.; Maia, A. V. P.; Silva, F. E. L.; Bezerra, C. E. S.; Silva, J. G.	2014	Toxicity of insecticides used in the Brazilian melon crop to the honey bee *Apis mellifera* under laboratory conditions.	Apidologie, Volume 45, Number 1, pp. 34-44	510
CA 8.3.1	European Food Safety Authority	2013	Evaluation of the FERA study on bumble bees and consideration of its potential impact on the EFSA conclusions on neonicotinoids	EFSA Journal 2013;11(6):3242, 20 pp.,	525

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.1	Elston, C.; Thompson, H. M.; Walters, K.F.A.	2013	Sub-lethal effects of thiamethoxam, a neonicotinoid pesticide, and propiconazole, a DMI fungicide, on colony initiation in bumblebee (*Bombus terrestris*) micro-colonies.	Apidologie (2013), Volume 44, Number 5, pp. 563-574, 63 refs.	551
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CA 8.3.1	Gama, J. S. N; de L. A Bruno, R.; Quirino, Z. G. M.; de S. Ramalho, F. ; Pereira Junior, L.L.R.; de S. Ramalho; F.	2013	Behaviour of pollinators and reproductive system of fennel grown in field intercropped with cotton	Revista Caatinga (2013), Vol. 26, Number 4, pp. 39-47, 27	636
CA 8.3.1	Carreck, N.	2013	Are pesticides the most important cause of colony losses?	Bee World (2013), Volume 90, Number 2, pp. 38-39, 10 refs	637
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CA 8.3.1	Carvalho, S. M.; Carvalho, G. A.; Carvalho, C. F.; Bueno Filho, J. S. S.; Baptista, A. P. M.	2009	Toxicity of acaricides/insecticides for citrus crop to the africanized honeybee *Apis mellifera* L., 1758 (Hymenoptera: Apidae)	Arquivos do Instituto Biologico (Sao Paulo) (2009), Volume 76, Number 4, pp. 597-606,	1047
CA 8.3.1	Thomazoni, D.; Soria, M. F.; Kodama, C.; Carbonari, V.; Fortunato, R. P.; Degrande, P. E.; Valter Junior, V. A.	2009	Selectivity of insecticides for adult workers of *Apis mellifera* (Hymenoptera:Apidae).	Revista Colombiana de Entomologia, Volume 35, Number 2, pp. 173-176	1100
CA 8.3.1	Bortolotti, L.; Sabatini, A. G; Mutinelli, F; Astuti, M; Lavazza, A; Piro, R.; Tesoriero, D.; Medrzycki, P.; Sgolastra, F.; Porrini, C.;	2009	Spring honey bee losses in Italy.	Julius-Kuehn-Archiv (2009), Number 423, pp. 148-152 Conference: Hazards of pesticides to bees. 10th International Symposium of the ICP-Bee Protection Group. Bucharest, Romania, 8-10 October, 2008.	1105

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.1	Forster, R.	2009	Bee poisoning caused by insecticidal seed treatment of maize in Germany in 2008.	Julius-Kuehn-Archiv (2009), Number 423, pp. 126-131. ISSN: 1868-9892	1112
CA 8.3.1	Frilli, F.; Greatti, M.; Vedova, G. della; Belletti, P. A.; della Vedova, G.	2009	Monitoring of spring bee mortality in Friuli-Venezia-Giulia.	Notiziario ERSA (2009), Volume 22, Number 4, pp. 45-49	1144
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CA 8.3.1	Pastagia, J. J.; Patel, M. B.	2007	Relative contact toxicity of some insecticides to worker bees of *Apis cerana* F.	Journal of Plant Protection and Environment (2007), Volume 4, Number 2, pp. 89-92	1308
CA 8.3.1	Fanti, M.; Maines, R.; Angeli, G.	2006	Evaluation of the repellency and acute toxicity of Neonicotinoids insecticides on *Apis mellifera ligustica*.	Giornate Fitopatologiche 2006, Riccione (RN), 27-29 marzo 2006. Atti, volume primo (2006), pp. 51-58	1344
CA 8.3.1	Gulati R.; Sharma, S.K.; Sharma, P.D.	2005	Field and Residual Toxicity of Commonly Used Insecticides to Asian Honeybees (*Apis Dorsata* F. and *A. Florea* F.) in Cotton	Honeybee Science (2005) 26 (1): 29-32	1489
CA 8.3.1	Neetu Singh; Karnatak, A. K.; Singh, N.	2005	Relative toxicity of some insecticides to the workers of *Apis mellifera* L.	Shashpa (2005), Volume 12, Number 1, pp. 23-25,	1492
CA 8.3.1	Hakala, K.; Kukkola, M.; Ruottinen, L.; Raiskio, S.; Pelkonen, K.; Ketola, J.	2014	Impact of neonicotinoid insecticides use to honey bees in spring oilseed cultivation in Finland	Abstracts of Papers, 248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014 (2014),	1515
CA 8.3.1	Scott-Dupree, C.; Cutler, C.	2014	Field studies examining exposure and effects of neonicotinoid insecticides on bee colonies	Ecotoxicology, Volume 23:1755–1763	1516
CA 8.3.1	Kasiotis, K. M.; Anagnostopoulos, C.; Anastasiadou, P.; Machera, K.	2014	Pesticide residues in honeybees, honey and bee pollen by LC-MS/MS screening: Reported death incidents in honeybees	Science of the Total Environment (2014), 485-486, 633-642	1517
CA 8.3.1	Purdy, J. R.	2014	Concentrations and distribution of neonicotinoid residues in honeybees (*Apis mellifera*) in Ontario, Canada	Abstracts of Papers, 248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014 (2014), AGRO-616.	1519
CA 8.3.1	Baok, R.a; Bari, J. I.; Uzelac, V. D.; Kos, T.; Drmi, Z.; Pedisi, S.; Zori, Z.	2014	Sugar beet seed treatment with neonicotinoids: Do they pose a risk for bees?	Abstracts of Papers, 248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014 (2014), AGRO-612	1520
CA 8.3.1	Arena, M.; Sgolastra, F.	2014	A meta-analysis comparing the sensitivity of bees to pesticides	Ecotoxicology (2014), 23 (3), 324-334	1525

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CA 8.3.1	Overmeyer, J.; Campbell, P.; Coulson, M.; Ruddle, N.; Tornier, I.	2013	Honey bee field studies: Assessing hive health after four consecutive years of exposure to flowering crops grown from thiamethoxam-treated seed	Abstracts of Papers, 246th ACS National Meeting & Exposition, Indianapolis, IN, United States, September 8-12, 2013 (2013), AGRO-150.	1526
CA 8.3.1	Pei, H.; Ou, .X; Yu, W.; Yi, Z.; Bai, J.; Gao, D.	2013	Acute toxicity of four insecticides to honeybee *Apis mellifera*	Shijie Nongyao (2013), 35 (4), 50-51, 54.	1570
CA 8.3.1	Yu, W.; Pei, H.; Yi, Z.; Bai, J.; Yu, K.	2013	Indoor toxicity determination of neonicotinoid insecticides to *Apis mellifera*.	Shijie Nongyao (2013), 35 (2), 28-31	1575
CA 8.3.1	Chen, Y.; Gao, J.	2013	Pesticide residue in pollen and nectar and its threaten to pollinating insects.	Shijie Nongyao (2013), 35 (2), 16-21, 27	1577
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CA 8.3.1	Fazekas, B.; Lang Woynarovich, M.; Paulus D., Petra; Csaba, G.; Orosz, E.	2012	Pesticide poisoning of honey bees between 2007 and 2011.	Magyar Allatorvosok Lapja (2012), 134 (4), 213-220	1601
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CA 8.3.1	Wu, J.Y.; Anelli, C.M.; Sheppard, W.S.	2011	Sub-lethal effects of pesticide residues in brood comb on worker honey bee (*Apis mellifera*) development and longevity.	PLoS One, 6(2), e14720.	1620
CA 8.3.1	Wiest, L.; Bulete, A.; Giroud, B.; Fratta, C.; Amic, S.; Lambert, O.; Pouliquen, H.; Arnaudguilhem, C.	2011	Multi-residue analysis of 80 environmental contaminants in honeys, honeybees and pollens by one extraction procedure followed by liquid and gas chromatography coupled with mass spectrometric detection.	Journal of Chromatography A (2011), 1218 (34), 5743-5756	1624
CA 8.3.1	Jeyalakshmi, T.; Shanmugasundaram, R.; Saravanan, M.; Geetha, S.; Mohan, Sweatha S.; Goparaju, A.; Murthy, P. Balakrishna	2011	Comparative toxicity of certain insecticides against *Apis cerana indica* under semi field and laboratory conditions.	Pestology (2011), 35 (12), 23-26.	1644
CA 8.3.1	Valdovinos-Nunez, G.R.; Quezada-Euan, J.J.G.; Ancona-Xiu, P.; Moo-Valle, H.; Carmona, A.; Sanchez, E.R.	2009	Comparative toxicity of pesticides to stingless bees (Hymenoptera: Apidae: Meliponini).	Journal of Economic Entomology (2009), 102 (5), 1737-1742	1672

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CA 8.3.2	Frewin, A. J; Schaafsma, A.W.; Hallett, R. H.	2014	Susceptibility of *Aphelinus certus* (Hymenoptera: Aphelinidae) to neonicotinoid seed treatments used for soybean pest management.	Journal of economic entomology, (2014 Aug) Vol. 107, No. 4, pp. 1450-7.	6
CA 8.3.2	Costa, M. A.; Moscardini, V.F.; da Costa, G. P.; Carvalho, G.A.; de Oliveira, R.L.; de Oliveira, H.N.	2014	Sublethal and transgenerational effects of insecticides in developing *Trichogramma galloi* (Hymenoptera: Trichogrammatidae): toxicity of insecticides to *Trichogramma galloi*.	Ecotoxicology (London, England), (2014 Oct) Vol. 23, No. 8, pp. 1399-408.	8
CA 8.3.2	Duso, C.; Ahmad, S.; Tirello, P.; Pozzebon, A.; Klaric, V.; Baldessari, M.; Malagnini, V.; Angeli, G.	2014	The impact of insecticides applied in apple orchards on the predatory mite *Kampimodromus aberrans* (Acari: Phytoseiidae).	Experimental & applied acarology, (2014 Mar) Vol. 62, No. 3, pp. 391-414.	14
CA 8.3.2	Amirzade, N.; Izadi, H.; Jalali, M. A.; Zohdi, H.	2014	Evaluation of three neonicotinoid insecticides against the common pistachio psylla, *Agonoscena pistaciae,* and its natural enemies	Journal of Insect Science: Vol. 14/ Article 35	27
CA 8.3.2	Gontijo, P. C.; Moscardini, V. F.; Michaud, Jp.; Carvalho, G. A.	2014	Non-target effects of two sunflower seed treatments on *Orius insidiosus* (Hemiptera: Anthocoridae).	Pest management science, (2014 Apr 11). Electronic Publication Date: 11 Apr 2014	37
CA 8.3.2	Döker, I.; Pappas, M.L.; Samaras, K.; Triantafyllou, A.; Kazak, C.; Broufas, G.D.	2014	Compatibility of reduced-risk insecticides with the non-target predatory mite *Iphiseius degenerans* (Acari: Phytoseiidae)	Pest Manag Sci (2014)	38
CA 8.3.2	Tirello, P.; Pozzebon, A.; Duso, C.	2013	The effect of insecticides on the non-target predatory mite *Kampimodromus aberrans*: Laboratory studies	Chemosphere 93 (2013) 1139–1144	54
CA 8.3.2	El-Zahi, S.	2013	Insect predators and control of Aphis gossypii comparing to certain insecticides under caged-cotton plants conditions.	Pakistan journal of biological sciences: PJBS, (2013 Mar 1) Vol. 16, No. 5, pp. 233-8.	69
CA 8.3.2	Yanhua, W.; Liping, C.; Xuehua, A.; Jinhua, J.; Qiang, W.; Leiming, C.; Xueping, Z.	2013	Susceptibility to selected insecticides and risk assessment in the insect egg parasitoid *Trichogramma confusum* (Hymenoptera: Trichogrammatidae).	Journal of economic entomology, (2013 Feb) Vol. 106, No. 1, pp. 142-9.	73
CA 8.3.2	Frank, S.D.	2012	Reduced risk insecticides to control scale insects and protect natural enemies in the production and maintenance of urban landscape plants.	Environmental entomology, (2012 Apr) Vol. 41, No. 2, pp. 377-86.	96

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CA 8.3.2	Xueping, Z.; Changxing, W.; Yanhua, W.; Tao, C.; Liping, C.; Ruixian, Y.; Qiang, W.	2012	Assessment of toxicity risk of insecticides used in rice ecosystem on *Trichogramma japonicum*, an egg parasitoid of rice lepidopterans.	Journal of economic entomology, (2012 Feb) Vol. 105, No. 1, pp. 92-101.	101
CA 8.3.2	Prabhaker, N.; Castle, S.J.; Naranjo, S. E.; Toscano, N. C.; Morse, J. G.	2011	Compatibility of two systemic neonicotinoids, imidacloprid and thiamethoxam, with various natural enemies of agricultural pests.	Journal of economic entomology, (2011 Jun) Vol. 104, No. 3, pp. 773-81.	113
CA 8.3.2	Pozzebon, A.; Duso, C.; Tirello, P.; Ortiz, P. Bermudez	2011	Toxicity of thiamethoxam to *Tetranychus urticae* Koch and *Phytoseiulus persimilis* Athias-Henriot (Acari Tetranychidae, Phytoseiidae) through different routes of exposure.	Pest management science, (2011 Mar) Vol. 67, No. 3, pp. 352-9.	120
CA 8.3.2	Koppel, A.; Herbert, D. A. Jr.; Kuhar, T. P.; Malone, S.; Arrington, M.	2011	Efficacy of selected insecticides against eggs of *Euschistus servus* and *Acrosternum hilare* (Hemiptera: Pentatomidae) and the egg parasitoid *Telenomus podis*i (Hymenoptera: Scelionidae).	Journal of economic entomology, (2011 Feb) Vol. 104, No. 1, pp. 137-42.	126
CA 8.3.2	Cloyd, R.A.; Bethke, J.A.	2011	Impact of neonicotinoid insecticides on natural enemies in greenhouse and interiorscape environments.	Pest management science, (2011 Jan) Vol. 67, No. 1, pp. 3-9.	128
CA 8.3.2	Bostanian, N.J.; Hardman, J.M.; Thistlewood, H.A.; Racette, G.	2010	Effects of six selected orchard insecticides on *Neoseiulus fallacis* (Acari: Phytoseiidae) in the laboratory.	Pest management science, (2010 Nov) Vol. 66, No. 11, pp. 1263-7.	135
CA 8.3.2	Peck, D. C., Olmstead, D.	2010	Neonicotinoid insecticides disrupt predation on the eggs of turf-infesting scarab beetles.	Bulletin of entomological research, (2010 Dec) Vol. 100, No. 6, pp. 689-700.	144
CA 8.3.2	Ohnesorg, W. J.; Johnson, K.D.; O'Neal, M.E.	2009	Impact of reduced-risk insecticides on soybean aphid and associated natural enemies.	Journal of economic entomology, (2009 Oct) Vol. 102, No. 5, pp. 1816-26.	167
CA 8.3.2	Cloyd, R.A.; Timmons, N. R.; Goebel, J. M.; Kemp, K. E.	2009	Effect of pesticides on adult rove beetle *Atheta coriaria* (Coleoptera: Staphylinidae) survival in growing medium.	Journal of economic entomology, (2009 Oct) Vol. 102, No. 5, pp. 1750-8	169
CA 8.3.2	Bostanian, N.J.; Thistlewood, H.A.; Hardman, J.M.; Laurin, M.C.; Racette, G.	2009	Effect of seven new orchard pesticides on *Galendromus occidentalis* in laboratory studies.	Pest management science, (2009 Jun) Vol. 65, No. 6, pp. 635-9.	178
CA 8.3.2	Laurin, M-C.; Bostanian, N. J.	2007	Laboratory studies to elucidate the residual toxicity of eight insecticides to *Anystis baccarum* (Acari: Anystidae).	Journal of economic entomology, (2007 Aug) Vol. 100, No. 4, pp. 1210-4.	206

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CA 8.3.2	Glynn, T.P.	2006	Susceptibility of pest *Nezara viridula* (Heteroptera: Pentatomidae) and parasitoid *Trichopoda pennipes* (Diptera: Tachinidae) to selected insecticides.	Journal of economic entomology, (2006 Jun) Vol. 99, No. 3, pp. 648-57.	226
CA 8.3.2	Villanueva, R.T.; Walgenbach, J.F.	2005	Development, oviposition, and mortality of *Neoseiulus fallacis* (Acari: Phytoseiidae) in response to reduced-risk insecticides.	Journal of economic entomology, (2005 Dec) Vol. 98, No. 6, pp. 2114-20.	239
CA 8.3.2	Bostanian, N. J.; Hardman, J.M.; Ventard, E.; Racette, G.	2005	The intrinsic toxicity of several neonicotinoids to *Lygus lineolaris* and *Hyaliodes vitripennis*, a phytophagous and a predacious mirid.	Pest management science, (2005 Oct) Vol. 61, No. 10, pp. 991-6. Journal code:	242
CA 8.3.2	Kilpatrick, A. L.; Hagerty, A. M.; Turnipseed, S. G.; Sullivan, M. J.; Bridges, W. C. Jr	2005	Activity of selected neonicotinoids and dicrotophos on nontarget arthropods in cotton: implications in insect management.	Journal of economic entomology, (2005 Jun) Vol. 98, No. 3, pp. 814-20.	245
CA 8.3.2	Oliver, J.B.; Mannion, C.M.; Klein, M.G.; Moyseenko, J.J.; Bishop, B.	2005	Effect of insecticides on *Tiphia vernalis* (Hymenoptera: Tiphiidae) oviposition and survival of progeny to cocoon stage when parasitizing *Popillia japonica* (Coleoptera: Scarabaeidae) larvae.	Journal of economic entomology, (2005 Jun) Vol. 98, No. 3, pp. 694-703.	247
CA 8.3.2	Samih, M. A.; Khajehhoseini, M.; Mahdian, K.; Alizadeh, A.	2013	Effect of Some Medicinal Plant Extracts on Stable population Parameters of *Chrysoperla Carnea* (Stephens).	Iranian Journal of Pharmaceutical Research, (Oct 2013) Vol. 12, Supp. Supplement 2, pp. 1290.	271
CA 8.3.2	Khajehhoseini, M.; Samih, M. A.n; Mahdian, K.; Alizadeh, A.	2013	Toxicity of Plant Extract *Rubia Tinctorum* in Comparision with Thiamethoxam on Green Lacewing *Chrysoperla Carnea* (Stephens).	Iranian Journal of Pharmaceutical Research, (Oct 2013) Vol. 12, Supp. Supplement 2, pp. 950.	272
CA 8.3.2	Khajehhoseini, M.; Samih, M.d A.; Mahdian, K.; Alizadeh, A.	2013	The Effect of Thiamethoxam and Plant Extracts on Biological Parameters of *Chrysoperla Carnea* (Stephens) (Neu. Chrysopidae) in Iaboratory Condition.	Iranian Journal of Pharmaceutical Research, (Oct 2013) Vol. 12, Supp. Supplement 2, pp. 746.	273
CA 8.3.2	Bredeson, M.M.; Reese, R. N.; Lundgren, J. G.	2015	The effects of insecticide dose and herbivore density on tri-trophic effects of thiamethoxam in a system involving wheat, aphids, and ladybeetles	Crop ProtectionCrop Protection (1 Mar 2015) Volume 69, pp. 70-76	296
CA 8.3.2	Duso, C.; Malagnini, V.; Pozzebon, A.; Buzzetti, Fi. M.; Tirello, P.	2008	A method to assess the effects of pesticides on the predatory mite Phytoseiulus persimilis (Acari Phytoseiidae) in the laboratory.	Biocontrol science and technology (2008), Vol. 18, Number 9-10, pp. 1027-1040	305
CA 8.3.2	Byrne, F. J.	2007	Evaluation of the Impact of Neonicotinoid Insecticides on the Glassy-winged Sharpshooter and Its Egg Parasitoids	Proceedings of the Pierce's Disease Research Symposium (2007), pp. 70-72.	307

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CA 8.3.2	Martinez, L.C.; Plata-Rueda, A.; Zanuncio, J. C.; Serrao, J. E.	2014	Comparative toxicity of six insecticides on the rhinoceros beetle (Coleoptera: Scarabaeidae)	Florida Entomologist, (SEP 2014) Vol. 97, No. 3, pp. 1056-1062.	311
CA 8.3.2	Shakoorzadeh, M.; Rafiee-Dastjerdi, H.; Golmohammadi, Gh.; Hassanpour, M.; Golizadeh, A.	2013	Lethal and sublethal effects of dinotefuran and thiamethoxam on the population growth parameters of the green lacewing, Chrysoperla carnea: (Neu.: Chrysopidae), under laboratory conditions.	Journal of Entomological Society of Iran, (2013) Vol. 33, No. 3, pp. 1-9.	334
CA 8.3.2	Tinsley, N. A.; Steffey, K. L.; Estes, R. E.; Heeren, J. R.; Gray, M. E.; Diers, B. W.	2012	Field-level effects of preventative management tactics on soybean aphids (*Aphis glycines* Matsumura) and their predators.	Journal of Applied Entomology, (JUN 2012) Vol. 135, No. 5, pp. 361-371.	346
CA 8.3.2	Rocha, L. C. D; Carvalho, G. A; Moura, A. P; Moscardini, V. F; Rezende, D. T; Santos, O. M	2010	Physiologic selectivity of pesticides used on coffee plantations on eggs and adults of *Cryptolaemus Montrouzieri* Mulsant.	Arquivos do Instituto Biologico Sao Paulo, (2010) Vol. 77, No. 1, pp. 119-127.	374
CA 8.3.2	Arno, J.; Roig, J.; Gabarra, R.	2008	Activity of some biorational and conventional insecticides against *Bemisia tabaci* and their compatibility with Whitefly parasitoids.	Journal of Insect Science (Tucson), (JAN 10 2008) Vol. 8, pp. 4-5.	394
CA 8.3.2	Lim, U. T.; Mahmoud, A. M. A.	2007	Pesticide susceptibility of Trissolcus nigripedius (Hymenoptera: Scelionidae) an egg parasitoid of Dolycoris baccarum (Heteroptera: Pentatomidae).	Entomological Research, (AUG 2007) Vol. 37, No. Suppl. 1, pp. A140.	402
CA 8.3.2	Li, W. D.; Zhang, P. J.; Zhang, J. M.; Lin, W. C.; Lu, Y. B.; Gao, Y. L.	2015	Acute and sublethal effects of neonicotinoids and pymetrozine on an important egg parasitoid, *Trichogramma ostriniae* (Hymenoptera: Trichogrammatidae).	Biocontrol Science and Technology (2015), Volume 25, Number 2, pp. 121-131	419
CA 8.3.2	Tabozada, E. O.; Sayed, S. M.; El-Arnaouty, S. A.	2015	Side effects of sublethal concentration of two neonicotinoids; thiamethoxam and thiacloprid on the larval parasitoid, *Bracon brevicornis* (Hymenoptera: Braconidae).	American Journal of Experimental Agriculture (2015), Volume 5, Number 1, pp. 29-35	420
CA 8.3.2	Halikatti, G.; Pokharkar, D. S.; Shrikant V.; Vivek U.; Halikatti, G.; Vibhute, S.; Uppar, V.	2014	Toxicity of newer insecticides on adults of *Cryptolaemus montrouzieri* M. under laboratory condition.	Environment and Ecology (2014), Volume 32, Number 3, pp. 928-932	439
CA 8.3.2	Gontijo, P. C.; Moscardini, V. F.; Michaud, J. P.; Carvalho, G. A.	2014	Non-target effects of chlorantraniliprole and thiamethoxam on *Chrysoperla carnea* when employed as sunflower seed treatments.	Journal of Pest Science (2014), Volume 87, Number 4, pp. 711-719, 59	445

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.2	Ewunkem, J. A.; Jackai, L. E. N.; Osofuhene-Sintim, H.; Dingha, B. N	2014	Comparing the impact of a neonicotinoid and biorational Agroneem® on herbivorous and beneficial arthropods on cowpea and tomato.	Journal of Agricultural Science and Technology A (2014), Volume 4, Number 7, pp. 585-596	447
CA 8.3.2	Moscardini, V. F.; Gontijo, P. C.; Michaud, J. P.; Carvalho, G. A.	2014	Sublethal effects of chlorantraniliprole and thiamethoxam seed treatments when *Lysiphlebus testaceipes* feed on sunflower extrafloral nectar.	BioControl (2014), Volume 59, Number 5, pp. 503-511.	452
CA 8.3.2	Souza, J. R.; Carvalho, G. A.; Moura, A. P.; Couto, M. H. G.; Maia, J. B.	2014	Toxicity of some insecticides used in maize crop on *Trichogramma pretiosum* (Hymenoptera, Trichogrammatidae) immature stages.	Chilean Journal of Agricultural Research (2014), Volume 74, Number 2, pp. 234-239, 28	471
CA 8.3.2	Rahmani, S.; Bandani, A. R.; Sabahi, Q.	2013	Population statistics and biological traits of *Hippodamia variegata* (Goeze) (Coleoptera: Coccinellidae) affected by LC_{30} of thiamethoxam and pirimicarb.	Archives of Phytopathology and Plant Protection (2013), Volume 46, Number 15, pp. 1839-1847	529
CA 8.3.2	Thiruchchelvan, N.; Mikunthan, G.; Thirukkumaran, G.; Pakeerathan, K.	2013	Effect of insecticides on bio-agent *Trichoderma harzianum rifai* under in vitro condition.	American-Eurasian Journal of Agricultural & Environmental Sciences (2013), Volume 13, Number 10, pp. 1357-1360	531
CA 8.3.2	Antigo, M. de R.; Oliveira, H. N. de; Carvalho, G. A.; Pereira, F. F.; de R. Antigo, M.; de Oliveira, H. N.	2013	Repellence of pesticides used in sugarcane and their effects on the emergence of *Trichogramma galloi*. Repelencia de produtos fitossanitarios usados na cana-de-acucar e seus efeitos na emergencia de *Trichogramma galloi*.	Revista Ciencia Agronomica (2013), Volume 44, Number 4, pp. 910-916	541
CA 8.3.2	Shankarganesh, K.; Bishwajeet Paul; Gautam, R. D.; Paul, B.	2013	Studies on ecological safety of insecticides to egg parasitoids, *Trichogramma chilonis* Ishii and *Trichogramma brasiliensis* (Ashmead).	National Academy Science Letters (2013), Volume 36, Number 6, pp. 581-585	548
CA 8.3.2	Rahmani, S.; Bandani, A. R.; Sabahi, Q.	2013	Effects of thiamethoxam in sublethal concentrations, on life expectancy (ex) and some other biological characteristics of *Hippodamia variegata* (Goeze) (Coleoptera: Coccinellidae).	International Research Journal of Applied and Basic Sciences (2013), Volume 4, Number 3, pp. 556-560,	552

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.2	Szczepanik, M.; Templin, J.; Napiorkowska, T.	2013	Susceptibility of developmental stages of the spider, *Tegenaria atrica* C.L. Koch to selected insecticides from different chemical groups. Wrazliwosc stadiow rozwojowych pajaka katnika wiekszego, *Tegenaria atrica* C.L. Koch na wybrane insektycydy z roznych grup chemicznych.	Progress in Plant Protection (2013), Volume 53, Number 3, pp. 519-523	553
CA 8.3.2	Nage, S. M.; Devi, A. R.; Kumar, G. S.; Akare, U. S.	2013	Effect of different seed treatments on occurence of natural enemies in soybean ecosystem.	International Journal of Plant Protection (2013), Volume 6, Number 2, pp. 432-435	559
CA 8.3.2	Ayubi, A.; Moravvej, G.; Karimi, J.; Jooyandeh, A.	2013	Lethal effects of four insecticides on immature stages of *Chrysoperla carnea* (Stephens) (Neuroptera: Chrysopidae) in laboratory conditions.	Tuerkiye Entomoloji Dergisi (2013), Volume 37, Number 4, pp. 399-407	564
CA 8.3.2	Jadhav, D. S.; Shukla, A.	2013	Relative toxicity of some insecticides to Coccinella transversalis (F.).	Indian Journal of Entomology (2013), Volume 75, Number 4, pp. 301-303	572
CA 8.3.2	Alexander, A.; Krishnamoorthy, S. V.; Kuttalam, S.	2013	Risk assessment of insecticides against non-target beneficials including natural enemies of papaya mealybug, *Paracoccus marginatus* Williams and Granara de Willink.	Journal of Insect Science (Ludhiana) (2013), Volume 26, Number 2, pp. 241-245	585
CA 8.3.2	Rahmani, S.; Bandani, A. R.	2013	Sublethal concentrations of thiamethoxam adversely affect life table parameters of the aphid predator, *Hippodamia variegata* (Goeze) (Coleoptera: Coccinellidae).	Crop Protection (2013), Volume 54, pp. 168-175.	604
CA 8.3.2	Mukesh, N.; Kumawat, K. C.; Meenu Choudhary; Jat, R. G.; Nitharwal, M.; Choudhary, M.	2013	Influence of biorational and conventional insecticides on the population of *Chrysoperla carnea* (Steph.) in green gram, *Vigna radiata* (Linn.) in semi-arid conditions.	Biopesticides International (2013), Volume 9, Number 1, pp. 83-87	621
CA 8.3.2	Halappa, B.; Awaknavar, J. S.; Archana, D.	2013	Safety evaluation of few insecticides against green lace wing, *Chrysoperla carnea* (Stephens) (Neuroptera: Chrysopidae) under laboratory condition.	Journal of Entomological Research (2013), Vol. 37, Number 1, pp. 73-77	622
CA 8.3.2	Anjum, S.; Iqbal, J.; Arshad, M.; Gogi, M. D.; Arif, M. J.; Tajammal, S.	2013	Comparative efficacy of insecticides as seed treatment against wheat aphid and its coccinellid predator.	Pakistan Entomologist (2013), Volume 35, Number 1, pp. 17-22	646

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.2	Pandi, G. G. P.; Bishwajeet Paul; Shah Vivek; Shankarganesh, K.; Paul, B.; Vivek, S.	2013	Relative toxicity of insecticides against coccinellid beetle, *Cheilomenes sexmaculata* (Fabricius).	Annals of Plant Protection Sciences (2013), Volume 21, Number 1, pp. 17-20	647
CA 8.3.2	Souza, C. R.; Sarmento, R. A.; Venzon, M.; Barros, E. C.; Santos, G. R. dos; Chaves, C. C.; dos Santos, G. R.	2012	Impact of insecticides on non-target arthropods in watermelon crop.	Semina: Ciencias Agrarias (Londrina) (2012), Volume 33, Number 5, pp. 1789-1801	665
CA 8.3.2	Zhao JianWei; Zheng Yu; Li LiNa; He YuXian; Weng QiYong; Zhao, J. W.; Zheng, Y.; Li, L. N.; He, Y. X.; Weng, Q. Y.	2012	Toxicity of various classes of insecticides to *Serangium japonicum*, a predator of *Bemisia tabaci*.	Chinese Journal of Applied Entomology (2012), Volume 49, Number 6, pp.1577-1583	666
CA 8.3.2	Rishi Kumar; Kranthi, S.; Nitharwal, M.; Jat, S. L.; Monga, D.; Kumar, R.	2012	Influence of pesticides and application methods on pest and predatory arthropods associated with cotton.	Phytoparasitica (2012), Vol. 40, Number 5, pp. 417-424	686
CA 8.3.2	Vivek S.; Bishwajeet P.; Pandi, G. G. P; Shankarganesh, K.	2012	Relative toxicity of insecticides on larval stages of green lacewing, *Chrysoperla sp.* (carnea-group) (Chrysopidae: Neuroptera).	Indian Journal of Entomology (2012), Volume 74, Number 4, pp. 394-397	688
CA 8.3.2	Mainali, B. P.; Kim, S. W.; Lim, U. T.	2012	Effects of combining releases of non-viable host eggs with insecticide application on *Riptortus pedestris* population and its egg parasitoids.	Journal of Asia-Pacific Entomology (2012), Volume 15, Number 2, pp. 299-305	702
CA 8.3.2	Khan, M. A.; Ahmad-ur-Rahman, S.; Khan, I. A.; Saeed Khan; Qamar Zeb; Muhammad, S.; Manzoor, M.; Khan, S. Z.; Shah, S. F.; Muhammad, Sm; Zell-e-Huma; Baharullah K.	2012	Toxicity of foliar insecticides to syrphidfly predator of green peach aphid, *Myzus persicae* (Sulzer) on potato varieties.	Sarhad Journal of Agriculture (2012), Volume 28, Number 2, pp. 291-296	704
CA 8.3.2	Muhammadm A. K.; Ahmad-ur-Rahmanm S,; Khan, I. A.; Qamar, Z.; Muhammad, S.; Manzoor, M.; Saeed, K.; Sana, Z.; Shah, S. F.; Muhammad Saleem; Zell-e-Huma; Awan, H. U.	2012	Toxicity of foliar insecticides to ladybird beetle predator of green peach aphid, *Myzus persicae* (Sulzer) on potato varieties.	Sarhad Journal of Agriculture (2012), Volume 28, Number 2, pp. 283-290	705
CA 8.3.2	Lanzoni, A; Sangiorgi, L; Luigi, V de; Consolini, L; Pasqualini, E; Burgio, G; de Luigi, V	2012	Evaluation of chronic toxicity of four neonicotinoids to *Adalia bipunctata* L. Coleoptera: Coccinellidae) using a demographic approach.	IOBC/WPRS Bulletin (2012), Volume 74, pp. 211-217	715

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.2	El-Zahi, E. S.	2012	Selectivity of some pesticides for various stages of *Chrysopeda carne*a (Steph.) using different methods of exposure.	Egyptian Journal of Biological Pest Control (2012), Volume 22, Number 2, pp. 211-216	716
CA 8.3.2	Seagraves, M. P.; Lundgren, J. G.	2012	Effects of neonicitinoid seed treatments on soybean aphid and its natural enemies.	Journal of Pest Science (2012), Volume 85, Number 1, pp. 125-132	742
CA 8.3.2	Avramova, K.; Grekov, D.; Ivanova, R.; Hristev, H.	2012	Some typical symptoms of mulberry silk worm poisoning with the neonicotinoid insecticides Confidor and Actara.	Scientific Papers, Series D. Animal Science (2012), Volume 55, pp. 107-108	748
CA 8.3.2	Wang, Y.; Yu, R.; Zhao, X.; An, X.; Chen, L.; Wu, C.; Wang, Q.	2012	Acute toxicity and safety evaluation of neonicotinoids and macrocyclic lactiones to adult wasps of four *Trichogramma* species (Hymenoptera: Trichogrammidae).	Acta Entomologica Sinica (2012), Vol. 55, Number 1, pp. 36-45	768
CA 8.3.2	Redoan, A. C. M.; Carvalho, G. A.; Cruz, I.; Figueiredo, M. de L. C.; Silva, R. B. da; de L. C. Figueiredo, M.; da Silva, R. B.	2012	Selectivity of insecticides used in the control of *Spodoptera frugiperda* (J. E. Smith) (Lepidoptera: Noctuidae) for eggs and nymphs of *Doru luteipes* (Scudder) (Dermaptera: Forficulidae). Seletividade de inseticidas utilizados no controle de *Spodoptera frugiperda* (J. E. Smith) (Lepidoptera: Noctuidae) para ovos e ninfas de *Doru luteipes* (Scudder) (Dermaptera: Forficulidae).	Revista Brasileira de Milho e Sorgo (2012), Volume 11, Number 1, pp. 25-34	774
CA 8.3.2	Al-Kherb, W. A	2011	Field efficacy of some neonicotinoid insecticides on whitefly *Bemicia tabaci* (Homoptera: Aleyrodidae) and its natural enemies in cucumber and tomato plants in Al-Qassim region, KSA.	Journal of Entomology (2011), Volume 8, Number 5, pp. 429-439	808
CA 8.3.2	Scarpellini, J. R.; Andrade, D. J. de; de Andrade, D. J.	2011	The effect of insecticides on the lady beetle *Cycloneda sanguinea* L. (Coleoptera, Coccinellidae) and on the aphid *Aphis gossypii* Glover (Hemiptera, Aphididae) on cotton plants.	Arquivos do Instituto Biologico (Sao Paulo) (2011), Volume 78, Number 3, pp. 393-399	813
CA 8.3.2	Mohanasundaram, A.; Sharma, R. K.	2011	Effect of newer pesticide schedules on the population of *Earias vittella* (Fabricius) and its predators on okra.	Journal of Insect Science (Ludhiana) (2011), Volume 24, Number 3, pp. 280-290	827
CA 8.3.2	Mohanasundaram, A.; Sharma, R. K.	2011	Effect of newer pesticide schedules on the population of sucking pests and predators on okra.	Pesticide Research Journal (2011), Volume 23, Number 1, pp. 55-63	875

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.2	Nakahira, K.; Kashitani, R.; Tomoda, M.; Kodama, R.; Ito, K.; Yamanaka, S.; Momoshita, M.; Arakawa, R.; Takagi, M.	2011	Systemic nicotinoid toxicity against the predatory mirid *Pilophorus typicus*: residual side effect and evidence for plant sucking.	Journal of the Faculty of Agriculture, Kyushu University (2011), Volume 56, Number 1, pp. 53-55	876
CA 8.3.2	More, S. A.; Patil, P. D.; Shinde, B. D.	2011	Safety of different insecticides to the green lace wing, *Mallada boninensis* Okomoto.	Journal of Plant Protection and Environment (2011), Volume 8, Number 1, pp. 21-25	893
CA 8.3.2	Godoy, M. S.; Carvalho, G. A.; Carvalho, B. F.; Lasmar, O.	2010	Physiological selectivity of insecticides to two lacewing species. Seletividade fisiologica de inseticidas em duas especies de crisopideos.	Pesquisa Agropecuaria Brasileira (2010), Volume 45, Number 11, pp. 1253-1258	903
CA 8.3.2	Al-Antary, T. M.; Ateyyat, M. A.; Abussamin, B. M.	2010	Toxicity of certain insecticides to the parasitoid *Diaeretiella rapae* (Mcintosh) (Hymenoptera: Aphidiidae) and its host, the cabbage aphid *Brevicoryne brassicae* L. (Homoptera: Aphididae).	Australian Journal of Basic and Applied Sciences (2010), Volume 4, Number 6, pp. 994-1000	907
CA 8.3.2	Naveed, M.; Salam, A.; Saleem, A.; Rafiq, M.; Hamza, A.	2010	Toxicity of thiamethoxam and imidacloprid as seed treatments to parasitoids associated to control *Bemisia tabaci*.	Pakistan Journal of Zoology (2010), Volume 42, Number 5, pp. 559-565	915
CA 8.3.2	Preetha, G.; Manoharan, T.; Kuttalam, S.	2010	Impact of chloronicotinyl insecticide, imidacloprid on egg, egg-larval and larval parasitoids under laboratory conditions.	Journal of Plant Protection Research (2010), Volume 50, Number 4, pp. 535-540	916
CA 8.3.2	Bhakray, R. B.; Thakre, S. M.; Aherkar, S. K.; Satpute, N. S.; Raut, B. T.	2010	Biosafety of systemic insecticides through seed treatment and stem smearing to some predators.	Journal of Maharashtra Agricultural Universities (2010), Volume 35, Number 3, pp. 488-489	919
CA 8.3.2	Schenke, D.; Baier, B.	2010	Diffusion of thiamethoxam and imidacloprid from coated sugarbeet seeds into the soil and its effects on carabid beetle larvae. Ausbreitung von Thiamethoxam und Imidacloprid aus pilliertem Zuckerruebensaatgut in den Boden und deren Auswirkungen auf Laufkaeferlarven.	Julius-Kuehn-Archiv (2010), Number 428, 462 p. ISSN: 1868-9892	921

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.2	Lima Junior, I. dos S. dos; Nogueira, R. F.; Bertoncello, T. F.; Melo, E. P. de; Suekane, R.; Degrande, P. E.; dos S. dos Lima Junior, I.; dos Lima Junior, I. dos S.; de Melo, E. P.	2010	Selectivity of pesticides over predators of cotton plant pests. Seletividade de inseticidas sobre o complexo de predadores das pragas do algodoeiro.	Pesquisa Agropecuaria Tropical (2010), Volume 40, Number 3, pp. 347-353	929
CA 8.3.2	Scarpellini, J. R.; Andrade, D. J. de; de Andrade, D. J.	2010	Evaluation of the effect of insecticides on lady beetles *Hippodamia convergens* uerin-Meneville (Coleoptera: Coccinellidae) in cotton plant.	Arquivos do Instituto Biologico (Sao Paulo) (2010), Volume 77, Number 2, pp. 323-330	932
CA 8.3.2	Zotti, M.J.; Gruetzmacher, A.D.; Gruetzmacher, D.D.; Dalmazzo, G.O.; Martins, J.F.S.	2010	Selectivity of insecticides used in the corn crop to adults of *Doru lineare* (Eschscholtz, 1822) (Dermaptera: Forficulidae). Seletividade de inseticidas usados na cultura do milho para adultos de Doru lineare (Eschscholtz, 1822) (Dermaptera: Forficulidae).	Arquivos do Instituto Biologico (Sao Paulo) (2010), Volume 77, Number 2, pp. 291-299	936
CA 8.3.2	Khajuria, D. R.; Gupta, D.; Sharma, J. P.; Editor(s): Verma, A. K.; Bhardwaj, S. P.; Gupta, P. R.	2010	Bio-efficacy of insecticides against aerial form of the woolly apple aphid, Eriosoma lanigerum (Hausmann) and their safety to the parasitoid, *Aphelinus mali* (Haldemann).	Pest Management and Economic Zoology (2010), Vol. 18, Number 1/2, pp. 225-228	940
CA 8.3.2	Muthuswami, M.; Indumathi, P.; Krishnan, R.; Thangamalar, A.; Subramanian, S.	2010	Impact of chemicals used for thrips control on silkworm, *Bombyx mori* L.	Karnataka Journal of Agricultural Sciences (2010), Volume 23, Number 1, pp. 144-145	952
CA 8.3.2	Gorzka, D.; Olszak, R. W.;	2010	Insecticide selectivity tests on spider mite destroyer (*Stethorus punctillum*) (Weise) (Coleoptera: Coccinellidae) in laboratory conditions.	IOBC/WPRS Bulletin (2010), Volume 55, pp. 109-112	961
CA 8.3.2	Noubar, J.; Bostanian, N. J.; Hardman, J. M.; Thistlewood, H. A.; Racette, G.	2010	The response of Neoseiulus fallacis (Garman) and *Galendromus occidentalis* (Nesbitt) (Acari: Phytoseiidae) to six reduced risk insecticides in Canada.	IOBC/WPRS Bulletin (2010), Volume 55, pp. 73-77	982
CA 8.3.2	Baldessari, M.; Malagnini, V.; Tolotti, G.; Angeli, G.	2010	Impact of neonicotinoid insecticides on beneficial phytoseiid mites. Insetticidi neonicotinoidi, quale l'impatto sugli acari fitoseidi utili.	Informatore Agrario (2010), Volume 66, Number 45, pp. 67-70	985
CA 8.3.2	Patel, J. K.; Patel, I. S.; Patel, G. M.	2010	Effect of Spirotetramat and Imidacloprid on survival of natural enemies of sucking pests in cotton crop.	Trends in Biosciences (2010), Volume 3, Number 1, pp. 37-38	1003

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.2	Kumar, P. K. V.; Vasudev, V.; Seetharama, H. G.; Irulandi, S.; Sreedharan, K.	2010	Effect of insecticides on *Spalgis epius.*	Journal of Coffee Research (2010), Volume 38, Number 1/2, pp. 11-28	1014
CA 8.3.2	Hegde, M.; Nidagundi, J.	2009	Effect of newer chemicals on planthoppers and their mirid predator in rice.	Karnataka Journal of Agricultural Sciences (2009), Volume 22, Number 3, pp. 511-513, 8 refs	1055
CA 8.3.2	Sun DingWei; Su JianYa; Shen JingLiang; Xu JianTao; Sun, D. W.; Su, J. Y.; Shen, J. L.; Xu, J. T.	2008	Safety evaluation of insecticides to *Cyrtohinus lividipennis* (Reuter) (Hemiptera: Miridae), a predator of *Nilaparvata lugens* (Stal) (Homoptera: Delphacidae).	Scientia Agricultura Sinica (2008), Volume 41, Number 7, pp. 1995-2002	1174
CA 8.3.2	Moser, S. E.; Obrycki, J. J.	2009	Non-target effects of neonicotinoid seed treatments; mortality of coccinellid larvae related to zoophytophagy.	Biological Control (2009), Volume 51, Number 3, pp. 487-492	1057
CA 8.3.2	Silva, M. Z. da; Oliveira, C. A. L. de; Sato, M. E.; da Silva, M. Z.; de Oliveira, C. A. L.	2009	Selectivity of the pesticides to the predaceous mite *Agistemus brasiliensis* Matioli, Ueckermann & Oliveira (Acari: Stigmaeidae). Seletividade de produtos fitossanitarios sobre o acaro predador *Agistemus brasiliensis* Matioli, Ueckermann & Oliveira (Acari: Stigmaeidae).	Revista Brasileira de Fruticultura (2009), Volume 31, Number 2, pp. 388-396	1067
CA 8.3.2	Pratissoli, D; Vianna, U. R; Furtado, G. O; Zanuncio, J. C; Polanczyk, R. A.; Barbosa, W. F.; Carvalho, J. R. de; de Carvalho, J. R.	2009	Insecticide selectivity to *Trichogramma pretiosum* Riley (Hymenoptera: Trichogrammatidae) in different hosts. Seletividade de inseticidas a *Trichogramma pretiosum* Riley (Hymenoptera: Trichogrammatidae) em diferentes hospedeiros.	Boletin de Sanidad Vegetal, Plagas (2009), Volume 35, Number 3, pp. 347-353	1072
CA 8.3.2	Preetha, G.; Stanley, J.; Suresh, S.; Kuttalam, S.; Samiyappan, R.	2009	Toxicity of selected insecticides to *Trichogramma chilonis*: assessing their safety in the rice ecosystem.	Phytoparasitica (2009), Volume 37, Number 3, pp. 209-215	1091
CA 8.3.2	Kumaran, N.; Kumar, B. V.; Boomathi, N.; Kuttalam, S.; Gunasekaran, K.	2009	Non-target effect of ethiprole 10 SC to predators of rice planthoppers.	Madras Agricultural Journal (2009), Vol. 96, Number 1/6, pp. 208-212	1092
CA 8.3.2	Thakare, S. M.; Bharti Dhoble; Thakare, A. S.; Dhoble, B.	2009	Effect of different chemicals applied by seed or stem smearing technique on natural enemies of Bt cotton.	Crop Research (Hisar) (2009), Volume 38, Number 1/3, pp. 205-207	1093

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.2	Ahire, R. V.; Bhosle, B. B.; Kadam, D. R.	2009	Impact of thiamethoxam as seed dresser on natural enemies of major pests of soybean (*Glycine max* (L.) Merill) and impact on yield.	Journal of Plant Protection and Environment (2009), Volume 6, Number 2, pp. 117-119	1114
CA 8.3.2	Agale, D. A.; Bhosle, B. B.; Kadam, D. R.	2009	Impact of different insecticides on population of natural enemies in Bt cotton and yield.	Journal of Plant Protection and Environment (2009), Volume 6, Number 2, pp. 105-107	1117
CA 8.3.2	Shinde, C. U.; Patel, M. B.; Mehendale, S. K.	2009	Studies on relative toxicity of different insecticides on larvae of *Chrysoperla carnea* (Stephens).	Insect Environment (2009), Volume 15, Number 2, pp. 67-69	1133
CA 8.3.2	Wang, H. Y.; Yang, Y.; Su, J. Y.; Shen, J. L.; Gao, C. F.	2008	Assessment of the impact of insecticides on *Anagrus nilaparvatae* (Pang et Wang) (Hymenoptera: Mymanidae), an egg parasitoid of the rice planthopper, *Nilaparvata lugens* (Hemiptera: Delphacidae).	Crop Protection (2008), Volume 27, Number 3/5, pp. 514-522	1185
CA 8.3.2	da Fonseca, P.R.B.; Bertoncello,T.F.; Ribeiro, J.F.; Fernandes, M.G.; Degrande, P.E.	2008	Selectivity of insecticides to natural enemies on soil cultivated with cotton.	Pesquisa Agropecuária Tropical, v. 38, n. 4, p. 304-309, out./dez. 2008	1195
CA 8.3.2	Hirekurubar, R.B.; Ambekar, J.S.	2008	Bio-efficacy of newer insecticides against shoot and fruit borer of okra and their impact on natural enemies.	Crop. Res. 36 (1, 2 & 3): 302 – 307 (2008)	1196
CA 8.3.2	Baldessari, M.; Maines, R.; Angeli, G. Editor(s): Lozzia, G. C.; Lucchi, A.; di Chiara, S. R.; Tsolakis, H.	2008	Comparison of two methods for the agrochemicals side effect evaluation on Phytoseiid mites in vineyards.	IOBC/WPRS Bulletin (2008), Volume 36, pp. 237-243	1200
CA 8.3.2	Mahmoud, A. M. A.; Lim, U. T.	2008	Ecotoxicological effect of fenitrothion on *Trissolcus nigripedius* (Hymenoptera: Scelionidae) an egg parasitoid of *Dolycoris baccarum* (Hemiptera: Pentatomidae).	Journal of Asia-Pacific Entomology (2008), Volume 11, Number 4, pp. 207-210	1207
CA 8.3.2	Scarpellini, J. R.	2008	Selectivity of pesticides on lady beetles *Cycloneda sanguinea* (Linnaeus, 1763) (Coleoptera, Coccinellidae) in cotton plant. Seletividade fisiologica de aficidas sobre joaninha *Cycloneda sanguinea* (Linnaeus, 1763) (Coleoptera, Coccinellidae) em algodoeiro.	Arquivos do Instituto Biologico (Sao Paulo) (2008), Volume 75, Number 2, pp. 195-202	1210
CA 8.3.2	Olszak, R. W.; Sekrecka, M.;	2008	Influence of some insecticides and acaricides on beneficial mites and on *Coccinella septempunctata* (Coleoptera; Coccinellidae) larvae.	IOBC/WPRS Bulletin (2008), Volume 35, pp. 101-108	1227

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.2	Bostanian, N. J; Laurin, M. C;	2008	Effects of ten pesticides to *Anystis baccarum* (Acari: Anystidae).	IOBC/WPRS Bulletin (2008), Volume 35, pp. 96-100	1228
CA 8.3.2	Sun Chao; Su JianYa; Shen JinLiang; Zhang Xi; Sun, C.; Su, J. Y.; Shen, J. L.; Zhang, X.	2008	Laboratory safety evaluation of insecticides to *Trichogramma japonicum*.	Chinese Journal of Rice Science (2008), Volume 22, Number 1, pp. 93-98	1229
CA 8.3.2	Farag, N. A.; Gesraha, M. A.	2007	Impact of four insecticides on the parasitoid wasp, *Diaertiella rapae* and its host aphid, *Brevicoryne brassicae* under laboratory conditions.	Research Journal of Agriculture and Biological Sciences (2007), Volume 3, Number 5, pp. 529-533	1264
CA 8.3.2	Mhaske, B. M.; Pardeshi, S. R.; Bhoite, K. D.; Rasal, P. N.	2007	Biosafety of Coccinellid predators and chemical control of wheat aphids.	Agricultural Science Digest (2007), Volume 27, Number 4, pp. 264-266	1280
CA 8.3.2	Choi, B. R;Lee, S. W; Park, H. M	2007	Selection of low toxic pesticides and residual toxicity to *Cotesia glomerata*.	Korean Journal of Applied Entomology (2007), Volume 46, Number 2, pp.	1281
CA 8.3.2	Muthukumar, M.; Sharma, R. K.; Sinha, S. R.	2007	Field efficacy of biopesticides and new insecticides against major insect pests and their effect on natural enemies in cauliflower.	Pesticide Research Journal (2007), Volume 19, Number 2, pp. 190-196	1285
CA 8.3.2	Ravi, S. K.; Manjunatha, M.; Naik, M. I.	2007	Toxic effect of insecticides on mortality of sugarcane woolly aphid, *Ceratovacuna lanigera* and its predator *Dipha aphidivora*.	Karnataka Journal of Agricultural Sciences (2007), Volume 20, Number 1, pp. 144-145	1295
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CA 8.3.2	Gesraha, M. A.	2007	Impact of some insecticides on the coccinellid predator, *Coccinella undecimpunctata* L. and its aphid prey, *Brevicoryne brassicae* L.	Egyptian Journal of Biological Pest Control (2007), Volume 17, Number 1/2, pp. 65-69	1316
CA 8.3.2	Basappa, H.	2007	Toxicity of biopesticides and synthetic insecticides to egg parasitoid, *Trichogramma chilonis I*shii, and coccinellid predator, *Cheilomenes sexmaculata* (Fabricius)	Journal of Biological Control (2007), Volume 21, Number 1, pp. 31-36	1326
CA 8.3.2	Poletti, M.; Maia, A. H. N.; Omoto, C	2007	Toxicity of neonicotinoid insecticides to Neoseiulus californicus and *Phytoseiulus macropilis* (Acari: Phytoseiidae) and their impact on functional response to *Tetranychus urticae* (Acari: Tetranychidae).	Biological Control (2007), Volume 40, Number 1, pp. 30-36	1327
CA 8.3.2	Lauziere, I.; Elzen, G.	2007	Effect of formulated insecticides on *Homalodisca vitripennis* (Germar) (Hemiptera: Cicadellidae) and its parasitoid *Gonatocerus ashmeadi* Girault (Hymenoptera: Mymaridae).	Journal of Entomological Science (2007), Volume 42, Number 1, pp. 11-19	1333

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CA 8.3.2	Carvalho, G. A.; Moura, A. P.; Bueno, V. H. P.; Editor(s): Castane, C.; Sanchez, J. A.	2006	Side effects of pesticides on *Trichogramma pretiosum* (Hymenoptera: Trichogrammatidae).	Bulletin OILB/SROP (2006), Volume 29, Number 4, pp. 355-359, 12 refs.	1357
CA 8.3.2	Hamamura, T.; Kohno, K.; Takeda, M.	2006	Insecticide susceptibility of *Pardosa astrigera* L. Koch spiderlings.	Jpn. J. Appl. Entomol. Zool Vol. 50 No.30: 253-255 (2006)	1362
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CA 8.3.2	Tillman, P. G.	2006	Feeding responses of *Trichopoda pennipes* (F.) (Diptera: Tachinidae) to selected insecticides.	Journal of Entomological Science (2006), Volume 41, Number 3, pp. 242-247	1367
CA 8.3.2	Kim, D. H.; Kim, S. S.; Kim, K. S.; Hyun, J. W	2006	Comparative toxicity of some pesticides to the predatory mites, *Neoseiulus fallacis* Garman (Acari: Phytoseiidae).	Korean Journal of Applied Entomology (2006), Volume 45, Number 2, pp. 179-188	1378
CA 8.3.2	Ersin, F.; Madanlar, N.	2006	Investigations on the effects of some pesticides used in greenhouse vegetables on predatory mite *Phytoseiulus persimilis* A.-H. (Acarina: Phytoseiidae) in laboratory conditions.	Tuerkiye Entomoloji Dergisi (2006), Volume 30, Number 1, pp. 67-80	1400
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CA 8.3.2	Tosi, L.; Farinazzo, E.; Posenato, G.; Girolami, V.	2006	Side effects of insecticides on Kampimodromus aberrans. Due anni di prove in veneto sul fitoseide Effetti collaterali di insetticidi su *Kampimodromus aberrans*.	Informatore Agrario (2006), Volume 62, Number 26, pp. 54-56	1407
CA 8.3.2	Vijayaraghavan, C.; Regupathy, A.	2006	Impact of thiamethoxam on spiders in sugarcane ecosystem.	Journal of Plant Protection and Environment (2006), Volume 3, Number 1, pp. 36-39	1413
CA 8.3.2	Mafi, S. A.; Ohbayashi, N.		Toxicity of insecticides to the citrus leafminer, *Phyllocnistis citrella*, and its parasitoids, *Chrysocharis pentheus* and *Sympiesis striatipes* (Hymenoptera: Eulophidae).	Applied Entomology and Zoology (2006), Volume 41, Number 1, pp. 33-39	1414
CA 8.3.2	Mullin, C. A.; Saunders, M. C., II; Leslie, T. W.; Biddinger, D. J.; Fleischer, S. J.	2005	Toxic and behavioral effects to carabidae of seed treatments used on Cry3Bb1- and Cry1Ab/c-protected corn.	Environmental Entomology (2005), Volume 34, Number 6, pp. 1626-163	1426

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.2	Moura, A. P.; Carvalho, G. A.; Rigitano, R. L. de O.; de O. Rigitano, R.L.	2005	Toxicity of insecticides used in tomato crop to *Trichogramma pretiosum*. Toxicidade de inseticidas utilizados na cultura do tomateiro a *Trichogramma pretiosum*.	Pesquisa Agropecuaria Brasileira (2005), Volume 40, Number 3, pp. 203-210	1449
CA 8.3.2	Czepak, C.; Fernandes, P. M.; Albernaz, K. C.; Rodrigues, O. D.; Silva, L. M.; Silva, E. A. da; Takatsuka, F. S.; Borges, J. D.; da Silva, E. A.	2005	Selectivity of insecticides on the complex of natural enemies in cotton crop (*Gossypium hirsutum* L.). Seletividade de inseticidas ao complexo de inimigos naturais na cultura do algodao (*Gossypium hirsutum* L.).	Pesquisa Agropecuaria Tropical (2005), Volume 35, Number 2, pp. 123-127	1456
CA 8.3.2	Kim SangSoo; Seo SangGi; Park JongDae; Kim SeonGon; Kim DoIk; Kim, S. S.; Seo, S. G.; Park, J. D.; Kim, S. G.; Kim, D. I.	2005	Effects of selected pesticides on the predatory mite, *Amblyseius cucumeris* (Acari: Phytoseiidae).	Journal of Entomological Science (2005), Volume 40, Number 2, pp. 107-114	1460
CA 8.3.2	Orita, H.; Kashio, T.	2005	Toxic effect of some pesticides on adults and larvae of *Aphidoletes aphidimyza* (Rondani).	Kyushu Plant Protection Research (2005), Volume 51, pp. 83-88	1467
CA 8.3.2	Carvalho, G. A.; Miranda, J. C.; Moura, A. P.; Rocha, L. C. D.; Reis, P. R.; Vilela, F. Z.	2005	Control of Leucoptera coffeella (Guerin-Meneville & Perrottet, 1842) (Lepidoptera: Lyonetiidae) with soil-applied granulated insecticides and their effects on predatory wasps and parasitoids. Controle de Leucoptera coffeella (Guerin-Meneville & Perrottet, 1842) (Lepidoptera: Lyonetiidae) com inseticidas granulados e seus efeitos sobre vespas predadoras e parasitoides.	Arquivos do Instituto Biologico (Sao Paulo) (2005), Volume 72, Number 1, pp. 63-72, 14 refs. ISSN: 0020-3653	1475
CA 8.3.2	Wang, Y.; Wu, C.; Cang, T.; Yang, L.; Yu, W.; Zhao, X.; Wang, Q.; Cai, L.	2014	Toxicity risk of insecticides to the insect egg parasitoid *Trichogramma evanescens* Westwood (Hymenoptera: Trichogrammatidae).	Pest Management Science (2014), 70 (3), 398-404	1523
CA 8.3.2	Schenke, D.; Heimbach, U.	2014	Exposure of Coccinellidae to guttation droplets on maize seedlings with seed or granule treatment of neonicotinoids.	Abstracts of Papers, 248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014 (2014), AGRO-359. CODEN: 69SZG4	1524
CA 8.3.2	Sun, Z.; Chen, D.; Jia, F.; Zhang, C.; Tang, S.; Ren, G.; Liu, X.	2014	Effect of six conventional insecticides on *Aphidius gifuensis* (Ashmead) in tobacco fields.	Zhiwu Baohu (2014), 40 (4), 185-189. CODEN: ZBHABE; ISSN: 0529-1542	1527

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.2	Uma, S.; Jacob, S.; Lyla, K. R.	2014	Acute contact toxicity of selected conventional and novel insecticides to *Trichogramma japonicum* Ashmead (Hymenoptera: Trichogrammatidae).	Journal of Biopesticides (2014), 7 (Suppl.), 133-136.	1531
CA 8.3.2	Thiruveni, T.; Kuhar, H. Ganesh; Kuttalah, S.	2014	Effect of newer indigenous thiamethoxam 25% WG formulation on spider population in mango.	Pestology (2014), 38 (5), 49-51	1536
CA 8.3.2	Argolo, Poliane Sa; Jacas, Josep A.; Urbaneja, Alberto	2014	Comparative toxicity of pesticides in three phytoseiid mites with different life-style occurring in citrus: *Euseius stipulatus*, *Neoseiulus californicus* and *Phytoseiulus persimilis*.	Experimental and Applied Acarology (2014)	1537
CA 8.3.2	Abraham, Cheri. M.; Braman, S. K.; Oetting, R. D.; Hinkle, N. C.	2013	Pesticide compatibility with natural enemies for pest management in greenhouse gerbera daisies.	Journal of Economic Entomology (2013), 106 (4), 1590-1601.	1547
CA 8.3.2	Jenkins, S.; Hoffmann, A. A.; McColl, S.; Tsitsilas, A.; Umina, P.A.	2013	Synthetic pesticides in agro-ecosystems: are they as detrimental to nontarget invertebrate fauna as we suspect?	Journal of Economic Entomology (2013), 106 (2), 756-775	1550
CA 8.3.2	Wang, X.; Jia, J.; Zhang, Y.; Zhou, Q.; Gao, C.	2013	Laboratory safety evaluation of eight insecticides to two predating natural enemies, *Hylyphantes graminicola* and *Coleosoma octomaculatum*.	Nanjing Nongye Daxue Xuebao (2013), 36 (3), 53-58	1569
CA 8.3.2	Bajya, D. R.; Baheti, H. S.; Raza, S. K.	2013	Field efficacy of Thiamethoxam 75% SG against major sucking pests of cotton and effect on natural enemies.	Pestology (2013), 37 (1), 46-50	1571
CA 8.3.2	Anand, G. K. Sujay; Sharma, R. K.; Shankarganesh, K.	2013	Efficacy of newer insecticides against leaf hopper and whitefly infesting brinjal and its effect on coccinellids	Pesticide Research Journal (2013), 25 (1), 6-11	1578
CA 8.3.2	Wang, Y.; Chen, L.; Yu, R.; Zhao, X.; Wu, C.; Cang, T.; Wang, Q.	2012	Insecticide toxic effects on *Trichogramma ostriniae* (Hymenoptera:Trichogrammatidae)	Pest Management Science (2012), 68 (12), 1564-1571.	1590
CA 8.3.2	Wang, Y.; Liu, T.; Li, J.; Dong, .; Zhou, T.; Zhang, D.	2012	Selective toxicity tests and field trials of 5 kinds of insecticide to *Brevicoryne brassicae* and ladybeetles.	Nongyao (2012), 51 (11), 829-831, 857	1593
CA 8.3.2	Cui, X.; Zhang, Q.; Jiang, H.; Lin, R.; Wang, K.	2012	Acute toxicity evaluation of neonicotinoid insecticides to *Bombyx mori* and observation of toxic symptoms.	Canye Kexue (2012), 38 (2), 288-291	1599
CA 8.3.2	Wang, Y.; Yu, R.; Zhao, X.; Chen, L.; Wu, C.; Cang, T.; Wang, Q.	2012	Susceptibility of adult *Trichogramma nubilale* (Hymenoptera: Trichogrammatidae) to selected insecticides with different modes of action.	Crop Protection (2012), 34, 76-82.	1612

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.2	Rocha, L. C.D.; Carvalho, G.A.; Moscardini, V.F.; Rezende, D.T.	2011	Selectivity of insecticides used in coffee crop to larvae of *Cryptolaemus montrouzieri* Mulsant.	Ciencia Rural (2011), 41 (6), 939-946.	1628
CA 8.3.2	Kerns, D. L.; Kesey, B. J.; Baugh, B. A.; Patman, D. R.	2011	Evaluation of insecticides against cotton aphids and convergent lady beetle larvae in cotton, 2010.	Arthropod Management Tests (2011), 36, F44/1-F44/3.	1642
CA 8.3.2	Kerns, D. L.; Baugh, B. A.; Patman, D. R.	2010	Evaluation of insecticides against cotton aphids and lady beetle larvae in cotton, 2009.	Arthropod Management Tests (2010), 35, F17	1666
CA 8.3.2	Kerns, D. L.; Baugh, B. A.	2008	Evaluation of insecticides against cotton aphids and predators in cotton, 2008.	Arthropod Management Tests (2009), 34, F27	1686
CA 8.3.2	Hull, L. A.; Joshi, N.K.; Zaman, F. U.	2008	Management of internal feeding lepidopteran pests in apple, 2008.	Arthropod Management Tests (2009), 34, A8	1687
CA 8.3.2	Zhao, X.; Yu, R.; Cang, T.; Chen, L.; Wu, S.; Wu, C.; Gu, X.	2008	Effects of Nilaparvata lugens and *Cyrtorhinus lividipennis* Reuter to insecticides.	Nongyao (2008), 47 (1), 74-76.	1697
CA 8.3.2	Mali, A.K.; Kurtadikar, J. S.; Wadnerkar, D. W.; Nemade, P. W.	2008	Studies on the safety of pesticides to grapevine mealy bug predator, *Scymnus coccivora* Aiyar.	Pestology (2008), 32 (1), 37-46.	1703
CA 8.3.2	Mali, A.K.; Kurtadikar, J. S.; Wadnerkar, D. W.; Nemade, P. W.	2008	Studies on the safety of pesticides to grapevine mealy bug predator, *Cryptolaemus montrouzieri* Aiyar.	Pestology (2008), 32 (4), 17-27	1708
CA 8.3.2	Javaregowda; Naik, L. K.	2005	Bioefficacy of thiamethoxam 25 WG against paddy white backed plant hopper (WBPH) and their natural.	Pestology (2005), 29 (5), 31-33	1762
CA 8.3.2	Beers, E. H.; Brunner, J. F.; Dunley, J. E.; Doerr, M.; Granger, K.	2005	Role of neonicotinyl insecticides in Washington apple integrated pest management. Part II. Nontarget effects on integrated mite control.	Journal of Insect Science (Tucson, AZ, United States) (2005), 5	1769
CA 8.3.2	Schenke, D; Baier, B	2009	Effect of thiamethoxam towards Poecilus cupreus larvae in comparison to imidacloprid applied as pelleted sugar beet seeds.	Conference: 2009 Annual Meeting of the UK branch of the Society of Environmental Toxicology and Chemistry (SETAC 2009), Goteborg Convention Centre, Goteborg, 31 May 2009 - 4 Jun 2009	1789
CA 8.4.1	Roger, P.; Alves, L.; Elke, J.B.N.; Cardoso, A.Martines, M.; Sousa, J.P.; Pasin, A.	2013	Earthworm ecotoxicological assessments of pesticides used to treat seeds under tropical conditions.	Chemosphere 90 (2013) 2674–2682	44
CA 8.4.1	Zhang, P.; Chen, C. Y.; Li, H.; Liu, F.; Mu, W.	2014	Selective toxicity of seven neonicotinoid insecticides to fungus gnat *Bradysia odoriphaga* and earthworm *Eisenia foetida*.	Acta Phytophylacica Sinica (2014), Volume 41, Number 1, pp. 79-86, 23 refs.	497
CA 8.4.1	Wang, Y.; Chen, L.; Zhao, X.; Wu,C.; Cang, T.; Yu, R.; Wu, S.; Wang, Q.	2010	Acute toxicity of neonicotinoids and avermectins to earthworm, *Eisenia foetida*.	Nongye Huanjing Kexue Xuebao (2010), 29 (12), 2299-2304. ISSN: 1672-2043	1652

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.4.2.1	Roger, P.; Alves, L.; Elke, J.B.N.; Cardoso, A.Martines, M.; Sousa, J.P.; Pasin, A.	2014	Seed dressing pesticides on springtails in two ecotoxicologicallaboratory tests.	Ecotoxicology and Environmental Safety 105 (2014) 65 – 71	25
CA 8.4.2.1	El-Naggar, J. B.; Nour El-Hoda; Zidan, A.	2013	Field evaluation of imidacloprid and thiamethoxam against sucking insects and their side effects on soil fauna.	Journal of Plant Protection Research 53 (4), 2013	566
CA 8.5	Ferreira Fernandes, M.; de Oliveira Procópio, S.; Teles, D. A.; Guedes de Sena Filho, J.; Cargnelutti Filho, A.; Clí Via Rolemberg Andrade	2013	Crescimento e fixação biológica de nitrogênio de Gluconacetobacter diazotrophicus Na presença de inseticidas utilizados na cultura da cana-de-açúcar.	Rev. Cienc. Agrar., v. 56, n. 1, p. 12-18, jan./mar. 2013	648
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CA 8.5	Liu, G.; Yao, K.; Zheng, L.; Zhou,Q.; Zhang, F.	2005	Effects of thiamethoxam and its photo-degradation products on soil microbe activity.	Nongye Huanjing Kexue Xuebao (2005), 24 (5), 870-873. ISSN: 1672-2043	1757
CA 8.6	Szczepaniec, A.; Raupp, M. J.; Parker, R.D.; Kerns, D.; Eubanks, M.D.	2013	Neonicotinoid Insecticides Alter Induced Defenses and Increase Susceptibility to Spider Mites in Distantly Related Crop Plants.	PLOS One, Volume 8, Issue 5, May 2013	270
CA 8.6	Soare, L.C.; Dobrecu, C-M.; Burtescu, L. ; Șutan, A.N.	2013	Research on the influence of two insectides on the gametophyte of some leptosporangiate pteridophytes.	Analele Stiintifice ale Universitatii 'Al I Cuza' din Iasi. (Serie Noua) Sectiunea II a. Biologie Vegetala (2013), Vol. 59, Number 2, pp. 5-12	650
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CA 8.7	Wang, Y.; Chen, L.; Yu, R.; Zhao, X.; Wu, C.; Cang, T.; Wang, Q.	2012	Effects of selected insecticides on osmotically treated entomopathogenic nematodes.	Journal of Plant Diseases and Protection (2012), Volume 119, Number 4, pp. 152-158, 30 refs. ISSN: 1861-3829. URL: http://www.jpdp-online.com	732
CA 8.7	Botelho, A. A. A.; Monteiro, A. C.	2011	Sensitivity of entomopathogenic fungi to pesticides used in management of sugarcane.	Bragantia (2011), Volume 70, Number 2, pp. 361-369	817
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CA 8.2.8	Ugurlu, P.; Unlu, E.; Satar, E.I.	2015	The toxicological effects of thiamethoxam on *Gammarus kischineffensis* (Schellenberg 1937) (Crustacea: Amphipoda).	Environmental toxicology and pharmacology, (2015 Mar) Vol. 39, No. 2, pp. 720-6	1
CA 8.3.1	Kessler S.C; Simcock, K.L.; Softley, S.; Wright, G.A.; Tiedeken, E.J.; Stout, J.C.; Mitchell, J.	2015	Bees prefer foods containing neonicotinoid pesticides.	Nature, (2015 May 7) Vol. 521, No. 7550, pp. 74-6	7

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.1	Goulson, D.	2015	Neonicotinoids impact bumblebee colony fitness in the field; a reanalysis of the UK's food & environment research agency 2012 experiment.	PeerJ, (2015) Vol. 2015, No. 3.	8
CA 8.3.1	Biocca, M.; Fanigliulo, R.; Gallo, P.; Pulcini, P.; Pochi, D.	2015	The assessment of dust drift from pneumatic drills using static tests and in-field validation.	Crop Protection, (MAY 2015) Vol. 71, pp. 109-115.	15
CA 8.3.1	Purdy, J. R.	2014	Concentrations and distribution of Neonicotinoid residues in honeybees (*Apis melifera*) in Ontario, Canada.	Abstracts of Papers American Chemical Society, (AUG 10 2014) Vol. 248, pp. 616-AGRO. Meeting Info.: 248th National Meeting of the American-Chemical-Society (ACS). San Francisco, CA, USA. August 10 -14, 2014	19
CA 8.3.2	Devi, R.; Tambe, V. J.; Srasvankumar, G.; Nage, S. M.	2014	Larvicidal effect of some newer insecticides on *Chrysoperla carnea* (Stephens).	International Journal of Plant Protection (2014), Vol. 7, Nr. 1, pp. 91-95	71
CA 8.3.2	Yao, F.; Zheng, Y.; Zhao, J.; He, Y.; Weng, Q.; Desneux, N.	2015	Lethal and sublethal effects of thiamethoxam on the whitefly predator *Serangium japonicum* (Coleoptera: Coccinellidae) through different exposure routes.	Chemosphere, (2015 Jun) Vol. 128, pp. 49-55.	3
CA 8.3.2	Moscardini, V. F. G..Costa; Michaud, J P; Carvalho; G. A.	2015	Sublethal effects of insecticide seed treatments on two nearctic lady beetles (Coleoptera: Coccinellidae).	Ecotoxicology, (2015 Apr 23). Electronic Publication Date	6
CA 8.3.2	Megha, R. R.; Basavanagoud, K.; Kulkarni, N. S.	2015	Safety evaluation of some selected insecticides against coccinellids *Cheilomenes sexmaculata* (Fab.) and *Hippodamia variegata* (Goeze).	Journal of Experimental Zoology, India (2015), Vol. 18, Number 1, pp. 315-318	34
CA 8.3.2	Whiting, S.A.; Lydy, M.J.	2014	A site-specific ecological risk assessment for corn-associated insecticides.	Integrated environmental assessment and management, (2014 Dec 30).	35
CA 8.3.2	Dumaniya, S. G.; Patel, M. B.; Siddhapara, M. R.	2015	Toxicity of insecticides to *Cryptolaemus montrouzieri* (Mulsant).	Journal of Cotton Research and Development (2015), Vol. 29, Nr. 1, pp. 121-124	39
CA 8.3.2	Ko Ko; Liu YuDi; Hou MaoLin; Babendreier, D.; Zhang Feng; Song Kai; Ko, K.; Liu, Y. D.; Hou, M. L.; Zhang, F.; Song, K.	2015	Toxicity of insecticides targeting rice planthoppers to adult and immature stages of *Trichogramma chilonis* (Hymenoptera: Trichogrammatidae).	Journal of Economic Entomology (2015), Volume 108, Number 1, pp. 69-76	43
CA 8.3.2	BuKeun, C.; Lim, E.; HeungSu, L.; ChungGyoo, P.	2014	Toxicity of several insecticides against *Halyomorpha halys* (Hemiptera: Pentatomidae) and *Gymnosoma rotundatum* (Diptera: Tachinidae).	Korean Journal of Applied Entomology (2014), Volume 53, Number 4, pp. 457-460	60
CA 8.3.2	Karthick, K. S.; Kandibane, M.; Kumar, K.	2014	Safety of newer insecticides to natural enemies in the coastal rice ecosystem of Karaikal, U.T. of Puducherry.	Journal of Biopesticides (2014), Volume 7, Number 2, pp. 200-203	65

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.2	Alim, Md. A.; Lim, U.T.	2015	Effects of fenitrothion on *Gryon japonicum* (Hymenoptera: Platygastridae) parasitizing non-viable, refrigerated eggs of *Riptortus pedestris* (Hemiptera: Alydidae).	Journal of Asia-Pacific Entomology (2015), 18 (2), 181-186	77
CA 8.3.2	Salahuddin, B.; ur Rahman, H.; Khan, I.; Daud, M. K.	2015	Incidence and management of coconut scale, *Aspidiotus destructor signoret* (Hemiptera: Diaspididae), and its parasitoids on mango (*Mangifera* sp.).	Crop Protection (2015), 74, 103-109	81
CA 8.3.2	Ohta, I.; Takeda, M.	2015	Acute toxicities of 42 pesticides used for green peppers to an aphid parasitoid, *Aphidius gifuensis* (Hymenoptera: Braconidae), in adult and mummy stages.	Applied Entomology and Zoology (2015), 50 (2), 207-212	84
CA 8.3.2	Saner, D. V.; Kabre, G. B.; Shinde, Y. A.	2014	Impact of newer insecticides on ladybird beetles (*Menochilus sexmaculatus* L.) in hybrid cotton.	Journal of Industrial Pollution Control (2014), 30 (2), 269-271	89
CA 8.6.2	Stamm, M. D.; Enders, L. S.; Donze-Reiner, T. J.; Baxendale, F. P.; Siegfried, B. D.; Heng-Moss, T. M.	2014	Transcriptional response of soybean to thiamethoxam seed treatment in the presence and absence of drought stress.	BMC Genomics (2014), 15, 1055/1-1055/27	85
CA 8.7	Hamlet, S. A.; Djekoun, M.; Smati, M.; Semassel, A.; Bensoltane, S. D.; Berrebbah, H.	2014	Histopathological effects of neonicotinoid insecticide in the hepatopancreas of terrestrial gastropod *Helix aspersa*.	Fresenius Environmental Bulletin (2014), Volume 23, Number 12, pp. 3041-3047	50
Clothianidin search					
CA 8.1.1.3	Hoshi, N.; Hirano, T.; Omotehara, T.; Tokumoto, J.; Umemura, Y.; Mantani, Y.; Tanida, T.; Warita, K.; Tabuchi, Y.; Yokoyama, T.; Kitagawa, H.	2014	Insight into the mechanism of reproductive dysfunction caused by neonicotinoid pesticides.	Biological & pharmaceutical bulletin, (2014) Vol. 37, No. 9, pp. 1439-43	17
CA 8.1.1.3	Tokumoto, J.; Danjo, M.; Kobayashi, Y.; Kinoshita, K.; Omotehara, T.; Tatsumi, A.; Hashiguchi, M.; Sekijima, T.; Kamisoyama, H.; Yokoyama, T.; Kitagawa, H.; Hoshi, N.	2013	Effects of exposure to clothianidin on the reproductive system of male quails.	The Journal of veterinary medical science / the Japanese Society of Veterinary Science, (2013) Vol. 75, No. 6, pp. 755-60	49
CA 8.1.1.3	Lopez-Antia, A.; Ortiz-Santaliestra, M. E.M.; Mateo, R.; Ortiz-Santaliestra, M.E.M; Mougeot, F.	2015	Imidacloprid-treated seed ingestion has lethal effect on adult partridges and reduces both breeding investment and offspring immunity.	Environmental Research, (JAN 2015) Vol. 136, pp. 97-107	721

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.2.8	de Perre C.; Murphy T.M.; Lydy M.J.	2015	Fate and effects of clothianidin in fields using conservation practices.	Environmental toxicology and chemistry / SETAC, (2015 Feb) Vol. 34, No. 2, pp. 258-65	3
CA 8.2.8	Whiting, S.A.; Lydy, M.J.	2014	A site-specific ecological risk assessment for corn-associated insecticides.	Integrated environmental assessment and management, (2014 Dec 30).	35
CA 8.2.8	Hayasaka, D.; Suzuki, K.; Nomura, T.; Nishiyama, M.; Nagai, T.; Sanchez-Bayo, F.; Goka, K.	2013	Comparison of acute toxicity of two neonicotinoid insecticides, imidacloprid and clothianidin, to five cladoceran species.	Journal of Pesticide Science (2013), Volume 38, Number 1/2, pp. 44-47	317
CA 8.3.1	Moffat, C.; Pacheco, J. G.; Sharp, S.; Samson, A. J.; Bollan, K.A.; Huang, J.; Buckland, S.T.; Connolly, C. N.	2015	Chronic exposure to neonicotinoids increases neuronal vulnerability to mitochondrial dysfunction in the bumblebee (*Bombus terrestris*).	FASEB journal : official publication of the Federation of American Societies for Experimental Biology, (2015 May) Vol. 29, No. 5, pp. 2112-9	10
CA 8.3.1	Rundlof M; Andersson GKS; Bommarco R; Fries I; Hederstrom V; Herbertsson L; Jonsson O; Klatt BK; Pedersen TR; Yourstone J; Smith HG	2015	Seed coating with a neonicotinoid insecticide negatively affects wild bees.	Nature, Vol. 521, No. 7550, pp. 77-80	12
CA 8.3.1	Cutler G Christopher; Scott-Dupree Cynthia D; Sultan Maryam; McFarlane Andrew D; Brewer Larry	2014	A large-scale field study examining effects of exposure to clothianidin seed-treated canola on honey bee colony health, development and overwintering success.	PeerJ, Vol. 2, pp. e652	20
CA 8.3.1	Larson, J. L.; Redmond, C. T.; Potter, D. A.	2014	Impacts of a neonicotinoid, neonicotinoid-pyrethroid premix, and anthranilic diamide insecticide on four species of turf-inhabiting beneficial insects.	Ecotoxicology (London, England), (2014 Mar) Vol. 23, No. 2, pp. 252-9	25
CA 8.3.1	Scholer, J.; Krischik, V.	2014	Chronic exposure of imidacloprid and clothianidin reduce queen survival,foraging, and nectar storing in colonies of *Bombus impatiens*.	PloS one, (2014) Vol. 9, No. 3, pp. e91573	33
CA 8.3.1	Fischer, .J; Muller, T.; Grunewald, B.; Spatz, A.; Greggers, U.; Menzel, R.	2014	Neonicotinoids interfere with specific components of navigation in honeybees.	PloS one, (2014) Vol. 9, No. 3, pp. e91364	34
CA 8.3.1	Larson J.L.; Redmond C.T.; Potter D.A.	2013	Assessing insecticide hazard to bumble bees foraging on flowering weeds in treated lawns.	PloS one, Vol. 8, No. 6, pp. e66375	60
CA 8.3.1	Schneider, C.W.; Tautz, J.; Grunewald, B.; Fuchs, S.	2012	RFID tracking of sublethal effects of two neonicotinoid insecticides on the foraging behavior of *Apis mellifera*.	PloS one, (2012) Vol. 7, No. 1, pp. e30023	61

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.1	Scott-Dupree, C.D.; Conroy, L.; Harris, C.R.	2009	Impact of currently used or potentially useful insecticides for canola agroecosystems on *Bombus impatiens* (Hymenoptera: Apidae), *Megachile rotundata* (Hymentoptera: egachilidae), and *Osmia lignaria* Hymenoptera: Megachilidae).	Journal of economic entomology, (2009 Feb) Vol. 102, No. 1, pp. 177-82	105
CA 8.3.1	Abbott, V.A.; Nadeau, J.L.; Higo, H.A.; Winston, M.L.	2008	Lethal and sublethal effects of imidacloprid on *Osmia lignaria* and clothianidin on *Megachile rotundat*a (Hymenoptera: Megachilidae).	Journal of economic entomology, (2008 Jun) Vol. 101, No. 3, pp. 784-96	111
CA 8.3.1	Cutler G Christopher; Scott-Dupree Cynthia D	2007	Exposure to clothianidin seed-treated canola has no long-term impact on honey bees.	Journal of economic entomology, Vol. 100, No. 3, pp. 765-72	121
CA 8.3.1	Sanchez-Bayo, F.	2014	The trouble with neonicotinoids.	Science, (14 Nov 2014) Vol. 346, No. 6211, pp. 806-807	147
CA 8.3.1	Georgiadis, P.; Pistorius, J.; Heimbach, U.; Staehler, M.	2014	Manual application of insecticidal dust in semi-field experiments with honeybees.	Proceedings: International conference on the German diabrotica research program. pp. 102. (2014) Tagungsband: Internationale Fachtagung zum Forschungsprogramm uber den Westlichen Maiswurzelbohrer. pp. 102. (2014)	170
CA 8.3.1	Dyer, D. G.; Xu, T.; Bondarenko, S.; Allen, R.	2014	Clothianidin: Potential accumulation/ bioavailability in soil and in corn and canola bee-relevant matrices.	Abstracts of Papers American Chemical Society, (AUG 10 2014) Vol. 248, pp. 606-AGRO.	179
CA 8.3.1	Bondarenko, S.; Rose, A.; Ansolabehere, M.; Allen, R.	2014	Clothianidin residues in pollen and nectar of cucurbits following different use patterns.	Abstracts of Papers American Chemical Society, (AUG 10 2014) Vol. 248, pp. 602-AGRO.	180
CA 8.3.1	Kimura, K.; Yoshiyama, M.; Saito, K.; Nirasawa, K.; Ishizaka, M.	2014	Examination of mass honey bee death at the entrance to hives in a paddy rice production district in Japan: the influence of insecticides sprayed on nearby rice fields.	Journal of Apicultural Research, (2014) Vol. 53, No. 5, pp. 599-606	181
CA 8.3.1	Andrew, D.; Brewer, L.; Cutler, G. C.; Scott-Dupree, C. D.; Sultan, M.; McFarlane	2013	Large-scale field study examining potential impacts on honey bees of exposure to clothianidin seed-treated canola.	Abstracts of Papers American Chemical Society, (SEP 8 2013) Vol. 246, pp. 149-AGRO.	191
CA 8.3.1	Pohorecka, K.; Skubida, P.; Semkiw, P.; Miszczak, A.; Teper, D.; Sikorski, P.; Zagibajlo, K.; Skubida, M.; Zdanska, D.; Bober, A.	2013	Effects of exposure on honey bee colopnies to necotinoid seed-treated maize crops.	Journal of Apicultural Science, (2013) Vol. 57, No. 2, pp. 199-208	189

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.1	Fell, R.	2013	Honey bee colony health, bee decline, and pesticides.	Abstracts of Papers American Chemical Society, (SEP 8 2013) Vol. 246, pp. 144-AGRO.	192
CA 8.3.1	Matsumoto, T.	2013	Short and long-term effects of necotinoid application in rice fields, on the mortality and colony collapse of honeybees (*Apis mellifera*)	Journal of Apicultural Science, (2013) Vol. 57, No. 2, pp. 21-35	196
CA 8.3.1	Chauzat, M..; Martel, A.; Blanchard, P.; Clement, M.; Schurr, F.; Lair, C.; Ribiere, M.; Wallner, K.; Rosenkranz, P.; Faucon, J.	2010	A case report of a honey bee colony poisoning.	Journal of Apicultural Research, (2010) Vol. 49, No. 1, Sp. Iss. SI, pp. 113-115	220
CA 8.3.1	Kunz, N.; Dietzsch, A.; Frommberger, M.; Wirtz, I.; Staehler, M.; Frey, E.; Illies, I.; Dyrba, W.; Alkassab, A.; Pistorius, J.	2014	Neonicotinoids and bees: effects on honeybees, bumblebees and solitary bees in oilseed rape grown from Clothianidin-treated seed.	Berichte aus dem Julius Kuehn-Institut (2014), Nr. 177, 18 p. ISSN: 1866-590X	292
CA 8.3.1	Nadaf, H. A.; Yadav, G. S.; Kaushik, H. D.; Sharma, S. K.	2013	Toxicity of new molecules of insecticides against honeybee, *Apis mellifera* L.	Trends in Biosciences (2013), Volume 6, Number 4, pp. 445-447.	302
CA 8.3.1	Matsumoto, T.	2013	Reduction in homing flights in the honey bee *Apis mellifera* after a sublethal dose of neonicotinoid insecticides.	Bulletin of Insectology (2013), Volume 66, Number 1, pp. 1-9	321
CA 8.3.1	Staehler, M.; Heimbach, U.; Schwabe, K.; Pistorius, J.; Georgiadis, P. T.	2012	Ecotoxicokinetics of clothianidin on honeybees in open field - first results. Zur Oekotoxikokinetik von Clothianidin auf Bienen im Freiland – erste Ergebnisse.	Julius-Kuehn-Archiv (2012), Number 438, pp. 466-467. ISSN: 1868-9892	333
CA 8.3.1	Sgolastra, F; Renzi, T; Draghetti, S; Medrzycki, P; Lodesani, M; Maini, S; Porrini, C	2012	Effects of neonicotinoid dust from maize seed-dressing on honey bees.	Bulletin of Insectology (2012), Vol. 65, Number 2, pp. 273-280	337
CA 8.3.1	Reetz, J. E.; Zuehlke, S.; Spiteller, M.; Wallner, K.	2011	Neonicotinoid insecticides translocated in guttated droplets of seed-treated maize and wheat: a threat to honeybees?	Apidologie, Volume 42, Number 5, pp. 596-606	367
CA 8.3.1	Georgiadis, P. T.; Pistorius, J.; Heimbach, U.	2011	Dust in the wind - drift of dust containing insecticides - a risk for honey bees (*Apis mellifera* L.)? Dust in the wind - Abdrift insektizidhaltiger Staeube - ein risiko fuer Honigbienen (*Apis mellifera* L.)?	Julius-Kuehn-Archiv (2011), Number 430, pp. 15-19, 2 refs. ISSN: 1868-9892	394

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.1	Bischoff, G.	2010	Chemical bee investigation - details of the new procedure and selected results since 2008. Chemische Bienenuntersuchung - Details des neuen Verfahrens und ausgewaehlte Ergebnisse seit 2008.	Julius-Kuehn-Archiv (2010), Number 428	397
CA 8.3.1	Friessleben, R.; Schad, T.; Schmuck, R.; Schnier, H.; Schoening, R.; Nikolakis, A.	2010	An effective risk management approach to prevent bee damage due to the emission of abraded seed treatment particles during sowing of neonicotinoid treated maize seeds	Aspects of Applied Biology (2010), Nr. 99, pp. 277-282, 3 refs. ISSN: 0265-1491	401
CA 8.3.1	Jacobs, A.; Bischoff, G.; Buettner, C.; Pestemer, W.	2010	Residue behaviour of selected pesticides in potatoes and bees. Rueckstandsverhalten von ausgewaehlten Pflanzenschutzmitteln in/auf Kartoffelpflanzen und Bienen.	Julius-Kuehn-Archiv (2010), Number 424, 34 p. ISSN: 1868-9892	418
CA 8.3.1	Georgiadis, P. T.; Pistorius, J.; Heimbach, U.	2010	Gone with the wind - drift of abrasive dust from seed treatments - a risk for honey bees (*Apis mellifera* L.)? Vom Winde verweht - Abdrift von Beizstaeuben - ein Risiko fuer Honigbienen (*Apis mellifera* L.)?	Julius-Kuehn-Archiv (2010), Number 424, 33 p., 1 refs. ISSN: 1868-9892	419
CA 8.3.1	Wallner, K.;	2009	Sprayed and seed dressed pesticides in pollen, nectar and honey of oilseed rape.	Julius-Kuehn-Archiv (2009), Number 423, pp. 152-153. ISSN: 1868-9892	438
CA 8.3.1	Nikolakis, A.; Chapple, A.; Friessleben, R.; Neumann, P.; Schad, T.; Schmuck, R.; Schnier, H. F.; Schnorbach, H. J.; Schoening, R.; Maus, C.	2009	An effective risk management approach to prevent bee damage due to the emission of abraded seed treatment particles during sowing of seeds treated with bee toxic insecticides.	Julius-Kuehn-Archiv (2009), Number 423, pp. 132-148, 2 refs. ISSN: 1868-9892	442
CA 8.3.1	Pistorius, J; Bischoff, G; Heimbach, U; Staehler, M;	2009	Bee poisoning incidents in Germany in spring 2008 caused by abrasion of active substance from treated seeds during sowing of maize.	Julius-Kuehn-Archiv (2009), Number 423, pp. 118-126, 9 refs. ISSN: 1868-9892	445
CA 8.3.1	Janke, M.; Rosenkranz, P.	2009	Periodical honey bee colony losses in Germany: preliminary results from a four years monitoring project.	Julius-Kuehn-Archiv (2009), Number 423, pp. 108-117, 1 refs. ISSN: 1868-9892	446

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.1	Pistorius, J.; Bischoff, G.; Heimbach, U	2009	Bee poisoning by abrasion of active substances from seed treatment of maize during seeding in spring 2008. Bienenvergiftung durch Wirkstoffabrieb von Saatgutbehandlungsmitteln waehrend der Maisaussaat im Fruehjahr 2008.	Journal fuer Kulturpflanzen (2009), Volume 61, Number 1, pp. 9-14	457
CA 8.3.1	Bailey, J.; Scott-Dupree, C.; Harris, R.; Tolman, J.; Harris, B.	2005	Contact and oral toxicity to honey bees (*Apis mellifera*) of agents registered for use for sweet corn insect control in Ontario, Canada.	Apidologie (2005), Volume 36, Number 4, pp. 623-633	519
CA 8.3.1	Neal, K.	2013	Is planting corn killing bees?	Abstracts of Papers, 246th ACS National Meeting & Exposition, Indianapolis, IN, United States, September 8-12, 2013 (2013)	572
CA 8.3.1	Girolami, V.; Marzaro, M.; Vivan, L.; Mazzon, L.; Greatti, M.; Giorio, C.; Marton, D.; Tapparo, A.	2012	Fatal powdering of bees in flight with particulates of neonicotinoids seed coating and humidity implication.	Journal of Applied Entomology (2012), 136(1-2), 17-26	600
CA 8.3.1	Trenkle, A.	2009	Harm to bees in 2008 in Rheintal - analysis, causes, consequences.	VDLUFA-Schriftenreihe (2009), 65 (Pt. 2, Produktivitaet und Umweltschonung in der Landwirtschaft: ein Widerspruncht?), 22-41.	641
CA 8.3.1	Knauer, K	2010	Post registration monitoring of effects of Clothianidin on bee colonies.	20th Annual Meeting of the Europe branch of the Society of Environmental Toxicology and Chemistry (SETAC 2010), Palacio de Congresos y Exposiciones - FIBES, Seville, 23 May 2010-27 May 2010	713
CA 8.3.1	Anonymous	2008	Pesticide penalty.	Ecologist. Vol. 38, no. 9, pp. 11-11. Nov. 2008.	714
CA 8.3.1	Cutler, L. G.; Scott-Dupree, C. D.; Chalmers, A.	2006	An Investigation of Potential Long-Term Impact of Clothianidin Seed-Treated Canola on Honey Bees, *Apis Mellifera.*	Conference: 27th Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC 2006), Montreal, Quebec (Canada), 3 Nov 2006 - 9 Nov 2006	715
CA 8.3.1	Feltham, H.; Park, K.; Goulson, D.	2014	Field realistic doses of pesticide imidacloprid reduce bumblebee pollen foraging efficiency.	Ecotoxicology, (APR 2014) Vol. 23, No. 3, pp. 317-323	724
CA 8.3.1	Lu, C.S.; Warchol, K.M.; Callahan, R.A.	2014	Sub-lethal exposure to neonicotinoids impaired honey bees winterization before proceeding to colony collapse disorder.	Bulletin of Insectology (2014), Volume 67, Number 1, pp. 125-130	276
CA 8.4	Wang K.; Pang S.; Mu X.; Qi S.; Li D.; Cui F.; Wang C.	2015	Biological response of earthworm, *Eisenia fetida*, to five neonicotinoid insecticides.	Chemosphere, (2015 Aug) Vol. 132, pp. 120-6	6

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.4	Wang Y.; Wu S.; Chen L.; Wu C.; Yu R.; Wang Q.g; Zhao X.	2012	Toxicity assessment of 45 pesticides to the epigeic earthworm Eisenia fetida.	Chemosphere, (2012 Jul) Vol. 88, No. 4, pp. 484-91	70
CA 8.4	Wang, Y.; Cang, T.; Zhao, X.; Yu, R.; Chen,L. .; Wu, .; Wang, Q.	2012	Comparative acute toxicity of twenty-four insecticides to earthworm, *Eisenia fetida*.	Ecotoxicology and Environmental Safety, (1 May 2012) Vol. 79, pp. 122-128	158
CA 8.7	Gibbons D.; Morrissey C.; Mineau P.	2015	A review of the direct and indirect effects of neonicotinoids and fipronil on vertebrate wildlife.	Environmental science and pollution research international, (2015 Jan) Vol. 22, No. 1, pp. 103-18	7
CA 8.7	Larson J.L.; Redmond C.T.; Potter D.A.	2012	Comparative impact of an anthranilic diamide and other insecticidal chemistries on beneficial invertebrates and ecosystem services in turfgrass.	Pest management science, (2012 May) Vol. 68, No. 5, pp. 740-8	67
CA 8.7	Aramaki, Hironori	2014	Foreword.	Biological and Pharmaceutical Bulletin, (2014) Vol. 37, No. 9, pp. 1429	146
CA 8.7	Cerevkova, A.; Cagan, L'.	2014	Influence of insecticides to soil nematode communities	Journal of Nematology, (JUN 2014) Vol. 46, No. 2, pp. 143.	185
CA 8.7	So, B. H.; Kim, H. M.	2010	Two Cases of Severe Neonicotinoid Intoxication.	Clinical Toxicology, (JUL 2010) Vol. 48, No. 6, pp. 611.	216
CA 8.7	Goulson, D.	2013	An overview of the environmental risks posed by neonicotinoid insecticides.	Journal of Applied Ecology (2013), Vol. 50, Nr. 4, pp. 977-987	300
CA 8.7	Cerevkova, A.; Cagan, L.	2013	The influence of Western corn rootworm seed coating and granular insecticides on the seasonal fluctuations of soil nematode communities in a maize field.	Helminthologia (2013), Vol. 50, Nr. 3, pp. 205-214	306
Not found in search (but referenced)					
CA 8.1	Mineau, P., Palmer, C.,	2013	Neonicotinoid insecticides and birds: the impact of the nation's most widely used insecticides on birds.	American Bird Conservancy	n/a
CA 8.2.2	Bose S, Nath S, Sahana SS.	2011	Toxic impact of thiamethoxam on the growth performance and liver protein concentration of a freshwater fish *Oreochromis niloticus* (Trewavas).	Ind J Fund Appl Life Sci 2011;1:274 – 80	n/a
CA 8.2.8	Riaz, M.A.; Chandor-Proust, A.; Dauphin-Villemant, C.; Poupardin, R.; Jones, C.M.; Strode, C.; Régent-Kloeckner, M.; David, J.P.; Reynaud, S.	2013	Molecular mechanisms associated with increased tolerance to the neonicotinoid insecticide imidacloprid in the dengue vector *Aedes aegypti*.	Aquatic Toxicology 126 (2013) 326– 337.	n/a

CA data point number	Author(s)	Year	Title	Source	Ref. ID
CA 8.3.1	Food & Environment Research Agency	2013	Effects of neonicotinoid seed treatments on bumble bee colonies under field conditions	Food & Environment Research Agency; Available at http://FERA.co.uk/ccss/documents/defraBumbleBeeReportPS2371V4a.pdf	n/a
CA 8.3.1	Sánchez-Bayo, F., Tennekes, H.A., Goka, K.	2013	Impact of systemic insecticides on organisms and ecosystems	Insecticides — Development of Safer and More Effective Technologies	n/a

Table 9.6-3: List of references for all relevant and unclear studies listed by Author

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Initial search					
Abraham, Cheri. M.; Braman, S. K.; Oetting, R. D.; Hinkle, N. C.	CA 8.3.2	2013	Pesticide compatibility with natural enemies for pest management in greenhouse gerbera daisies.	Journal of Economic Entomology (2013), 106 (4), 1590-1601.	1547
Agale, D. A.; Bhosle, B. B.; Kadam, D. R.	CA 8.3.2	2009	Impact of different insecticides on population of natural enemies in Bt cotton and yield.	Journal of Plant Protection and Environment (2009), Volume 6, Number 2, pp. 105-107	1117
Ahire, R. V.; Bhosle, B. B.; Kadam, D. R.	CA 8.3.2	2009	Impact of thiamethoxam as seed dresser on natural enemies of major pests of soybean (*Glycine max* (L.) Merill) and impact on yield.	Journal of Plant Protection and Environment (2009), Volume 6, Number 2, pp. 117-119	1114
Al-Antary, T. M.; Ateyyat, M. A.; Abussamin, B. M.	CA 8.3.2	2010	Toxicity of certain insecticides to the parasitoid *Diaeretiella rapae* (Mcintosh) (Hymenoptera: Aphidiidae) and its host, the cabbage aphid *Brevicoryne brassicae* L. (Homoptera: Aphididae).	Australian Journal of Basic and Applied Sciences (2010), Volume 4, Number 6, pp. 994-1000	907
Alarcon A. L., M. Canovas, R. Senn, R. Correia	CA 8.3.1	2005	The safety of thiamethoxam to pollinating bumble bees (*Bombus terrestris* L.) when applied to tomato plants through drip irrigation.	Communications in agricultural and applied biological sciences, Vol. 70, No. 4, pp. 569-79.	248
Alexander, A.; Krishnamoorthy, S. V.; Kuttalam, S.	CA 8.3.2	2013	Risk assessment of insecticides against non-target beneficials including natural enemies of papaya mealybug, *Paracoccus marginatus* Williams and Granara de Willink.	Journal of Insect Science (Ludhiana) (2013), Volume 26, Number 2, pp. 241-245	585
Aliouane, Y.; El Hassani, A.K.; Gary, V.; Armengaud, C.; Lambin, M.; Gauthier, M.	CA 8.3.1	2009	Subchronic exposure of honeybees to sublethal doses of pesticides: effects on behavior.	Environmental toxicology and chemistry / SETAC, (2009 Jan) Vol. 28, No. 1, pp. 113-22	183

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Aliouane, Y.; El Hassani, A.K.; Gary, V.; Armengaud, C.; Lambin, M.; Gauthier, M.	CA 8.3.1	2008	Effects of sublethal doses of acetamiprid and thiamethoxam on the behavior of the honeybee (*Apis mellifera*).	Archives of environmental contamination and toxicology, (2008 May) Vol. 54, No. 4, pp. 653-61.	197
Al-Kherb, W. A	CA 8.3.2	2011	Field efficacy of some neonicotinoid insecticides on whitefly *Bemicia tabaci* (Homoptera: Aleyrodidae) and its natural enemies in cucumber and tomato plants in Al-Qassim region, KSA.	Journal of Entomology (2011), Volume 8, Number 5, pp. 429-439	808
Amirzade, N.; Izadi, H.; Jalali, M. A.; Zohdi, H.	CA 8.3.2	2014	Evaluation of three neonicotinoid insecticides against the common pistachio psylla, *Agonoscena pistaciae,* and its natural enemies	Journal of Insect Science: Vol. 14/ Article 35	27
Anand, G. K. Sujay; Sharma, R. K.; Shankarganesh, K.	CA 8.3.2	2013	Efficacy of newer insecticides against leaf hopper and whitefly infesting brinjal and its effect on coccinellids	Pesticide Research Journal (2013), 25 (1), 6-11	1578
Anderson, J.C.; Dubetz, C.; Palace, V.P.	CA 8.2.8	2015	Neonicotinoids in the Canadian aquatic environment: A literature review on current use products with a focus on fate, exposure, and biological effects	Science of the Total Environment 505 (2015) 409 – 422	13
Anjum, S.; Iqbal, J.; Arshad, M.; Gogi, M. D.; Arif, M. J.; Tajammal, S.	CA 8.3.2	2013	Comparative efficacy of insecticides as seed treatment against wheat aphid and its coccinellid predator.	Pakistan Entomologist (2013), Volume 35, Number 1, pp. 17-22	646
Antigo, M. de R.; Oliveira, H. N. de; Carvalho, G. A.; Pereira, F. F.; de R. Antigo, M.; de Oliveira, H. N.	CA 8.3.2	2013	Repellence of pesticides used in sugarcane and their effects on the emergence of *Trichogramma galloi*. Repelencia de produtos fitossanitarios usados na cana-de-acucar e seus efeitos na emergencia de Trichogramma galloi.	Revista Ciencia Agronomica (2013), Volume 44, Number 4, pp. 910-916	541
Arena, M.; Sgolastra, F.	CA 8.3.1	2014	A meta-analysis comparing the sensitivity of bees to pesticides	Ecotoxicology (2014), 23 (3), 324-334	1525
Argolo, Poliane Sa; Jacas, Josep A.; Urbaneja, Alberto	CA 8.3.2	2014	Comparative toxicity of pesticides in three phytoseiid mites with different life-style occurring in citrus: *Euseius stipulatus*, *Neoseiulus californicus* and *Phytoseiulus persimilis*	Experimental and Applied Acarology (2014)	1537
Arno, J.; Roig, J.; Gabarra, R.	CA 8.3.2	2008	Activity of some biorational and conventional insecticides against *Bemisia tabaci* and their compatibility with Whitefly parasitoids.	Journal of Insect Science (Tucson), (JAN 10 2008) Vol. 8, pp. 4-5.	394
Avramova, K.; Grekov, D.; Ivanova, R.; Hristev, H.	CA 8.3.2	2012	Some typical symptoms of mulberry silk worm poisoning with the neonicotinoid insecticides Confidor and Actara.	Scientific Papers, Series D. Animal Science (2012), Volume 55, pp. 107-108	748

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Ayubi, A.; Moravvej, G.; Karimi, J.; Jooyandeh, A.	CA 8.3.2	2013	Lethal effects of four insecticides on immature stages of *Chrysoperla carnea* (Stephens) (Neuroptera: Chrysopidae) in laboratory conditions.	Turkiye Entomoloji Dergisi (2013), Volume 37, Number 4, pp. 399-407	564
Bacandritsos, N.; Granato, A.; Budge, G.; Papanastasio, I.; Roinioti, E.; Caldon, M.; Falcaro, C.; Gallina, A.; Mutinelli, F.	CA 8.3.1	2010	Sudden deaths and colony population decline in Greek honey bee colonies.	Journal of Invertebrate Pathology (2010), Volume 105, Number 3, pp. 335-340	930
Badiou-Beneteau, A.; Carvalho, S. M.; Brunet, J-L.; Carvalho, G. A.; Bulete, A.; Giroud, B.; Belzunces, L. P.	CA 8.3.1	2012	Development of biomarkers of exposure to xenobiotics in the honey bee *Apis mellifera*: application to the systemic insecticide thiamethoxam.	Ecotoxicology and environmental safety, (2012 Aug) Vol. 82, pp. 22-31.	104
Bajya, D. R.; Baheti, H. S.; Raza, S. K.	CA 8.3.2	2013	Field efficacy of Thiamethoxam 75% SG against major sucking pests of cotton and effect on natural enemies	Pestology (2013), 37 (1), 46-50	1571
Baldessari, M.; Maines, R.; Angeli, G. Editor(s): Lozzia, G. C.; Lucchi, A.; di Chiara, S. R.; Tsolakis, H.	CA 8.3.2	2008	Comparison of two methods for the agrochemicals side effect evaluation on Phytoseiid mites in vineyards.	IOBC/WPRS Bulletin (2008), Volume 36, pp. 237-243	1200
Baldessari, M.; Malagnini, V.; Tolotti, G.; Angeli, G.	CA 8.3.2	2010	Impact of neonicotinoid insecticides on beneficial phytoseiid mites .Insetticidi neonicotinoidi, quale l'impatto sugli acari fitoseidi utili.	Informatore Agrario (2010), Volume 66, Number 45, pp. 67-70	985
Baok, R.a; Bari, J. I.; Uzelac, V. D.; Kos, T.; Drmi, Z.; Pedisi, S.; Zori, Z.	CA 8.3.1/35	2014	Sugar beet seed treatment with neonicotinoids: Do they pose a risk for bees?	Abstracts of Papers, 248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014 (2014), AGRO-612	1520
Barbee, G.C.; Stout, J.	CA 8.2.8	2009	Comparative acute toxicity of neonicotinoid and pyrethroid insecticides to non-target crayfish (*Procambarus clarkii*) associated with rice-crayfish crop rotations.	Pest management science, (2009 Nov) Vol. 65, No. 11, pp. 1250-6.	170
Basappa, H.	CA 8.3.2	2007	Toxicity of biopesticides and synthetic insecticides to egg parasitoid, *Trichogramma chilonis* Ishii, and coccinellid predator, *Cheilomenes sexmaculata* (Fabricius)	Journal of Biological Control (2007), Volume 21, Number 1, pp. 31-36	1326
Bednarska, A. J.; Edwards, P.; Sibly, R.; Thorbek, P.	CA 8.1.2.1	2013	A toxicokinetic model for thiamethoxam in rats: implications for higher-tier risk assessment.	Ecotoxicology (2013) 22:548–557	61

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Beers, E. H.; Brunner, J. F.; Dunley, J. E.; Doerr, M.; Granger, K.	CA 8.3.2	2005	Role of neonicotinyl insecticides in Washington apple integrated pest management. Part II. Nontarget effects on integrated mite control	Journal of Insect Science (Tucson, AZ, United States) (2005), 5	1769
Berny, P.; Mastain, O.; Decors, A.; Poulsen, V.; Moinet, M.; Dunoyer, C.	CA 8.1.4	2010	The SAGIR network in France: A 40-year active and passive toxicovigilance scheme for pesticide poisoning in wildlife	Toxicology Letters, (17 Jul 2010) Vol. 196, Supp. 1, pp. S322	284
Bhakray, R. B.; Thakre, S. M.; Aherkar, S. K.; Satpute, N. S.; Raut, B. T.	CA 8.3.2	2010	Biosafety of systemic insecticides through seed treatment and stem smearing to some predators.	Journal of Maharashtra Agricultural Universities (2010), Volume 35, Number 3, pp. 488-489	919
Blacquiere, T.; Smagghe, G.; van Gestel, C.; Cornelis, A.M.; Mommaerts, V.	CA 8.3.1	2012	Neonicotinoids in bees: a review on concentrations, side-effects and risk assessment (vol 21, pg 973, 2012).	Ecotoxicology, (JUL 2012) Vol. 21, No. 5, pp. 1581.	342
Blatzheim, L.; Bower,C.; Polk, T.; Ikizo; Lu, D.; Karahn, A. Levinson, B.; Gune, N.; Cakmak, I.; Wells, H.; Hranitz J. M.	CA 8.3.1	2014	The neonicotinoid pesticide thiamethoxam affects motor responses and foraging behaviour of honey bees.	Integrative and Comparative Biology, (2014) Vol. 54, No. Suppl. 1, pp. E244.	314
Bortolotti, L.; Sabatini, A. G; Mutinelli, F; Astuti, M; Lavazza, A; Piro, R.; Tesoriero, D.; Medrzycki, P.; Sgolastra, F.; Porrini, C.;	CA 8.3.1	2009	Spring honey bee losses in Italy.	Julius-Kuehn-Archiv (2009), Number 423, pp. 148-152 Conference: Hazards of pesticides to bees. 10th International Symposium of the ICP-Bee Protection Group. Bucharest, Romania, 8-10 October, 2008.	1105
Bostanian, N. J.; Hardman, J.M.; Ventard, E.; Racette, G.	CA 8.3.2	2005	The intrinsic toxicity of several neonicotinoids to *Lygus lineolaris* and *Hyaliodes vitripennis*, a phytophagous and a predacious mirid.	Pest management science, (2005 Oct) Vol. 61, No. 10, pp. 991-6. Journal code:	242
Bostanian, N. J; Laurin, M. C;	CA 8.3.2	2008	Effects of ten pesticides to *Anystis baccarum* (Acari: Anystidae).	IOBC/WPRS Bulletin (2008), Volume 35, pp. 96-100	1228
Bostanian, N.J.; Hardman, J.M.; Thistlewood, H.A.; Racette, G.	CA 8.3.2	2010	Effects of six selected orchard insecticides on *Neoseiulus fallacis* (Acari: Phytoseiidae) in the laboratory.	Pest management science, (2010 Nov) Vol. 66, No. 11, pp. 1263-7.	135
Bostanian, N.J.; Thistlewood, H.A.; Hardman, J.M.; Laurin, M.C.; Racette, G.	CA 8.3.2	2009	Effect of seven new orchard pesticides on *Galendromus occidentalis* in laboratory studies.	Pest management science, (2009 Jun) Vol. 65, No. 6, pp. 635-9.	178
Botelho, A. A. A.; Monteiro, A. C.	CA 8.7	2011	Sensitivity of entomopathogenic fungi to pesticides used in management of sugarcane.	Bragantia (2011), Volume 70, Number 2, pp. 361-369	817
Bredeson, M.M.; Reese, R. N.; Lundgren, J. G.	CA 8.3.2	2015	The effects of insecticide dose and herbivore density on tri-trophic effects of thiamethoxam in a system involving wheat, aphids, and ladybeetles	Crop ProtectionCrop Protection (1 Mar 2015) Volume 69, pp. 70-76	296

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Brock, T.C.M. and Van Wijngaarden, R.P.A.	CA 8.2.8	2012	Acute toxicity tests with *Daphnia magna, Americamysis bahia, Chironomus riparius* and *Gammarus pulex* and implications of new EU requirements for the aquatic effect assessment of insecticides	Environ Sci Pollut Res (2012) 19:3610 – 3618	1583
Byrne, F. J.	CA 8.3.2	2007	Evaluation of the Impact of Neonicotinoid Insecticides on the Glassy-winged Sharpshooter and Its Egg Parasitoids	Proceedings of the Pierce's Disease Research Symposium (2007), pp. 70-72.	307
Campbell, P.J.	CA 8.3.1	2013	Declining European bee health: Banning the neonicotinoids is not the answer.	Outlooks on Pest Management (Apr 2013) Volume 24, Number 2, pp. 52-57,	297
Carreck, N.	CA 8.3.1	2013	Are pesticides the most important cause of colony losses?	Bee World (2013), Volume 90, Number 2, pp. 38-39, 10 refs	637
Carvalho, G. A.; Miranda, J. C.; Moura, A. P.; Rocha, L. C. D.; Reis, P. R.; Vilela, F. Z.	CA 8.3.2	2005	Control of Leucoptera coffeella (Guerin-Meneville & Perrottet, 1842) (Lepidoptera: Lyonetiidae) with soil-applied granulated insecticides and their effects on predatory wasps and parasitoids. Controle de Leucoptera coffeella (Guerin-Meneville & Perrottet, 1842) (Lepidoptera: Lyonetiidae) com inseticidas granulados e seus efeitos sobre vespas predadoras e parasitoides.	Arquivos do Instituto Biologico (Sao Paulo) (2005), Volume 72, Number 1, pp. 63-72, 14 refs. ISSN: 0020-3653	1475
Carvalho, G. A.; Moura, A. P.; Bueno, V. H. P.; Editor(s): Castane, C.; Sanchez, J. A.	CA 8.3.2	2006	Side effects of pesticides on *Trichogramma pretiosum* (Hymenoptera: Trichogrammatidae).	Bulletin OILB/SROP (2006), Volume 29, Number 4, pp. 355-359, 12 refs.	1357
Carvalho, S. M.; Carvalho, G. A.; Carvalho, C. F.; Bueno Filho, J. S. S.; Baptista, A. P. M.	CA 8.3.1	2009	Toxicity of acaricides/insecticides for citrus crop to the africanized honeybee *Apis mellifera* L., 1758 (Hymenoptera: Apidae)	Arquivos do Instituto Biologico (Sao Paulo) (2009), Volume 76, Number 4, pp. 597-606,	1047
Catae, A.F.; Roat, T.C.; De Oliveira, R.; Alves, N.; Cornelio Ferreira, R.; Malaspina, O.	CA 8.3.1	2014	Cytotoxic Effects of Thiamethoxam in the Midgut and Malpighian Tubules of Africanized *Apis mellifera* (Hymenoptera: Apidae)	Microscopy research and technique, (2014 Apr) Vol. 77, No. 4, pp. 274-81	17
Chandramani, P.; Usha Rani, B.; Muthiah, C.; Kumar, S.	CA 8.3.1	2008	Evaluation of toxicity of certain insecticides to Indian honeybee, *Apis cerana indica* F.	Pestology (2008), 32 (8), 42-43	1702
Chen, Y.; Gao, J.	CA 8.3.1	2013	Pesticide residue in pollen and nectar and its threaten to pollinating insects	Shijie Nongyao (2013), 35 (2), 16-21, 27	1577
Choi, B. R;Lee, S. W; Park, H. M	CA 8.3.2	2007	Selection of low toxic pesticides and residual toxicity to *Cotesia glomerata*.	Korean Journal of Applied Entomology (2007), Volume 46, Number 2, pp.	1281

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Cloyd, R.A.; Bethke, J.A.	CA 8.3.2	2011	Impact of neonicotinoid insecticides on natural enemies in greenhouse and interiorscape environments.	Pest management science, (2011 Jan) Vol. 67, No. 1, pp. 3-9.	128
Cloyd, R.A.; Timmons, N. R.; Goebel, J. M.; Kemp, K. E.	CA 8.3.2	2009	Effect of pesticides on adult rove beetle *Atheta coriaria* (Coleoptera: Staphylinidae) survival in growing medium.	Journal of economic entomology, (2009 Oct) Vol. 102, No. 5, pp. 1750-8	169
Cole, P. G.; Horne, P. A.	CA 8.3.2	2006	The impact of aphicide drenches on *Micromus tasmaniae* (Walker) (Neuroptera: Hemerobiidae) and the implications for pest control in lettuce crops.	Australian Journal of Entomology (2006), Volume 45, Number 3, pp. 244-248	1366
Costa, E. M.; Araujo, E. L.; Maia, A. V. P.; Silva, F. E. L.; Bezerra, C. E. S.; Silva, J. G.	CA 8.3.1	2014	Toxicity of insecticides used in the Brazilian melon crop to the honey bee *Apis mellifera* under laboratory conditions.	Apidologie, Volume 45, Number 1, pp. 34-44	510
Costa, M. A.; Moscardini, V.F.; da Costa, G. P.; Carvalho, G.A.; de Oliveira, R.L.; de Oliveira, H.N.	CA 8.3.2	2014	Sublethal and transgenerational effects of insecticides in developing *Trichogramma galloi* (Hymenoptera: Trichogrammatidae): toxicity of insecticides to *Trichogramma galloi*.	Ecotoxicology (London, England), (2014 Oct) Vol. 23, No. 8, pp. 1399-408.	8
Cressey, D.	CA 8.3.1	2013	Europe debates risk to bees	Nature, (2013 Apr 25) Vol. 496, No. 7446, pp. 408	63
Cresswell J.E.; Thompson H.M	CA 8.3.1	2012	Comment on "a common pesticide decreases foraging success and survival in honey bees".	Science, (21 Sep 2012) Vol. 337, No. 6101, pp. 1453-c	277
Cui, X.; Zhang, Q.; Jiang, H.; Lin, R.; Wang, K.	CA 8.3.2	2012	Acute toxicity evaluation of neonicotinoid insecticides to *Bombyx mori* and observation of toxic symptoms	Canye Kexue (2012), 38 (2), 288-291	1599
Czepak, C.; Fernandes, P. M.; Albernaz, K. C.; Rodrigues, O. D.; Silva, L. M.; Silva, E. A. da; Takatsuka, F. S.; Borges, J. D.; da Silva, E. A.	CA 8.3.2	2005	Selectivity of insecticides on the complex of natural enemies in cotton crop (*Gossypium hirsutum* L.). Seletividade de inseticidas ao complexo de inimigos naturais na cultura do algodao (*Gossypium hirsutum* L.).	Pesquisa Agropecuaria Tropical (2005), Volume 35, Number 2, pp. 123-127	1456
da Fonseca, P.R.B.; Bertoncello,T.F.; Ribeiro, J.F.; Fernandes, M.G.; Degrande, P.E.	CA 8.3.2	2008	Selectivity of insecticides to natural enemies on soil cultivated with cotton.	Pesquisa Agropecuária Tropical, v. 38, n. 4, p. 304-309, out./dez. 2008	1195
Decourtye, A.; Devillers, J.	CA 8.3.1	2010	Ecotoxicity of neonicotinoid insecticides to bees.	Advances in experimental medicine and biology, (2010) Vol. 683, pp. 85-95.	159
DeGrandi-Hoffman, G.; Sammataro, D.; Simonds; R.	CA 8.3.1	2012	Are agrochemicals present in High Fructose Corn Syrup fed to honey bees (*Apis mellifera* L.)?.	Journal of Apicultural Research, (2012) Vol. 51, No. 4, pp. 371-372.	345

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Deng, L.; Zhang, L.; Zhang, Y.; He, W.; Feng, L.; Jiang, H.	CA 8.2.8	2013	Acute immobilization of four neonicotinoid insecticides to *Daphnia magn*a Straus	Nongyao Kexue Yu Guanli (2013), 34 (6), 23-25	1576
Dicks, L.	CA 8.3.1	2013	Bees, lies and evidence-based policy	Nature, (2013 Feb 21) Vol. 494, No. 7437, pp. 283.	67
Dively, G.P.; Kamel, A.	CA 8.3.1	2012	Insecticide residues in pollen and nectar of a cucurbit crop and their potential exposure to pollinators.	Journal of agricultural and food chemistry, Vol. 60, No. 18, pp. 4449-56.	85
Döker, I.; Pappas, M.L.; Samaras, K.; Triantafyllou, A.; Kazak, C.; Broufas, G.D.	CA 8.3.2	2014	Compatibility of reduced-risk insecticides with the non-target predatory mite *Iphiseius degenerans* (Acari: Phytoseiidae)	Pest Manag Sci-2014	38
Duso, C.; Ahmad, S.; Tirello, P.; Pozzebon, A.; Klaric, V.; Baldessari, M.; Malagnini, V.; Angeli, G.	CA 8.3.2	2014	The impact of insecticides applied in apple orchards on the predatory mite *Kampimodromus aberrans* (Acari: Phytoseiidae).	Experimental & applied acarology, (2014 Mar) Vol. 62, No. 3, pp. 391-414.	14
Duso, C.; Malagnini, V.; Pozzebon, A.; Buzzetti, Fi. M.; Tirello, P.	CA 8.3.2	2008	A method to assess the effects of pesticides on the predatory mite *Phytoseiulus persimilis* (Acari Phytoseiidae) in the laboratory.	Biocontrol science and technology (2008), Vol. 18, Number 9-10, pp. 1027-1040	305
Elenka, G.; Stoyanova, S.; Velcheva, I.; Yanchevaa, V.	CA 8.2.1	2014	Histopathological Alterations in Common Carp (*Cyprinus carpio* L.) Gills Caused by Thiamethoxam	Braz. Arch. Biol. Technol. v.57 n.6: pp. 991-996	312
El-Naggar, J. B.; Nour El-Hoda; Zidan, A.	CA 8.4.2.1	2013	Field evaluation of imidacloprid and thiamethoxam against sucking insects and their side effects on soil fauna	Journal of Plant Protection Research 53 (4), 2013	566
Elston, C.; Thompson, H. M.; Walters, K.F.A.	CA 8.3.1	2013	Sub-lethal effects of thiamethoxam, a neonicotinoid pesticide, and propiconazole, a DMI fungicide, on colony initiation in bumblebee (*Bombus terrestris*) micro-colonies.	Apidologie (2013), Volume 44, Number 5, pp. 563-574, 63 refs.	551
El-Zahi, E. S.	CA 8.3.2	2012	Selectivity of some pesticides for various stages of *Chrysopeda carne*a (Steph.) using different methods of exposure.	Egyptian Journal of Biological Pest Control (2012), Volume 22, Number 2, pp. 211-216	716
El-Zahi, S.	CA 8.3.2	2013	Insect predators and control of Aphis gossypii comparing to certain insecticides under caged-cotton plants conditions.	Pakistan journal of biological sciences: PJBS, (2013 Mar 1) Vol. 16, No. 5, pp. 233-8.	69
Ersin, F.; Madanlar, N.	CA 8.3.2	2006	Investigations on the effects of some pesticides used in greenhouse vegetables on predatory mite *Phytoseiulus persimilis* A.-H. (Acarina: Phytoseiidae) in laboratory conditions.	Turkiye Entomoloji Dergisi (2006), Volume 30, Number 1, pp. 67-80	1400

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European Food Safety Authority	CA 8.3.1	2013	Evaluation of the FERA study on bumble bees and consideration of its potential impact on the EFSA conclusions on neonicotinoids	EFSA Journal 2013;11(6):3242, 20 pp.,	525
Ewunkem, J. A.; Jackai, L. E. N.; Osofuhene-Sintim, H.; Dingha, B. N	CA 8.3.2	2014	Comparing the impact of a neonicotinoid and biorational Agroneem® on herbivorous and beneficial arthropods on cowpea and tomato.	Journal of Agricultural Science and Technology A (2014), Volume 4, Number 7, pp. 585-596	447
Falco, J.R.P.; Hashimoto, J.H.; Fermino, F.; de Toledo, V.A.A.	CA 8.3.1	2010	Toxicity of thiamethoxam, behavioral effects and alterations in chromatin of *Apis mellifera* L., 1758 (Hymenoptera; Apidae).	Research Journal of Agriculture and Biological Sciences (2010), Volume 6, Number 6, pp. 823-828	909
Fanti, M.; Maines, R.; Angeli, G.	CA 8.3.1	2006	Evaluation of the repellency and acute toxicity of Neonicotinoids insecticides on *Apis mellifera ligustica*.	Giornate Fitopatologiche 2006, Riccione (RN), 27-29 marzo 2006. Atti, volume primo (2006), pp. 51-58	1344
Farag, N. A.; Gesraha, M. A.	CA 8.3.2	2007	Impact of four insecticides on the parasitoid wasp, *Diaertiella rapae* and its host aphid, *Brevicoryne brassicae* under laboratory conditions	Research Journal of Agriculture and Biological Sciences (2007), Volume 3, Number 5, pp. 529-533	1264
Fauser-Misslin, A.; Sadd, B.M.; Neumann, P.; Sandrock, C.	CA 8.3.1	2014	Influence of combined pesticide and parasite exposure on bumblebee colony traits in the laboratory.	Journal of Applied Ecology (2014), Volume 51, Number 2, pp. 450-459.	455
Fazekas, B.; Lang Woynarovich, M.; Paulus D., Petra; Csaba, G.; Orosz, E.	CA 8.3.1	2012	Pesticide poisoning of honey bees between 2007 and 2011	Magyar Allatorvosok Lapja (2012), 134 (4), 213-220	1601
Fernandes, M. E. de S.; Fernandes, F. L.; Picanco, M. C.; Queiroz, R. B.; Silva, R. S. da; Huertas, A. A. G.; de S. Fernandes, M. E.; da Silva, R. S.	CA 8.3.1 and CA 8.3.2	2008	Physiological selectivity of insecticides to *Apis mellifera* (Hymenoptera: Apidae) and *Protonectarina sylveirae* (Hymenoptera: Vespidae) in citrus.	Sociobiology (2008), Volume 51, Number 3, pp. 765-774	1183
Ferreira Fernandes, M.; de Oliveira Procópio, S.; Teles, D. A.; Guedes de Sena Filho, J.; Cargnelutti Filho, A.; Clí Via Rolemberg Andrade	CA 8.5	2013	Crescimento e fixação biológica de nitrogênio de Gluconacetobacter diazotrophicus Na presença de inseticidas utilizados na cultura da cana-de-açúcar	Rev. Cienc. Agrar., v. 56, n. 1, p. 12-18, jan./mar. 2013	648
Fodor, M.	CA 8.2.1	2012	The eco-toxicological influence of the pesticide/ insecticide thiamethoxam over some varieties of *Carassius auratus gibelio* Bloch.	Universitatea din craiova University of craiova Seria: Biologie Horticultură Tehnologia prelucrării produselor agricole Ingineria mediului Vol. XVII (LIII) - 2012	673
Ford, K. A.; Gulevich, A.G.; Swenson, T. L.; Casida, J. E.	CA 8.6	2011	Neonicotinoid Insecticides: Oxidative Stress in Planta and Metallo-oxidase Inhibition	J. Agric. Food Chem.	1813

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Forster, R.	CA 8.3.1	2009	Bee poisoning caused by insecticidal seed treatment of maize in Germany in 2008.	Julius-Kuehn-Archiv (2009), Number 423, pp. 126-131. ISSN: 1868-9892	1112
Fothergill, K.; Tindall, K.	CA 8.2.8	2010	Impact of the insecticide seed treatments, Cruiser and Dermacor on nontarget, aquatic invertebrates, in flooded rice fields	Conference: 33rd Rice Technical Working Group Meeting (RTWG 2010), Biloxi, Mississippi, 22 Feb 2010 - 25 Feb 2010	1786
Frank, S.D.	CA 8.3.2	2012	Reduced risk insecticides to control scale insects and protect natural enemies in the production and maintenance of urban landscape plants.	Environmental entomology, (2012 Apr) Vol. 41, No. 2, pp. 377-86.	96
Frewin, A. J; Schaafsma, A.W.; Hallett, R. H.	CA 8.3.2	2014	Susceptibility of *Aphelinus certus* (Hymenoptera: Aphelinidae) to neonicotinoid seed treatments used for soybean pest management.	Journal of economic entomology, (2014 Aug) Vol. 107, No. 4, pp. 1450-7.	6
Frilli, F.; Greatti, M.; Vedova, G. della; Belletti, P. A.; della Vedova, G.	CA 8.3.1	2009	Monitoring of spring bee mortality in Friuli-Venezia-Giulia.	Notiziario ERSA (2009), Volume 22, Number 4, pp. 45-49	1144
Gama, J. S. N; de L. A Bruno, R.; Quirino, Z. G. M.; de S. Ramalho, F. ; Pereira Junior, L.L.R.; de S. Ramalho; F.	CA 8.3.1	2013	Behaviour of pollinators and reproductive system of fennel grown in field intercropped with cotton	Revista Caatinga (2013), Vol. 26, Number 4, pp. 39-47, 27	636
Gesraha, M. A.	CA 8.3.2	2007	Impact of some insecticides on the coccinellid predator, *Coccinella undecimpunctata* L. and its aphid prey, *Brevicoryne brassicae* L.	Egyptian Journal of Biological Pest Control (2007), Volume 17, Number 1/2, pp. 65-69	1316
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Glynn, T.P.	CA 8.3.2	2006	Susceptibility of pest *Nezara viridula* (Heteroptera: Pentatomidae) and parasitoid *Trichopoda pennipes* (Diptera: Tachinidae) to selected insecticides.	Journal of economic entomology, (2006 Jun) Vol. 99, No. 3, pp. 648-57.	226
Godoy, M. S.; Carvalho, G. A.; Carvalho, B. F.; Lasmar, O.	CA 8.3.2	2010	Physiological selectivity of insecticides to two lacewing species. Seletividade fisiologica de inseticidas em duas especies de crisopideos.	Pesquisa Agropecuaria Brasileira (2010), Volume 45, Number 11, pp. 1253-1258	903
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Author(s)	CA data point number	Year	Title	Source	Ref. ID
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Gorzka, D.; Olszak, R. W.	CA 8.3.2	2010	Insecticide selectivity tests on spider mite destroyer (*Stethorus punctillum*) (Weise) (Coleoptera: Coccinellidae) in laboratory conditions.	IOBC/WPRS Bulletin (2010), Volume 55, pp. 109-112	961
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Hakala, K.; Kukkola, M.; Ruottinen, L.; Raiskio, S.; Pelkonen, S.; Peltonen, K.; Ketola, J.	CA 8.3.1	2014	Impact of neonicotinoid insecticides use to honey bees in spring oilseed cultivation in Finland	Abstracts of Papers, 248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014 (2014),	1515
Halappa, B.; Awaknavar, J. S.; Archana, D.	CA 8.3.2	2013	Safety evaluation of few insecticides against green lace wing, *Chrysoperla carnea* (Stephens) (Neuroptera: Chrysopidae) under laboratory condition.	Journal of Entomological Research (2013), Vol. 37, Number 1, pp. 73-77	622
Halikatti, G.; Pokharkar, D. S.; Shrikant V.; Vivek U.; Halikatti, G.; Vibhute, S.; Uppar, V.	CA 8.3.2	2014	Toxicity of newer insecticides on adults of *Cryptolaemus montrouzieri* M. under laboratory condition.	Environment and Ecology (2014), Volume 32, Number 3, pp. 928-932	439
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Henry, M.	CA 8.3.1	2013	Assessing homing failure in honeybees exposed to pesticides: Guez's (2013) criticism illustrates pitfalls and challenges.	Frontiers in physiology, (2013) Vol. 4, pp. 352.	64
Henry, M.; Beguin, M.; Requier, F.; Rollin, O.; Odoux, J.F.; Aupinel, P.; Aptel, J.; Tchamitchian, S.; Decourtye, A.	CA 8.3.1	2012	A common pesticide decreases foraging success and survival in honey bees.	Science (New York, N.Y.), (2012 Apr 20) Vol. 336, No. 6079, pp. 348-50.	98
Henry, M; Decourtye, A.	CA 8.3.1	2013	Ecological relevance in honeybee pesticide risk assessment: Developing context-dependent scenarios to manage uncertainty.	Frontiers in Physiology, (2013) Vol. 4 APR. arn. Article 62.	275

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Hirekurubar, R.B.; Ambekar, J.S.	CA 8.3.2	2008	Bio-efficacy of newer insecticides against shoot and fruit borer of okra and their impact on natural enemies	Crop. Res. 36 (1, 2 & 3): 302 – 307 (2008)	1196
Hull, L. A.; Joshi, N.K.; Zaman, F. U.	CA 8.3.2	2008	Management of internal feeding lepidopteran pests in apple, 2008	Arthropod Management Tests (2009), 34, A8	1687
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Jenkins, S.; Hoffmann, A. A.; McColl, S.; Tsitsilas, A.; Umina, P.A.	CA 8.3.2	2013	Synthetic pesticides in agro-ecosystems: are they as detrimental to nontarget invertebrate fauna as we suspect?	Journal of Economic Entomology (2013), 106 (2), 756-775	1550
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Kasiotis, K. M.; Anagnostopoulos, C.; Anastasiadou, P.; Machera, K.	CA 8.3.1	2014	Pesticide residues in honeybees, honey and bee pollen by LC-MS/MS screening: Reported death incidents in honeybees	Science of the Total Environment (2014), 485-486, 633-642	1517
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Kerns, D. L.; Baugh, B. A.; Patman, D. R.	CA 8.3.2	2010	Evaluation of insecticides against cotton aphids and lady beetle larvae in cotton, 2009	Arthropod Management Tests (2010), 35, F17	1666
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Khajehhoseini, M.; Samih, M.d A.; Mahdian, K.; Alizadeh, A.	CA 8.3.2	2013	The Effect of Thiamethoxam and Plant Extracts on Biological Parameters of *Chrysoperla Carnea* (Stephens) (Neu. Chrysopidae) in Iaboratory Condition.	Iranian Journal of Pharmaceutical Research, (Oct 2013) Vol. 12, Supp. Supplement 2, pp. 746.	273
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Mali, A.K.; Kurtadikar, J. S.; Wadnerkar, D. W.; Nemade, P. W.	CA 8.3.2	2008	Studies on the safety of pesticides to grapevine mealy bug predator, *Cryptolaemus montrouzieri* Aiyar	Pestology (2008), 32 (4), 17-27	1708
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Minakshi, R.; Mahajan, A. Y.	CA 8.2.8	2013	Effect of thiamethoxam on oxygen consumption of the freshwater bivalve, *Lamellidens marginalis* (Lamarck)	The Bioscan 8(2): 469-472	1551

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Noubar, J.; Bostanian, N. J.; Hardman, J. M.; Thistlewood, H. A.; Racette, G.	CA 8.3.2	2010	The response of Neoseiulus fallacis (Garman) and *Galendromus occidentalis* (Nesbitt) (Acari: Phytoseiidae) to six reduced risk insecticides in Canada.	IOBC/WPRS Bulletin (2010), Volume 55, pp. 73-77	982
Ohnesorg, W. J.; Johnson, K.D.; O'Neal, M.E.	CA 8.3.2	2009	Impact of reduced-risk insecticides on soybean aphid and associated natural enemies.	Journal of economic entomology, (2009 Oct) Vol. 102, No. 5, pp. 1816-26.	167
Oliveira, Regiane Alves; Roat, Thaisa, Cristina; Carvalho, Stephan, Malfitano; Malaspina, Osmar	CA 8.3.1	2014	Side-effects of thiamethoxam on the brain and midgut of the africanized honeybee *Apis mellifera (*Hymenopptera: Apidae).	Environmental toxicology, Vol. 29, No. 10, pp. 1122-33.	9

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Oliver, J.B.; Mannion, C.M.; Klein, M.G.; Moyseenko, J.J.; Bishop, B.	CA 8.3.2	2005	Effect of insecticides on *Tiphia vernalis* (Hymenoptera: Tiphiidae) oviposition and survival of progeny to cocoon stage when parasitizing *Popillia japonica* (Coleoptera: Scarabaeidae) larvae.	Journal of economic entomology, (2005 Jun) Vol. 98, No. 3, pp. 694-703.	247
Olszak, R. W.; Sekrecka, M.	CA 8.3.2	2008	Influence of some insecticides and acaricides on beneficial mites and on *Coccinella septempunctata* (Coleoptera; Coccinellidae) larvae	IOBC/WPRS Bulletin (2008), Volume 35, pp. 101-108	1227
Orita, H.; Kashio, T.	CA 8.3.2	2005	Toxic effect of some pesticides on adults and larvae of *Aphidoletes aphidimyza* (Rondani).	Kyushu Plant Protection Research (2005), Volume 51, pp. 83-88	1467
Overmeyer, J.; Campbell, P.; Coulson, M.; Ruddle, N.; Tornier, I.	CA 8.3.1	2013	Honey bee field studies: Assessing hive health after four consecutive years of exposure to flowering crops grown from thiamethoxam-treated seed	Abstracts of Papers, 246th ACS National Meeting & Exposition, Indianapolis, IN, United States, September 8-12, 2013 (2013), AGRO-150.	1526
Padilla S., Corum D., Padnos B., Hunter D.L., Beam A., Houck K.A., Sipes N., Kleinstreuer N., Knudsen T., Dix D.J. and Reif D.M.	CA 8.2.2.1	2012	Zebrafish developmental screening of the ToxCast™ Phase I chemical library	Reproductive Toxicology (2012), 33 (2), 174-187.	1604
Pandi, G. G. P.; Bishwajeet Paul; Shah Vivek; Shankarganesh, K.; Paul, B.; Vivek, S.	CA 8.3.2	2013	Relative toxicity of insecticides against coccinellid beetle, *Cheilomenes sexmaculata* (Fabricius).	Annals of Plant Protection Sciences (2013), Volume 21, Number 1, pp. 17-20	647
Pastagia, J. J.; Patel, M. B.	CA 8.3.1	2007	Relative contact toxicity of some insecticides to worker bees of *Apis cerana* F.	Journal of Plant Protection and Environment (2007), Volume 4, Number 2, pp. 89-92	1308
Patel, J. K.; Patel, I. S.; Patel, G. M.	CA 8.3.2	2010	Effect of Spirotetramat and Imidacloprid on survival of natural enemies of sucking pests in cotton crop.	Trends in Biosciences (2010), Volume 3, Number 1, pp. 37-38	1003
Paunescu, A.; Ponepal, C. M; Octavian, D.M.; Gabriel, A.	CA 8.2.8	2009	Research on the changes of some physiological parameters in *Rana ridibunda* under the action of the Actara 25WG insecticide.	Annals Food Science and Technology (2009), Volume 10, Number 2, pp. 644-647	1041
Păunescu, A.; Ponepal, C.M.; Drăghici,O.; Marinescu, Al. G.	CA 8.2.8	2010	The influence of Reldan 40EC and Actara 25WG insecticides upon gall-bladder structure in *Rana (Pelophylax) ridibunda*	Lucrări ştiinţifice USAMVB, Seria B, vol. LIV, 2010	910
Peck, D. C., Olmstead, D.	CA 8.3.2	2010	Neonicotinoid insecticides disrupt predation on the eggs of turf-infesting scarab beetles.	Bulletin of entomological research, (2010 Dec) Vol. 100, No. 6, pp. 689-700.	144
Pei, H.; Ou, .X; Yu, W.; Yi, Z.; Bai, J.; Gao, D.	CA 8.3.1	2013	Acute toxicity of four insecticides to honeybee *Apis mellifera*	Shijie Nongyao (2013), 35 (4), 50-51, 54.	1570

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Pilling, E.; Campbell, P.; Coulson, M.; Ruddle, N.; Tornier, I.	CA 8.3.1	2012	A four-year field program investigating long-term effects of repeated exposure of honey bee colonies to flowering crops treated with thiamethoxam.	PloS one, Vol. 8, No. 10, pp. e77193.	80
Pohorecka, K.; Skubida, P.; Miszczak, A.; Semkiw, P.; Sikorski, P.; Zagibajlo, K.; Teper, D.; Koltowski, Z.; Skubida, M.; Zdanska, D.; Bober, A.	CA 8.3.1	2012	Residues of neonicotinoid insecticides in bee collected plant materials from oilseed rape crops send their effect on bee colonies	Journal of Apicultural Science, Vol. 56, No. 2, pp. 115-134.	347
Poletti, M.; Maia, A. H. N.; Omoto, C	CA 8.3.2	2007	Toxicity of neonicotinoid insecticides to Neoseiulus californicus and *Phytoseiulus macropilis* (Acari: Phytoseiidae) and their impact on functional response to *Tetranychus urticae* (Acari: Tetranychidae).	Biological Control (2007), Volume 40, Number 1, pp. 30-36	1327
Pozzebon, A.; Duso, C.; Tirello, P.; Ortiz, P. Bermudez	CA 8.3.2	2011	Toxicity of thiamethoxam to *Tetranychus urticae* Koch and *Phytoseiulus persimilis* Athias-Henriot (Acari Tetranychidae, Phytoseiidae) through different routes of exposure.	Pest management science, (2011 Mar) Vol. 67, No. 3, pp. 352-9.	120
Prabhaker, N.; Castle, S.J.; Naranjo, S. E.; Toscano, N. C.; Morse, J. G.	CA 8.3.2	2011	Compatibility of two systemic neonicotinoids, imidacloprid and thiamethoxam, with various natural enemies of agricultural pests.	Journal of economic entomology, (2011 Jun) Vol. 104, No. 3, pp. 773-81.	113
Pratissoli, D; Vianna, U. R; Furtado, G. O; Zanuncio, J. C; Polanczyk, R. A.; Barbosa, W. F.; Carvalho, J. R. de; de Carvalho, J. R.	CA 8.3.2	2009	Insecticide selectivity to *Trichogramma pretiosum* Riley (Hymenoptera: Trichogrammatidae) in different hosts. Seletividade de inseticidas a *Trichogramma pretiosum* Riley (Hymenoptera: Trichogrammatidae) em diferentes hospedeiros.	Boletin de Sanidad Vegetal, Plagas (2009), Volume 35, Number 3, pp. 347-353	1072
Preetha, G.; Manoharan, T.; Kuttalam, S.	CA 8.3.2	2010	Impact of chloronicotinyl insecticide, imidacloprid on egg, egg-larval and larval parasitoids under laboratory conditions.	Journal of Plant Protection Research (2010), Volume 50, Number 4, pp. 535-540	916
Preetha, G.; Stanley, J.; Suresh, S.; Kuttalam, S.; Samiyappan, R.	CA 8.3.2	2009	Toxicity of selected insecticides to *Trichogramma chilonis*: assessing their safety in the rice ecosystem.	Phytoparasitica (2009), Volume 37, Number 3, pp. 209-215	1091
Purdy, J. R.	CA 8.3.1	2014	Concentrations and distribution of neonicotinoid residues in honeybees (*Apis mellifera*) in Ontario, Canada	Abstracts of Papers, 248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014 (2014), AGRO-616.	1519

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Rahmani, S.; Bandani, A. R.	CA 8.3.2	2013	Sublethal concentrations of thiamethoxam adversely affect life table parameters of the aphid predator, *Hippodamia variegata* (Goeze) (Coleoptera: Coccinellidae).	Crop Protection (2013), Volume 54, pp. 168-175.	604
Rahmani, S.; Bandani, A. R.; Sabahi, Q.	CA 8.3.2	2013	Population statistics and biological traits of *Hippodamia variegata* (Goeze) (Coleoptera: Coccinellidae) affected by LC_{30} of thiamethoxam and pirimicarb.	Archives of Phytopathology and Plant Protection (2013), Volume 46, Number 15, pp. 1839-1847	529
Rahmani, S.; Bandani, A. R.; Sabahi, Q.	CA 8.3.2	2013	Effects of thiamethoxam in sublethal concentrations, on life expectancy (ex) and some other biological characteristics of *Hippodamia variegata* (Goeze) (Coleoptera: Coccinellidae).	International Research Journal of Applied and Basic Sciences (2013), Volume 4, Number 3, pp. 556-560,	552
Ravi, S. K.; Manjunatha, M.; Naik, M. I.	CA 8.3.2	2007	Toxic effect of insecticides on mortality of sugarcane woolly aphid, *Ceratovacuna lanigera* and its predator *Dipha aphidivora*.	Karnataka Journal of Agricultural Sciences (2007), Volume 20, Number 1, pp. 144-145	1295
Redoan, A. C. M.; Carvalho, G. A.; Cruz, I.; Figueiredo, M. de L. C.; Silva, R. B. da; de L. C. Figueiredo, M.; da Silva, R. B.	CA 8.3.2	2012	Selectivity of insecticides used in the control of *Spodoptera frugiperda* (J. E. Smith) (Lepidoptera: Noctuidae) for eggs and nymphs of *Doru luteipes* (Scudder) (Dermaptera: Forficulidae). Seletividade de inseticidas utilizados no controle de Spodoptera frugiperda (J. E. Smith) (Lepidoptera: Noctuidae) para ovos e ninfas de Doru luteipes (Scudder) (Dermaptera: Forficulidae).	Revista Brasileira de Milho e Sorgo (2012), Volume 11, Number 1, pp. 25-34	774
Rishi Kumar; Kranthi, S.; Nitharwal, M.; Jat, S. L.; Monga, D.; Kumar, R.	CA 8.3.2	2012	Influence of pesticides and application methods on pest and predatory arthropods associated with cotton.	Phytoparasitica (2012), Vol. 40, Number 5, pp. 417-424	686
Rocha, L. C. D; Carvalho, G. A; Moura, A. P; Moscardini, V. F; Rezende, D. T; Santos, O. M	CA 8.3.2	2010	Physiologic selectivity of pesticides used on coffee plantations on eggs and adults of *Cryptolaemus Montrouzieri* Mulsant.	Arquivos do Instituto Biologico Sao Paulo, (2010) Vol. 77, No. 1, pp. 119-127.	374
Rocha, L. C.D.; Carvalho, G.A.; Moscardini, V.F.; Rezende, D.T.	CA 8.3.2	2011	Selectivity of insecticides used in coffee crop to larvae of *Cryptolaemus montrouzieri* Mulsant	Ciencia Rural (2011), 41 (6), 939-946.	1628
Roger, P.; Alves, L.; Elke, J.B.N.; Cardoso, A.Martines, M.; Sousa, J.P.; Pasin, A.	CA 8.4.1	2013	Earthworm ecotoxicological assessments of pesticides used to treat seeds under tropical conditions.	Chemosphere 90 (2013) 2674–2682	44

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Roger, P.; Alves, L.; Elke, J.B.N.; Cardoso, A.Martines, M.; Sousa, J.P.; Pasin, A.	CA 8.4.2.1	2014	Seed dressing pesticides on springtails in two ecotoxicologicallaboratory tests	Ecotoxicology and Environmental Safety 105 (2014) 65 – 71	25
Roy, B. and Nath, S.	CA 8.2.2	2011	Some haematological investigations on *Oreochromis niloticus* (Trewavas) following exposure to Thiamethoxam.	Acta Zoologica Lituanica (2011), Volume 21, Number 4, pp. 301-305	821
Samih, M. A.; Khajehhoseini, M.; Mahdian, K.; Alizadeh, A.	CA 8.3.2	2013	Effect of Some Medicinal Plant Extracts on Stable population Parameters of *Chrysoperla Carnea* (Stephens).	Iranian Journal of Pharmaceutical Research, (Oct 2013) Vol. 12, Supp. Supplement 2, pp. 1290.	271
Samson-Robert, O.; Fournier, V.; Labrie, G.; Chagnon, M.	CA 8.3.1	2014	Neonicotinoid-contaminated puddles of water represent a risk of intoxication for honey bees.	PLoS ONE, (1 Dec 2014) Vol. 9, No. 12.	267
Sánchez-Bayo, F.	CA 8.2.8	2005	Comparative acute toxicity of organic pollutants and reference	Environmental Pollution 139 (2006) 385-420	1742
Sanchez-Bayo, F.; Goka, K.	CA 8.3.1	2014	Pesticide Residues and Bees – A Risk Assessment	PloS one, (2014) Vol. 9, No. 4, pp. e94482.	33
Sandrock, C.; Tanadini, L.G.; Pettis, J.S.; Biesmeijer, J.C.; Potts, S.G.; Neumann, P.	CA 8.3.1	2014	Sublethal neonicotinoid insecticide exposure reduces solitary bee reproductive success.	Agricultural and Forest Entomology (2014), Volume 16, Number 2, pp. 119-128.	489
Sandrock, C.; Tanadini, M.; Tanadini, L.G.; Fauser-Misslin, A.; Neumann, P. ; Potts, S. G.	CA 8.3.1	2014	Impact of chronic neonicotinoid exposure on honeybee colony performance and queen supersedure.	PloS one, (2014) Vol. 9, No. 8	31
Scarpellini, J. R.	CA 8.3.2	2008	Selectivity of pesticides on lady beetles *Cycloneda sanguinea* (Linnaeus, 1763) (Coleoptera, Coccinellidae) in cotton plant. Seletividade fisiologica de aficidas sobre joaninha Cycloneda sanguinea (Linnaeus, 1763) (Coleoptera, Coccinellidae) em algodoeiro.	Arquivos do Instituto Biologico (Sao Paulo) (2008), Volume 75, Number 2, pp. 195-202	1210
Scarpellini, J. R.; Andrade, D. J. de; de Andrade, D. J.	CA 8.3.2	2011	The effect of insecticides on the lady beetle *Cycloneda sanguinea* L. (Coleoptera, Coccinellidae) and on the aphid *Aphis gossypii* Glover (Hemiptera, Aphididae) on cotton plants.	Arquivos do Instituto Biologico (Sao Paulo) (2011), Volume 78, Number 3, pp. 393-399	813
Scarpellini, J. R.; Andrade, D. J. de; de Andrade, D. J.	CA 8.3.2	2010	Evaluation of the effect of insecticides on lady beetles *Hippodamia convergens* uerin-Meneville (Coleoptera: Coccinellidae) in cotton plant.	Arquivos do Instituto Biologico (Sao Paulo) (2010), Volume 77, Number 2, pp. 323-330	932

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Schenke, D.; Baier, B.	CA 8.3.2	2010	Diffusion of thiamethoxam and imidacloprid from coated sugarbeet seeds into the soil and its effects on carabid beetle larvae. Ausbreitung von Thiamethoxam und Imidacloprid aus pilliertem Zuckerruebensaatgut in den Boden und deren Auswirkungen auf Laufkaeferlarven.	Julius-Kuehn-Archiv (2010), Number 428, 462 p. ISSN: 1868-9892	921
Schenke, D.; Heimbach, U.	CA 8.3.2	2014	Exposure of Coccinellidae to guttation droplets on maize seedlings with seed or granule treatment of neonicotinoids	Abstracts of Papers, 248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014 (2014), AGRO-359. CODEN: 69SZG4	1524
Schenke, D; Baier, B	CA 8.3.2	2009	Effect of thiamethoxam towards *Poecilus cupreus* larvae in comparison to imidacloprid applied as pelleted sugar beet seeds	Conference: 2009 Annual Meeting of the UK branch of the Society of Environmental Toxicology and Chemistry (SETAC 2009), Goteborg Convention Centre, Goteborg, 31 May 2009 - 4 Jun 2009	1789
Scott-Dupree, C.; Cutler, C.	CA 8.3.1	2014	Field studies examining exposure and effects of neonicotinoid insecticides on bee colonies	Ecotoxicology, Volume 23:1755–1763	1516
Seagraves, M. P.; Lundgren, J. G.	CA 8.3.2	2012	Effects of neonicitinoid seed treatments on soybean aphid and its natural enemies.	Journal of Pest Science (2012), Volume 85, Number 1, pp. 125-132	742
Shakoorzadeh, M.; Rafiee-Dastjerdi, H.; Golmohammadi, Gh.; Hassanpour, M.; Golizadeh, A.	CA 8.3.2	2013	Lethal and sublethal effects of dinotefuran and thiamethoxam on the population growth parameters of the green lacewing, *Chrysoperla carnea*: (Neu.: Chrysopidae), under laboratory conditions.	Journal of Entomological Society of Iran, (2013) Vol. 33, No. 3, pp. 1-9.	334
Shankarganesh, K.; Bishwajeet Paul; Gautam, R. D.; Paul, B.	CA 8.3.2	2013	Studies on ecological safety of insecticides to egg parasitoids, *Trichogramma chilonis* Ishii and *Trichogramma brasiliensis* (Ashmead).	National Academy Science Letters (2013), Volume 36, Number 6, pp. 581-585	548
Shanmugam, P. S.; Balagurunathan, R.; Sathiah, N.	CA 8.3.2	2006	Safety of some newer insecticides against *Trichogramma chilonis* Ishii.	Journal of Plant Protection and Environment (2006), Volume 3, Number 1, pp. 58-63	1405
Shinde, C. U.; Patel, M. B.; Mehendale, S. K.	CA 8.3.2	2009	Studies on relative toxicity of different insecticides on larvae of *Chrysoperla carnea* (Stephens).	Insect Environment (2009), Volume 15, Number 2, pp. 67-69	1133

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Silva, M. Z. da; Oliveira, C. A. L. de; Sato, M. E.; da Silva, M. Z.; de Oliveira, C. A. L.	CA 8.3.2	2009	Selectivity of the pesticides to the predaceous mite *Agistemus brasiliensis* Matioli, Ueckermann & Oliveira (Acari: Stigmaeidae). Seletividade de produtos fitossanitarios sobre o acaro predador Agistemus brasiliensis Matioli, Ueckermann & Oliveira (Acari: Stigmaeidae).	Revista Brasileira de Fruticultura (2009), Volume 31, Number 2, pp. 388-396	1067
Smalling,K.L; Reeves, R.; Muth, E.; Vandever,M. Battaglin, W. A.; Hladik, M.L., Pierce, C.L.	CA 8.2.8	2015	Pesticide concentrations in frog tissue and wetland habitats in a landscape dominated by agriculture	Science of the Total Environment 502 (2015) 80 – 90	263
Soare, L.C.; Dobrecu, C-M.; Burtescu, L. ; Șutan, A.N.	CA 8.6	2013	Research on the influence of two insectides on the gametophyte of some leptosporangiate pteridophytes	Analele Stiintifice ale Universitatii 'Al I Cuza' din Iasi. (Serie Noua) Sectiunea II a. Biologie Vegetala (2013), Vol. 59, Number 2, pp. 5-12	650
Souza, C. R.; Sarmento, R. A.; Venzon, M.; Barros, E. C.; Santos, G. R. dos; Chaves, C. C.; dos Santos, G. R.	CA 8.3.2	2012	Impact of insecticides on non-target arthropods in watermelon crop.	Semina: Ciencias Agrarias (Londrina) (2012), Volume 33, Number 5, pp. 1789-1801	665
Souza, J. R.; Carvalho, G. A.; Moura, A. P.; Couto, M. H. G.; Maia, J. B.	CA 8.3.2	2014	Toxicity of some insecticides used in maize crop on *Trichogramma pretiosum* (Hymenoptera, Trichogrammatidae) immature stages.	Chilean Journal of Agricultural Research (2014), Volume 74, Number 2, pp. 234-239, 28	471
Stanley Johnson; Sah Khushboo; Jain S K; Bhatt J C; Sushil S N	CA 8.3.1	2015	Evaluation of pesticide toxicity at their field recommended doses to honeybees, *Apis cerana* and A. *mellifera* through laboratory, semi-field and field studies.	Chemosphere, Vol. 119, pp. 668-74.	1
Stark, J.D.	CA 8.2.5.2	2004	How closely do acute lethal concentration estimates predict effects of toxicants on populations?	Integrated Environmental Assessment and Management Volume 1, Number 2, pp. 109–1	255
Stevens, M.M.; Helliwell, S.; Hughes, P.A.	CA 8.2.8	2005	Toxicity of *Bacillus thuringiensis* var. israelensis formulations, spinosad, and selected synthetic insecticides to *Chironomus tepperi* larvae.	Journal of the American Mosquito Control Association, (December 2005) Vol. 21, No. 4, pp. 446-450.	292
Stewart, S. D. L., Gus, M.; Catchot, A. L.; Gore, J.; Cook, D.; Skinner, J.; Mueller, T. C.; Johnson, D.R.; Zawislak, J.; Barber, J.	CA 8.3.1	2014	Potential exposure of pollinators to neonicotinoid insecticides from the use of insecticide seed treatments in the mid-southern United States.	Environmental science & technology, Vol. 48, No. 16, pp. 9762-9	4
Stokstad, E.	CA 8.3.1	2013	Pesticides under fire for risks to pollinators.	Science, (2013) Vol. 340, No. 6133, pp. 674-676.	274

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Stoner, A.K.; Eitzer, B. D.	CA 8.3.1	2013	Using a hazard quotient to evaluate pesticide residues detected in pollen trapped from honey bees (*Apis mellifera*) in Connecticut.	PloS one, (2013) Vol. 8, No. 10, pp. e77550.	79
Stoner, K.A.; Eitzer, B.D.	CA 8.3.1	2012	Movement of soil-applied imidacloprid and thiamethoxam into nectar and pollen of squash (*Cucurbita pepo*).	PloS one, Vol. 7, No. 6, pp. e39114.	81
Sun Chao; Su JianYa; Shen JinLiang; Zhang Xi; Sun, C.; Su, J. Y.; Shen, J. L.; Zhang, X.	CA 8.3.2	2008	Laboratory safety evaluation of insecticides to *Trichogramma japonicum*.	Chinese Journal of Rice Science (2008), Volume 22, Number 1, pp. 93-98	1229
Sun DingWei; Su JianYa; Shen JingLiang; Xu JianTao; Sun, D. W.; Su, J. Y.; Shen, J. L.; Xu, J. T.	CA 8.3.2	2008	Safety evaluation of insecticides to *Cyrtohinus lividipennis* (Reuter) (Hemiptera: Miridae), a predator of *Nilaparvata lugens* (Stal) (Homoptera: Delphacidae).	Scientia Agricultura Sinica (2008), Volume 41, Number 7, pp. 1995-2002	1174
Sun, Z.; Chen, D.; Jia, F.; Zhang, C.; Tang, S.; Ren, G.; Liu, X.	CA 8.3.2	2014	Effect of six conventional insecticides on *Aphidius gifuensis* (Ashmead) in tobacco fields	Zhiwu Baohu (2014), 40 (4), 185-189. CODEN: ZBHABE; ISSN: 0529-1542	1527
Szczepaniec, A.; Raupp, M. J.; Parker, R.D.; Kerns, D.; Eubanks, M.D.	CA 8.6	2013	Neonicotinoid Insecticides Alter Induced Defenses and Increase Susceptibility to Spider Mites in Distantly Related Crop Plants	PLOS One, Volume 8, Issue 5, May 2013	270
Szczepanik, M.; Templin, J.; Napiorkowska, T.	CA 8.3.2	2013	Susceptibility of developmental stages of the spider, *Tegenaria atrica* C.L. Koch to selected insecticides from different chemical groups. Wrazliwosc stadiow rozwojowych pajaka katnika wiekszego, *Tegenaria atrica* C.L. Koch na wybrane insektycydy z roznych grup chemicznych.	Progress in Plant Protection (2013), Volume 53, Number 3, pp. 519-523	553
Tabozada, E. O.; Sayed, S. M.; El-Arnaouty, S. A.	CA 8.3.2	2015	Side effects of sublethal concentration of two neonicotinoids; thiamethoxam and thiacloprid on the larval parasitoid, *Bracon brevicornis* (Hymenoptera: Braconidae).	American Journal of Experimental Agriculture (2015), Volume 5, Number 1, pp. 29-35	420
Tamutis, V.; Ziogas, A.; Saluchaite, A.; Kazlauskaite, S.; Amsiejus, A.	CA 8.3.2	2007	Epigeic beetle (Coleoptera) communities in summer barley agrocenoses.	Baltic Journal of Coleopterology (2007), Volume 7, Number 1, pp. 83-98	1311
Tapparo, A.; Giorio, C.; Marzaro, M.; Marton, D.; Solda, L.; Girolami, V.	CA 8.3.1	2011	Rapid analysis of neonicotinoid insecticides in guttation drops of corn seedlings obtained from coated seeds.	Journal of environmental monitoring : JEM, Vol. 13, No. 6, pp. 1564-8.	108

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Tapparo, A.; Marton, D.; Giorio, C.; Zanella, A.; Solda, L.; Marzaro, M.; Vivan, L.; Girolami, V.	CA 8.3.1	2012	Assessment of the Environmental Exposure of Honeybees to Particulate Matter Containing Neonicotinoid Insecticides Coming from Corn Coated Seeds	Environmental Science & Technology, Vol. 46 (5), 2592-2599	1588
Thakare, S. M.; Bharti Dhoble; Thakare, A. S.; Dhoble, B.	CA 8.3.2	2009	Effect of different chemicals applied by seed or stem smearing technique on natural enemies of Bt cotton.	Crop Research (Hisar) (2009), Volume 38, Number 1/3, pp. 205-207	1093
Thiruchchelvan, N.; Mikunthan, G.; Thirukkumaran, G.; Pakeerathan, K.	CA 8.3.2	2013	Effect of insecticides on bio-agent *Trichoderma harzianum rifai* under in vitro condition.	American-Eurasian Journal of Agricultural & Environmental Sciences (2013), Volume 13, Number 10, pp. 1357-1360	531
Thiruveni, T.; Kuhar, H. Ganesh; Kuttalah, S.	CA 8.3.2	2014	Effect of newer indigenous thiamethoxam 25% WG formulation on spider population in mango	Pestology (2014), 38 (5), 49-51	1536
Thomazoni, D.; Soria, M. F.; Kodama, C.; Carbonari, V.; Fortunato, R. P.; Degrande, P. E.; Valter Junior, V. A.	CA 8.3.1	2009	Selectivity of insecticides for adult workers of *Apis mellifera* (Hymenoptera:Apidae).	Revista Colombiana de Entomologia, Volume 35, Number 2, pp. 173-176	1100
Thompson, H.M.; Fryday, S.L.; Harkin, S.; Milner, S.	CA 8.3.1	2014	Potential impacts of synergism in honeybees (*Apis mellifera*) of exposure to neonicotinoids and sprayed fungicides in crops.	Apidologie (2014), Volume 45, Number 5, pp. 545-553, 30 refs	449
Thompson, H.M.; Wilkins, S.; Harkin, S.; Milner, S.; Walters, K.F.	CA 8.3.1	2013	Neonicotinoids and bumblebees (*Bombus terrestris*): effects on nectar consumption in individual workers	Pest management science, (2014 Jul 30)	36
Tillman, P. G.	CA 8.3.2	2006	Feeding responses of *Trichopoda pennipes* (F.) (Diptera: Tachinidae) to selected insecticides.	Journal of Entomological Science (2006), Volume 41, Number 3, pp. 242-247	1367
Tinsley, N. A.; Steffey, K. L.; Estes, R. E.; Heeren, J. R.; Gray, M. E.; Diers, B. W.	CA 8.3.2	2012	Field-level effects of preventative management tactics on soybean aphids (*Aphis glycines* Matsumura) and their predators.	Journal of Applied Entomology, (JUN 2012) Vol. 135, No. 5, pp. 361-371.	346
Tirello, P.; Pozzebon, A.; Duso, C.	CA 8.3.2	2013	The effect of insecticides on the non-target predatory mite	Chemosphere 93 (2013) 1139–1144	54
Tosi, L.; Farinazzo, E.; Posenato, G.; Girolami, V.	CA 8.3.2	2006	Side effects of insecticides on *Kampimodromus aberrans*. Due anni di prove in veneto sul fitoseide Effetti collaterali di insetticidi su Kampimodromus aberrans.	Informatore Agrario (2006), Volume 62, Number 26, pp. 54-56	1407
Tremolada, P.; Mazzoleni, M.; Saliu, F.; Colombo, M.; Vighi, M.	CA 8.3.1	2010	Field trial for evaluating the effects on honeybees of corn sown using Cruiser and Celest xl treated seeds.	Bulletin of environmental contamination and toxicology, Vol. 85, No.3, pp. 229-34.	152

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Uma, S.; Jacob, S.; Lyla, K. R.	CA 8.3.2	2014	Acute contact toxicity of selected conventional and novel insecticides to *Trichogramma japonicum* Ashmead (Hymenoptera: Trichogrammatidae)	Journal of Biopesticides (2014), 7 (Suppl.), 133-136.	1531
V. Kumar, V. Anil; Janaiah, C.; Venkateshwarlu, P.	CA 8.2.1	2010	Impact of thiamethoxam on proteases, aminases and glutamate dehydrogenase in some tissues of freshwater fish, *Channa punctatus* (Bloch)	Bioscan (2010), 5 (1), 135-137	1660
Valdovinos-Nunez, G.R.; Quezada-Euan, J.J.G.; Ancona-Xiu, P.; Moo-Valle, H.; Carmona, A.; Sanchez, E.R.	CA 8.3.1	2009	Comparative toxicity of pesticides to stingless bees (Hymenoptera: Apidae: Meliponini)	Journal of Economic Entomology (2009), 102 (5), 1737-1742	1672
Vendan, K. T.; Sreenivas, A. G.; Nargund, V. B.; Nadaf, A. M.	CA 8.5	2008	Impact of seed dressing chemicals on soil micro flora and sucking pests in cotton.	Annals of Plant Protection Sciences (2008), Volume 16, Number 1, pp. 212-214, 3 refs. ISSN: 0971-3573	1204
Vijayaraghavan, C.; Regupathy, A.	CA 8.3.2	2006	Impact of thiamethoxam on spiders in sugarcane ecosystem.	Journal of Plant Protection and Environment (2006), Volume 3, Number 1, pp. 36-39	1413
Villanueva, R.T.; Walgenbach, J.F.	CA 8.3.2	2005	Development, oviposition, and mortality of *Neoseiulus fallacis* (Acari: Phytoseiidae) in response to reduced-risk insecticides.	Journal of economic entomology, (2005 Dec) Vol. 98, No. 6, pp. 2114-20.	239
Vivek S.; Bishwajeet P.; Pandi, G. G. P; Shankarganesh, K.	CA 8.3.2	2012	Relative toxicity of insecticides on larval stages of green lacewing, *Chrysoperla sp.* (carnea-group) (Chrysopidae: Neuroptera).	Indian Journal of Entomology (2012), Volume 74, Number 4, pp. 394-397	688
Wang, H. Y.; Yang, Y.; Su, J. Y.; Shen, J. L.; Gao, C. F.	CA 8.3.2	2008	Assessment of the impact of insecticides on *Anagrus nilaparvatae* (Pang et Wang) (Hymenoptera: Mymanidae), an egg parasitoid of the rice planthopper, *Nilaparvata lugens* (Hemiptera: Delphacidae).	Crop Protection (2008), Volume 27, Number 3/5, pp. 514-522	1185
Wang, X.; Jia, J.; Zhang, Y.; Zhou, Q.; Gao, C.	CA 8.3.2	2013	Laboratory safety evaluation of eight insecticides to two predating natural enemies, *Hylyphantes graminicola* and *Coleosoma octomaculatum*	Nanjing Nongye Daxue Xuebao (2013), 36 (3), 53-58	1569
Wang, Y.; Chen, L.; Zhao, X.; Wu,C.; Cang, T.; Yu, R.; Wu, S.; Wang, Q.	CA 8.4.1	2010	Acute toxicity of neonicotinoids and avermectins to earthworm, *Eisenia foetida*	Nongye Huanjing Kexue Xuebao (2010), 29 (12), 2299-2304. ISSN: 1672-2043	1652
Wang, Y.; Liu, T.; Li, J.; Dong, .; Zhou, T.; Zhang, D.	CA 8.3.2	2012	Selective toxicity tests and field trials of 5 kinds of insecticide to *Brevicoryne brassicae* and ladybeetles	Nongyao (2012), 51 (11), 829-831, 857	1593

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Wang, Y.; Wu, C.; Cang, T.; Yang, L.; Yu, W.; Zhao, X.; Wang, Q.; Cai, L.	CA 8.3.2	2014	Toxicity risk of insecticides to the insect egg parasitoid *Trichogramma evanescens* Westwood (Hymenoptera: Trichogrammatidae)	Pest Management Science (2014), 70 (3), 398-404	1523
Wang, Y.; Yu, R.; Zhao, X.; An, X.; Chen, L.; Wu, C.; Wang, Q.	CA 8.3.2	2012	Acute toxicity and safety evaluation of neonicotinoids and macrocyclic lactiones to adult wasps of four *Trichogramma* species (Hymenoptera: Trichogrammidae).	Acta Entomologica Sinica (2012), Vol. 55, Number 1, pp. 36-45	768
Wang, Y.; Yu, R.; Zhao, X.; Chen, L.; Wu, C.; Cang, T.; Wang, Q.	CA 8.3.2	2012	Susceptibility of adult *Trichogramma nubilale* (Hymenoptera: Trichogrammatidae) to selected insecticides with different modes of action	Crop Protection (2012), 34, 76-82.	1612
Wang, Y.; Chen, L.; Yu, R.; Zhao, X.; Wu, C.; Cang, T.; Wang, Q.	CA 8.3.2	2012	Insecticide toxic effects on *Trichogramma ostriniae* (Hymenoptera:Trichogrammatida e)	Pest Management Science (2012), 68 (12), 1564-1571.	1590
Whitehor, P. R.; O'Connor, S.; Wackers, F. L.; Goulson, D.	CA 8.3.1	2012	Neonicotinoid Pesticide Reduces Bumble Bee Colony Growth and Queen Production	Science (Washington, DC, United States) (2012), 336 (6079), 351-352	1597
Wiest, L.; Bulete, A.; Giroud, B.; Fratta, C.; Amic, S.; Lambert, O.; Pouliquen, H.; Arnaudguilhem, C.	Ca 8.3.1	2011	Multi-residue analysis of 80 environmental contaminants in honeys, honeybees and pollens by one extraction procedure followed by liquid and gas chromatography coupled with mass spectrometric detection	Journal of Chromatography A (2011), 1218 (34), 5743-5756	1624
Williamson, S.; Willis, J.; Wright, G.A.	CA 8.3.1	2014	Exposure to neonicotinoids influences the motor function of adult worker honeybees.	Ecotoxicology (London, England), (2014 Oct) Vol. 23, No. 8, pp. 1409-18.	7
Wu, J.Y.; Anelli, C.M.; Sheppard, W.S.	CA 8.3.1	2011	Sub-lethal effects of pesticide residues in brood comb on worker honey bee (*Apis mellifera*) development and longevity	PLoS One, 6(2), e14720.	1620
Xia, Q.; Yang, W.; Zhou, L.	CA 8.3.1	2012	Comparison of insecticide sensitivity to *Apis mellifera* and insects	Shijie Nongyao (2012), 34 (1), 21-25, 30.	1616
Xueping, Z.; Changxing, W.; Yanhua, W.; Tao, C.; Liping, C.; Ruixian, Y.; Qiang, W.	CA 8.3.2	2012	Assessment of toxicity risk of insecticides used in rice ecosystem on *Trichogramma japonicum*, an egg parasitoid of rice lepidopterans.	Journal of economic entomology, (2012 Feb) Vol. 105, No. 1, pp. 92-101.	101
Wang, Y.; Chen, L.; Yu, R.; Zhao, X.; Wu, C.; Cang, T.; Wang, Q.	CA 8.7	2012	Effects of selected insecticides on osmotically treated entomopathogenic nematodes.	Journal of Plant Diseases and Protection (2012), Volume 119, Number 4, pp. 152-158, 30 refs. ISSN: 1861-3829. URL: http://www.jpdp-online.com	732

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Yanhua, W.; Liping, C.; Xuehua, A.; Jinhua, J.; Qiang, W.; Leiming, C.; Xueping, Z.	CA 8.3.2	2013	Susceptibility to selected insecticides and risk assessment in the insect egg parasitoid *Trichogramma confusum* (Hymenoptera: Trichogrammatidae).	Journal of economic entomology, (2013 Feb) Vol. 106, No. 1, pp. 142-9.	73
Yu, W.; Pei, H.; Yi, Z.; Bai, J.; Yu, K.	CA 8.3.1	2013	Indoor toxicity determination of neonicotinoid insecticides to *Apis mellifera*	Shijie Nongyao (2013), 35 (2), 28-31	1575
Zhang, P.; Chen, C. Y.; Li, H.; Liu, F.; Mu, W.	CA 8.4.1	2014	Selective toxicity of seven neonicotinoid insecticides to fungus gnat *Bradysia odoriphaga* and earthworm *Eisenia foetida*.	Acta Phytophylacica Sinica (2014), Volume 41, Number 1, pp. 79-86, 23 refs.	497
Zhao JianWei; Zheng Yu; Li LiNa; He YuXian; Weng QiYong; Zhao, J. W.; Zheng, Y.; Li, L. N.; He, Y. X.; Weng, Q. Y.	CA 8.3.2	2012	Toxicity of various classes of insecticides to *Serangium japonicum*, a predator of *Bemisia tabaci*.	Chinese Journal of Applied Entomology (2012), Volume 49, Number 6, pp.1577-1583	666
Zhao, X.; Yu, R.; Cang, T.; Chen, L.; Wu, S.; Wu, C.; Gu, X.	CA 8.3.2	2008	Effects of Nilaparvata lugens and *Cyrtorhinus lividipennis* Reuter to insecticides	Nongyao (2008), 47 (1), 74-76.	1697
Zotti, M.J.; Gruetzmacher, A.D.; Gruetzmacher, D.D.; Dalmazzo, G.O.; Martins, J.F.S.	CA 8.3.2	2010	Selectivity of insecticides used in the corn crop to adults of *Doru lineare* (Eschscholtz, 1822) (Dermaptera: Forficulidae). Seletividade de inseticidas usados na cultura do milho para adultos de Doru lineare (Eschscholtz, 1822) (Dermaptera: Forficulidae).	Arquivos do Instituto Biologico (Sao Paulo) (2010), Volume 77, Number 2, pp. 291-299	936
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Alim, Md. A.; Lim, U.T.	CA 8.3.2	2015	Effects of fenitrothion on *Gryon japonicum* (Hymenoptera: Platygastridae) parasitizing non-viable, refrigerated eggs of *Riptortus pedestris* (Hemiptera: Alydidae)	Journal of Asia-Pacific Entomology (2015), 18 (2), 181-186	77
Biocca, M.; Fanigliulo, R.; Gallo, P.; Pulcini, P.; Pochi, D.	CA 8.3.1	2015	The assessment of dust drift from pneumatic drills using static tests and in-field validation.	Crop Protection, (MAY 2015) Vol. 71, pp. 109-115.	15
BuKeun, C.; Lim, E.; HeungSu, L.; ChungGyoo, P.	CA 8.3.2	2014	Toxicity of several insecticides against *Halyomorpha halys* (Hemiptera: Pentatomidae) and *Gymnosoma rotundatum* (Diptera: Tachinidae).	Korean Journal of Applied Entomology (2014), Volume 53, Number 4, pp. 457-460	60

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Devi, R.; Tambe, V. J.; Srasvankumar, G.; Nage, S. M.	CA 8.3.2	2014	Larvicidal effect of some newer insecticides on *Chrysoperla carnea* (Stephens).	International Journal of Plant Protection (2014), Vol. 7, Nr. 1, pp. 91-95	71
Dumaniya, S. G.; Patel, M. B.; Siddhapara, M. R.	CA 8.3.2	2015	Toxicity of insecticides to *Cryptolaemus montrouzieri* (Mulsant).	Journal of Cotton Research and Development (2015), Vol. 29, Nr. 1, pp. 121-124	39
Goulson, D.	CA 8.3.1	2015	Neonicotinoids impact bumblebee colony fitness in the field; a reanalysis of the UK's food & environment research agency 2012 experiment.	PeerJ, (2015) Vol. 2015, No. 3.	8
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Karthick, K. S.; Kandibane, M.; Kumar, K.	CA 8.3.2	2014	Safety of newer insecticides to natural enemies in the coastal rice ecosystem of Karaikal, U.T. of Puducherry.	Journal of Biopesticides (2014), Volume 7, Number 2, pp. 200-203	65
Kessler S.C; Simcock, K.L.; Softley, S.; Wright, G.A.; Tiedeken, E.J.; Stout, J.C.; Mitchell, J.	CA 8.3.1	2015	Bees prefer foods containing neonicotinoid pesticides.	Nature, (2015 May 7) Vol. 521, No. 7550, pp. 74-6	7
Ko Ko; Liu YuDi; Hou MaoLin; Babendreier, D.; Zhang Feng; Song Kai; Ko, K.; Liu, Y. D.; Hou, M. L.; Zhang, F.; Song, K.	CA 8.3.2	2015	Toxicity of insecticides targeting rice planthoppers to adult and immature stages of *Trichogramma chilonis* (Hymenoptera: Trichogrammatidae).	Journal of Economic Entomology (2015), Volume 108, Number 1, pp. 69-76	43
Megha, R. R.; Basavanagoud, K.; Kulkarni, N. S.	CA 8.3.2	2015	Safety evaluation of some selected insecticides against coccinellids *Cheilomenes sexmaculata* (Fab.) and *Hippodamia variegata* (Goeze).	Journal of Experimental Zoology, India (2015), Vol. 18, Number 1, pp. 315-318	34
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Ohta, I.; Takeda, M.	CA 8.3.2	2015	Acute toxicities of 42 pesticides used for green peppers to an aphid parasitoid, *Aphidius gifuensis* (Hymenoptera: Braconidae), in adult and mummy stages	Applied Entomology and Zoology (2015), 50 (2), 207-212	84
Purdy, J. R.	CA 8.3.1	2014	Concentrations and distribution of Neonicotinoid residues in honeybees (*Apis melifera*) in Ontario, Canada.	Abstracts of Papers American Chemical Society, (AUG 10 2014) Vol. 248, pp. 616-AGRO. Meeting Info.: 248th National Meeting of the American-Chemical-Society (ACS). San Francisco, CA, USA. August 10 -14, 2014	19

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Salahuddin, B.; ur Rahman, H.; Khan, I.; Daud, M. K.	CA 8.3.2	2015	Incidence and management of coconut scale, *Aspidiotus destructor signoret* (Hemiptera: Diaspididae), and its parasitoids on mango (*Mangifera* sp.)	Crop Protection (2015), 74, 103-109	81
Saner, D. V.; Kabre, G. B.; Shinde, Y. A.	CA 8.3.2	2014	Impact of newer insecticides on ladybird beetles (*Menochilus sexmaculatus* L.) in hybrid cotton	Journal of Industrial Pollution Control (2014), 30 (2), 269-271	89
Stamm, M. D.; Enders, L. S.; Donze-Reiner, T. J.; Baxendale, F. P.; Siegfried, B. D.; Heng-Moss, T. M.	CA 8.6.2	2014	Transcriptional response of soybean to thiamethoxam seed treatment in the presence and absence of drought stress	BMC Genomics (2014), 15, 1055/1-1055/27	85
Ugurlu, P.; Unlu, E.; Satar, E.I.	CA 8.2.8	2015	The toxicological effects of thiamethoxam on *Gammarus kischineffensis* (Schellenberg 1937) (Crustacea: Amphipoda).	Environmental toxicology and pharmacology, (2015 Mar) Vol. 39, No. 2, pp. 720-6	1
Whiting, S.A.; Lydy, M.J.	CA 8.3.2	2014	A site-specific ecological risk assessment for corn-associated insecticides.	Integrated environmental assessment and management, (2014 Dec 30).	35
Yao, F.; Zheng, Y.; Zhao, J.; He, Y.; Weng, Q.; Desneux, N.	CA 8.3.2	2015	Lethal and sublethal effects of thiamethoxam on the whitefly predator *Serangium japonicum* (Coleoptera: Coccinellidae) through different exposure routes.	Chemosphere, (2015 Jun) Vol. 128, pp. 49-55.	3
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Andrew, D.; Brewer, L.; Cutler, G. C.; Scott-Dupree, C. D.; Sultan, M.; McFarlane	CA 8.3.1	2013	Large-scale field study examining potential impacts on honey bees of exposure to clothianidin seed-treated canola.	Abstracts of Papers American Chemical Society, (SEP 8 2013) Vol. 246, pp. 149-AGRO.	191
Anonymous	CA 8.3.1	2008	Pesticide penalty	Ecologist. Vol. 38, no. 9, pp. 11-11. Nov. 2008.	714
Aramaki, H.	CA 8.7	2014	Foreword.	Biological and Pharmaceutical Bulletin, (2014) Vol. 37, No. 9, pp. 1429	146
Jacobs, A.; Bischoff, G.; Buettner, C.; Pestemer, W.	CA 8.3.1	2010	Residue behaviour of selected pesticides in potatoes and bees. Rueckstandsverhalten von ausgewaehlten Pflanzenschutzmitteln in/auf Kartoffelpflanzen und Bienen.	Julius-Kuehn-Archiv (2010), Number 424, 34 p. ISSN: 1868-9892	418
Bailey, J.; Scott-Dupree, C.; Harris, R.; Tolman, J.; Harris, B.	CA 8.3.1	2005	Contact and oral toxicity to honey bees (*Apis mellifera*) of agents registered for use for sweet corn insect control in Ontario, Canada.	Apidologie (2005), Volume 36, Number 4, pp. 623-633	519

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Bischoff, G.	CA 8.3.1	2010	Chemical bee investigation - details of the new procedure and selected results since 2008. Chemische Bienenuntersuchung - Details des neuen Verfahrens und ausgewaehlte Ergebnisse seit 2008.	Julius-Kuehn-Archiv (2010), Number 428	397
Bondarenko, S.; Rose, A.; Ansolabehere, M.; Allen, R.	CA 8.3.1	2014	Clothianidin residues in pollen and nectar of cucurbits following different use patterns.	Abstracts of Papers American Chemical Society, (AUG 10 2014) Vol. 248, pp. 602-AGRO.	180
Cerevkova, A.; Cagan, L.	CA 8.7	2013	The influence of Western corn rootworm seed coating and granular insecticides on the seasonal fluctuations of soil nematode communities in a maize field.	Helminthologia (2013), Vol. 50, Nr. 3, pp. 205-214	306
Cerevkova, A.; Cagan, L'.	CA 8.7	2014	Influence of insecticides to soil nematode communities	Journal of Nematology, (JUN 2014) Vol. 46, No. 2, pp. 143.	185
Chauzat, M..; Martel, A.; Blanchard, P.; Clement, M.; Schurr, F.; Lair, C.; Ribiere, M.; Wallner, K.; Rosenkranz, P.; Faucon, J.	CA 8.3.1	2010	A case report of a honey bee colony poisoning.	Journal of Apicultural Research, (2010) Vol. 49, No. 1, Sp. Iss. SI, pp. 113-115	220
Cutler G C.; Scott-Dupree C.D.	CA 8.3.1	2007	Exposure to clothianidin seed-treated canola has no long-term impact on honey bees.	Journal of economic entomology, Vol. 100, No. 3, pp. 765-72	121
Cutler G Christopher; Scott-Dupree Cynthia D; Sultan Maryam; McFarlane Andrew D; Brewer Larry	CA 8.3.1	2014	A large-scale field study examining effects of exposure to clothianidin seed-treated canola on honey bee colony health, development and overwintering success.	PeerJ, Vol. 2, pp. e652	20
Cutler, L. G.; Scott-Dupree, C. D.; Chalmers, A.	CA 8.3.1	2006	An Investigation of Potential Long-Term Impact of Clothianidin Seed-Treated Canola on Honey Bees, *Apis Mellifera*	Conference: 27th Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC 2006), Montreal, Quebec (Canada), 3 Nov 2006 - 9 Nov 2006	715
de Perre C.; Murphy T.M.; Lydy M.J.	CA 8.2.8	2015	Fate and effects of clothianidin in fields using conservation practices.	Environmental toxicology and chemistry / SETAC, (2015 Feb) Vol. 34, No. 2, pp. 258-65	3
Dyer, D. G.; Xu, T.; Bondarenko, S.; Allen, R.	CA 8.3.1	2014	Clothianidin: Potential accumulation/ bioavailability in soil and in corn and canola bee-relevant matrices.	Abstracts of Papers American Chemical Society, (AUG 10 2014) Vol. 248, pp. 606-AGRO.	179
Fell, R.	CA 8.3.1	2013	Honey bee colony health, bee decline, and pesticides.	Abstracts of Papers American Chemical Society, (SEP 8 2013) Vol. 246, pp. 144-AGRO.	192

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Feltham, H.; Park, K.; Goulson, D.	CA 8.3.1	2014	Field realistic doses of pesticide imidacloprid reduce bumblebee pollen foraging efficiency	Ecotoxicology, (APR 2014) Vol. 23, No. 3, pp. 317-323	724
Fischer, .J; Muller, T.; Grunewald, B.; Spatz, A.; Greggers, U.; Menzel, R.	CA 8.3.1	2014	Neonicotinoids interfere with specific components of navigation in honeybees.	PloS one, (2014) Vol. 9, No. 3, pp. e91364	34
Friessleben, R.; Schad, T.; Schmuck, R.; Schnier, H.; Schoening, R.; Nikolakis, A.	CA 8.3.1	2010	An effective risk management approach to prevent bee damage due to the emission of abraded seed treatment particles during sowing of neonicotinoid treated maize seeds	Aspects of Applied Biology (2010), Nr. 99, pp. 277-282, 3 refs. ISSN: 0265-1491	401
Georgiadis, P. T.; Pistorius, J.; Heimbach, U.	CA 8.3.1	2011	Dust in the wind - drift of dust containing insecticides - a risk for honey bees (*Apis mellifera* L.)? Dust in the wind - Abdrift insektizidhaltiger Staeube - ein risiko fuer Honigbienen (Apis mellifera L.)?	Julius-Kuehn-Archiv (2011), Number 430, pp. 15-19, 2 refs. ISSN: 1868-9892	394
Georgiadis, P. T.; Pistorius, J.; Heimbach, U.	CA 8.3.1	2010	Gone with the wind - drift of abrasive dust from seed treatments - a risk for honey bees (*Apis mellifera* L.)? Vom Winde verweht - Abdrift von Beizstaeuben - ein Risiko fuer Honigbienen (*Apis mellifera* L.)?	Julius-Kuehn-Archiv (2010), Number 424, 33 p., 1 refs. ISSN: 1868-9892	419
Georgiadis, P.; Pistorius, J.; Heimbach, U.; Staehler, M.	CA 8.3.1	2014	Manual application of insecticidal dust in semi-field experiments with honeybees	Proceedings: International conference on the German diabrotica research program. pp. 102. (2014) Tagungsband: Internationale Fachtagung zum Forschungsprogramm uber den Westlichen Maiswurzelbohrer. pp. 102. (2014)	170
Gibbons D.; Morrissey C.; Mineau P.	CA 8.7	2015	A review of the direct and indirect effects of neonicotinoids and fipronil on vertebrate wildlife.	Environmental science and pollution research international, (2015 Jan) Vol. 22, No. 1, pp. 103-18	7
Girolami, V.; Marzaro, M.; Vivan, L.; Mazzon, L.; Greatti, M.; Giorio, C.; Marton, D.; Tapparo, A.	CA 8.3.1	2012	Fatal powdering of bees in flight with particulates of neonicotinoids seed coating and humidity implication	Journal of Applied Entomology (2012), 136(1-2), 17-26	600
Goulson, D.	CA 8.7	2013	An overview of the environmental risks posed by neonicotinoid insecticides.	Journal of Applied Ecology (2013), Vol. 50, Nr. 4, pp. 977-987	300

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Hayasaka, D.; Suzuki, K.; Nomura, T.; Nishiyama, M.; Nagai, T.; Sanchez-Bayo, F.; Goka, K.	CA 8.2.8	2013	Comparison of acute toxicity of two neonicotinoid insecticides, imidacloprid and clothianidin, to five cladoceran species.	Journal of Pesticide Science (2013), Volume 38, Number 1/2, pp. 44-47	317
Hoshi, N.; Hirano, T.; Omotehara, T.; Tokumoto, J.; Umemura, Y.; Mantani, Y.; Tanida, T.; Warita, K.; Tabuchi, Y.; Yokoyama, T.; Kitagawa,H.	CA 8.1.1.3	2014	Insight into the mechanism of reproductive dysfunction caused by neonicotinoid pesticides.	Biological & pharmaceutical bulletin, (2014) Vol. 37, No. 9, pp. 1439-43	17
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Kimura, K.; Yoshiyama, M.; Saito, K.; Nirasawa, K.; Ishizaka, M.	CA 8.3.1	2014	Examination of mass honey bee death at the entrance to hives in a paddy rice production district in Japan: the influence of insecticides sprayed on nearby rice fields.	Journal of Apicultural Research, (2014) Vol. 53, No. 5, pp. 599-606	181
Knauer, K	CA 8.3.1	2010	Post registration monitoring of effects of Clothianidin on bee colonies	20th Annual Meeting of the Europe branch of the Society of Environmental Toxicology and Chemistry (SETAC 2010), Palacio de Congresos y Exposiciones - FIBES, Seville, 23 May 2010-27 May 2010	713
Kunz, N.; Dietzsch, A.; Frommberger, M.; Wirtz, I.; Staehler, M.; Frey, E.; Illies, I.; Dyrba, W.; Alkassab, A.; Pistorius, J.	CA 8.3.1	2014	Neonicotinoids and bees: effects on honeybees, bumblebees and solitary bees in oilseed rape grown from Clothianidin-treated seed.	Berichte aus dem Julius Kuehn-Institut (2014), Nr. 177, 18 p. ISSN: 1866-590X	292
Larson J.L.; Redmond C.T.; Potter D.A.	CA 8.7	2012	Comparative impact of an anthranilic diamide and other insecticidal chemistries on beneficial invertebrates and ecosystem services in turfgrass.	Pest management science, (2012 May) Vol. 68, No. 5, pp. 740-8	67
Larson J.L.; Redmond C.T.; Potter D.A.	CA 8.3.1	2013	Assessing insecticide hazard to bumble bees foraging on flowering weeds in treated lawns.	PloS one, Vol. 8, No. 6, pp. e66375	60
Larson, J. L.; Redmond, C. T.; Potter, D. A.	CA 8.3.1	2014	Impacts of a neonicotinoid, neonicotinoid-pyrethroid premix, and anthranilic diamide insecticide on four species of turf-inhabiting beneficial insects.	Ecotoxicology (London, England), (2014 Mar) Vol. 23, No. 2, pp. 252-9	25
Lopez-Antia, A.; Ortiz-Santaliestra, M. E.M.; Mateo, R.; Ortiz-Santaliestra, M.E.M; Mougeot, F.	CA 8.1.1.3	2015	Imidacloprid-treated seed ingestion has lethal effect on adult partridges and reduces both breeding investment and offspring immunity	Environmental Research, (JAN 2015) Vol. 136, pp. 97-107	721

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Lu, C.S.; Warchol, K.M.; Callahan, R.A.	CA 8.3.1	2014	Sub-lethal exposure to neonicotinoids impaired honey bees winterization before proceeding to colony collapse disorder.	Bulletin of Insectology (2014), Volume 67, Number 1, pp. 125-130	276
Matsumoto, T.	CA 8.3.1	2013	Short and long-term effects of necotinoid application in rice fields, on the mortality and colony collapse of honeybees (*Apis mellifera*)	Journal of Apicultural Science, (2013) Vol. 57, No. 2, pp. 21-35	196
Matsumoto, T.	CA 8.3.1	2013	Reduction in homing flights in the honey bee *Apis mellifera* after a sublethal dose of neonicotinoid insecticides.	Bulletin of Insectology (2013), Volume 66, Number 1, pp. 1-9	321
Moffat, C.; Pacheco, J. G.; Sharp, S.; Samson, A. J.; Bollan, K.A.; Huang, J.; Buckland, S.T.; Connolly, C. N	CA 8.3.1	2015	Chronic exposure to neonicotinoids increases neuronal vulnerability to mitochondrial dysfunction in the bumblebee (*Bombus terrestris*).	FASEB journal : official publication of the Federation of American Societies for Experimental Biology, (2015 May) Vol. 29, No. 5, pp. 2112-9	10
Nadaf, H. A.; Yadav, G. S.; Kaushik, H. D.; Sharma, S. K.	CA 8.3.1	2013	Toxicity of new molecules of insecticides against honeybee, *Apis mellifera* L.	Trends in Biosciences (2013), Volume 6, Number 4, pp. 445-447.	302
Neal, K.	CA 8.3.1	2013	Is planting corn killing bees?	Abstracts of Papers, 246th ACS National Meeting & Exposition, Indianapolis, IN, United States, September 8-12, 2013 (2013)	572
Nikolakis, A.; Chapple, A.; Friessleben, R.; Neumann, P.; Schad, T.; Schmuck, R.; Schnier, H. F.; Schnorbach, H. J.; Schoening, R.; Maus, C.	CA 8.3.1	2009	An effective risk management approach to prevent bee damage due to the emission of abraded seed treatment particles during sowing of seeds treated with bee toxic insecticides.	Julius-Kuehn-Archiv (2009), Number 423, pp. 132-148, 2 refs. ISSN: 1868-9892	442
Pistorius, J.; Bischoff, G.; Heimbach, U	CA 8.3.1	2009	Bee poisoning by abrasion of active substances from seed treatment of maize during seeding in spring 2008. Bienenvergiftung durch Wirkstoffabrieb von Saatgutbehandlungsmitteln waehrend der Maisaussaat im Fruehjahr 2008.	Journal fuer Kulturpflanzen (2009), Volume 61, Number 1, pp. 9-14	457
Pistorius, J; Bischoff, G; Heimbach, U; Staehler, M;	CA 8.3.1	2009	Bee poisoning incidents in Germany in spring 2008 caused by abrasion of active substance from treated seeds during sowing of maize.	Julius-Kuehn-Archiv (2009), Number 423, pp. 118-126, 9 refs. ISSN: 1868-9892	445

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Pohorecka, K.; Skubida, P.; Semkiw, P.; Miszczak, A.; Teper, D.; Sikorski, P.; Zagibajlo, K.; Skubida, M.; Zdanska, D.; Bober, A.	CA 8.3.1	2013	Effects of exposure on honey bee colopnies to necotinoid seed-treated maize crops.	Journal of Apicultural Science, (2013) Vol. 57, No. 2, pp. 199-208	189
Reetz, J. E.; Zuehlke, S.; Spiteller, M.; Wallner, K.	CA 8.3.1	2011	Neonicotinoid insecticides translocated in guttated droplets of seed-treated maize and wheat: a threat to honeybees?	Apidologie, Volume 42, Number 5, pp. 596-606	367
Rundlof M; Andersson GKS; Bommarco R; Fries I; Hederstrom V; Herbertsson L; Jonsson O; Klatt BK; Pedersen TR; Yourstone J; Smith HG	CA 8.3.1	2015	Seed coating with a neonicotinoid insecticide negatively affects wild bees.	Nature, Vol. 521, No. 7550, pp. 77-80	12
Sanchez-Bayo, F.	CA 8.3.1	2014	The trouble with neonicotinoids.	Science, (14 Nov 2014) Vol. 346, No. 6211, pp. 806-807	147
Schneider, C.W.; Tautz, J.; Grunewald, B.; Fuchs, S.	CA 8.3.1	2012	RFID tracking of sublethal effects of two neonicotinoid insecticides on the foraging behavior of *Apis mellifera*.	PloS one, (2012) Vol. 7, No. 1, pp. e30023	61
Scholer, J.; Krischik, V.	CA 8.3.1	2014	Chronic exposure of imidacloprid and clothianidin reduce queen survival,foraging, and nectar storing in colonies of *Bombus impatiens*.	PloS one, (2014) Vol. 9, No. 3, pp. e91573	33
Scott-Dupree, C.D.; Conroy, L.; Harris, C.R.	CA 8.3.1	2009	Impact of currently used or potentially useful insecticides for canola agroecosystems on *Bombus impatiens* (Hymenoptera: Apidae), *Megachile rotundata* (Hymentoptera: egachilidae), and *Osmia lignaria* Hymenoptera: Megachilidae).	Journal of economic entomology, (2009 Feb) Vol. 102, No. 1, pp. 177-82	105
Sgolastra, F; Renzi, T; Draghetti, S; Medrzycki, P; Lodesani, M; Maini, S; Porrini, C	CA 8.3.1	2012	Effects of neonicotinoid dust from maize seed-dressing on honey bees.	Bulletin of Insectology (2012), Vol. 65, Number 2, pp. 273-280	337
So, B. H.; Kim, H. M.	CA 8.7	2010	Two Cases of Severe Neonicotinoid Intoxication.	Clinical Toxicology, (JUL 2010) Vol. 48, No. 6, pp. 611.	216
Staehler, M.; Heimbach, U.; Schwabe, K.; Pistorius, J.; Georgiadis, P. T.	CA 8.3.1	2012	Ecotoxicokinetics of clothianidin on honeybees in open field - first results. Zur Oekotoxikokinetik von Clothianidin auf Bienen im Freiland – erste Ergebnisse.	Julius-Kuehn-Archiv (2012), Number 438, pp. 466-467. ISSN: 1868-9892	333

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Tokumoto, J.; Danjo, M.; Kobayashi, Y.; Kinoshita, K.; Omotehara, T.; Tatsumi, A.; Hashiguchi, M.; Sekijima, T.; Kamisoyama, H.; Yokoyama, T.; Kitagawa, H.; Hoshi, N.	CA 8.1.1.3	2013	Effects of exposure to clothianidin on the reproductive system of male quails.	The Journal of veterinary medical science / the Japanese Society of Veterinary Science, (2013) Vol. 75, No. 6, pp. 755-60	49
Trenkle, A.	CA 8.3.1	2009	Harm to bees in 2008 in Rheintal - analysis, causes, consequences	VDLUFA-Schriftenreihe (2009), 65 (Pt. 2, Produktivitaet und Umweltschonung in der Landwirtschaft: ein Widerspurcht?), 22-41.	641
Wallner, K.;	CA 8.3.1	2009	Sprayed and seed dressed pesticides in pollen, nectar and honey of oilseed rape.	Julius-Kuehn-Archiv (2009), Number 423, pp. 152-153. ISSN: 1868-9892	438
Wang K.; Pang S.; Mu X.; Qi S.; Li D.; Cui F.; Wang C.	CA 8.4	2015	Biological response of earthworm, *Eisenia fetida*, to five neonicotinoid insecticides.	Chemosphere, (2015 Aug) Vol. 132, pp. 120-6	6
Wang Y.; Wu S.; Chen L.; Wu C.; Yu R.; Wang Q.g; Zhao X.	CA 8.4	2012	Toxicity assessment of 45 pesticides to the epigeic earthworm Eisenia fetida.	Chemosphere, (2012 Jul) Vol. 88, No. 4, pp. 484-91	70
Wang, Y.; Cang, T.; Zhao, X.; Yu, R.; Chen,L. .; Wu, .; Wang, Q.	CA 8.4	2012	Comparative acute toxicity of twenty-four insecticides to earthworm, *Eisenia fetida*.	Ecotoxicology and Environmental Safety, (1 May 2012) Vol. 79, pp. 122-128	158
Whiting, S.A.; Lydy, M.J.	CA 8.2.8	2014	A site-specific ecological risk assessment for corn-associated insecticides.	Integrated environmental assessment and management, (2014 Dec 30).	35
Not found in search (but referenced)					
Bose S, Nath S, Sahana SS.	CA 8.2.2	2011	Toxic impact of thiamethoxam on the growth performance and liver protein concentration of a freshwater fish *Oreochromis niloticus* (Trewavas).	Ind J Fund Appl Life Sci 2011;1:274 – 80	n/a
Food & Environment Research Agency	CA 8.3.1	2013	Effects of neonicotinoid seed treatments on bumble bee colonies under field conditions	Food & Environment Research Agency; Available at http://FERA.co.uk/ccss/documents/defraBumbleBeeReportPS2371V4a.pdf	n/a
Mineau, P., Palmer, C.,	CA 8.1	2013	Neonicotinoid insecticides and birds: the impact of the nation's most widely used insecticides on birds.	American Bird Conservancy	n/a

Author(s)	CA data point number	Year	Title	Source	Ref. ID
Riaz, M.A.; Chandor-Proust, A.; Dauphin-Villemant, C.; Poupardin, R.; Jones, C.M.; Strode, C.; Régent-Kloeckner, M.; David, J.P.; Reynaud, S.	CA 8.2.8/08	2013	Molecular mechanisms associated with increased tolerance to the neonicotinoid insecticide imidacloprid in the dengue vector *Aedes aegypti.*	Aquatic Toxicology 126 (2013) 326– 337.	n/a
Sánchez-Bayo, F., Tennekes, H.A., Goka, K.	CA 8.3.1	2013	Impact of systemic insecticides on organisms and ecosystems	Insecticides — Development of Safer and More Effective Technologies	n/a

A detailed review of the full-text documents identified in Table 9.6-2 resulted in the additional exclusion of the following studies from the dossier.

Table 9.6-4: List of references excluded following detailed review listed by data point number

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
Initial search						
CA 8.1.2.1	Bednarska, A. J.; Edwards, P.; Sibly, R.; Thorbek, P.	2013	A toxicokinetic model for thiamethoxam in rats: implications for higher-tier risk assessment.	Ecotoxicology (2013) 22:548–557	This article describes how an ADME study on rats can be used to parameterize a body burden model which predicts body residue levels after exposures to a LD_{50} dose either as a bolus or eaten at different feeding rates and how its results can be used for risk assessments. As no new data is presented and a body burden model is not used to refine the risk to mammals, this has been considered as not relevant for this review.	61
CA 8.1.2.2	Ivanova, R.	2013	Study on the effect of Actara and Confidor on rabbits submitted to chronic intoxication.	Agrarni Nauki (2013), Volume 5, Number 14, pp. 253-257, 15 refs. ISSN: 1313-6577	Does not fulfil criteria 8 (a quantitative relationship exists between reported endpoints and risk assessment endpoints of growth, mortality, behavior and/or reproduction). In this study the effect of Actara on rabbits in chronic intoxication by biochemical (blood) assays (blood glucose, total protein, cholesterol, ALP, AST, ALT), and ethologic monitoring was investigated. Reported endpoints were blood glucose, AST, ALP, and total protein, which cannot be related to usual risk assessment endpoints. Therefore this reference is considered not relevant for this review.	581
CA 8.1.4	Berny, P.; Mastain, O.; Decors, A.; Poulsen, V.; Moinet, M.; Dunoyer, C.	2010	The SAGIR network in France: A 40-year active and passive toxicovigilance scheme for pesticide poisoning in wildlife.	Toxicology Letters, (17 Jul 2010) Vol. 196, Supp. 1, pp. S322	This article is an abstract published from a conference (12th International Congress of Toxicology). It is not sufficiently detailed and does not contain any data. Therefore this reference is not considered relevant.	284

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.2.1	Elenka, G.; Stoyanova, S.; Velcheva, I.; Yanchevaa, V.	2014	Histopathological Alterations in Common Carp (*Cyprinus carpio* L.) Gills Caused by Thiamethoxam.	Braz. Arch. Biol. Technol. v.57 n.6: pp. 991-996	Does not fulfil criteria 1 (well defined test material including purity/content). Does not fulfil criteria 9 (Sufficient experimental information provided to substantiate and evaluate whether the study conclusions and endpoints are robust). Common carp (*Cyprinus carpio*) were exposed to three different thiamethoxam concentrations and histopathological changes in the gill epithelium were investigated. No further information on the test item, was given and duration of the exposure is not clear. The primary endpoint was histopathological changes in the gill epithelium and no detailed findings on mortality were reported. Therefore, this has been considered as not relevant for this review.	312
CA 8.2.1	Fodor, M.	2012	The eco-toxicological influence of the pesticide/ insecticide thiamethoxam over some varieties of *Carassius auratus gibelio* Bloch.	Analele Universitatii din Craiova - Biologie, Horticultura, Tehnologia Prelucrarii Produselor Agricole, Ingineria Mediului (2012), Volume 17, pp. 885-890	Does not fulfil criteria 1 (well defined test material including purity/content). Does not fulfil criteria 4 (Test organism are not previously exposed to the test material or other contaminants). Does not fulfil criteria 5 (Several dose levels tested, at least 3, to establish a dose-response). Does not fulfil criteria 9 (Sufficient experimental information provided to substantiate and evaluate whether the study conclusions and endpoints are robust). Thiamethoxam was tested with a carp species (*Carassius auratus gibelio Bloch)* in a 96h study. It is not clear where the test organism were obtained from. No information on the test item was given. Only one concentration was tested, therefore ECx values could not be calculated. Also, only limited test methodology was presented. The primary endpoint was effect on respiration and no detailed findings on mortality were reported. Therefore, this has been considered as not relevant for this review.	673

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.2.1	Kumar, V. A.; Janaiah, C.; Venkateshwarlu, P.	2010	Effect of thiamethoxam alters serum biochemical parameters in *Channa punctatus* (Bloch).	Asian Journal of Bio Science (2010), Volume 5, Number 1, pp. 106-110	Does not fulfil criteria 4 (Test organism are not previously exposed to the test material or other contaminants). Does not fulfil criteria 5 (Several dose levels tested, at least 3, to establish a dose-response). The change of the serum biochemical parameters of fish, *Channa punctuates,* were measured following a 96h exposure with a sublethal concentration of thiamethoxam. The primary endpoint was effect on gallbladder histopathology and no apical endpoints were reported. Therefore, this has been considered as not relevant for this review.	962
CA 8.2.1	V. Kumar, V. Anil; Janaiah, C.; Venkateshwarlu, P.	2010	Impact of thiamethoxam on proteases, aminases and glutamate dehydrogenase in some tissues of freshwater fish, *Channa punctatus* (Bloch).	Bioscan (2010), 5 (1), 135-137	Does not fulfil criteria 4 (Test organism are not previously exposed to the test material or other contaminants). Does not fulfil criteria 5 (Several dose levels tested, at least 3, to establish a dose-response). Thiamethoxam was tested with *Channa punctatus* in a 96h study and sublethal effects on the tissues (liver, brain, gill, muscle and kidney) enzyme parameters were analysed. It is not clear where the test organism were obtained, as they were “procured from a local market”. Only one concentration was tested, therefore ECx values could not be calculated. The primary endpoint was effect on enzyme activity and no mortality data were reported. Therefore, this has been considered as not relevant for this review.	1660

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.2.1	Kumar, V.; Anil, V.; Venkateshwarlu, P.; Janaiah, C.	2008	Exposure of sublethal concentration of thiamethoxam alters serum enzymes in fresh water fish, *Channa punctatus* (Bloch).	Bulletin of Pure and Applied Sciences, Section A: Zoology (2008), 27A (2), 131-137	Does not fulfil criteria 1 (well defined test material including purity/content). Does not fulfil criteria 4 (Test organism are not previously exposed to the test material or other contaminants). Does not fulfil criteria 5 (Several dose levels tested, at least 3, to establish a dose-response). Thiamethoxam was tested with *Channa punctatus* in a 96h study and sublethal effects on enzyme activities were analysed. No information on the test item was given. It is not clear where the test organism were obtained, as they were "procured from a local market". Only one concentration was tested, therefore ECx values could not be calculated. The primary endpoint was effect on enzyme activity and no mortality data were reported. Therefore, this has been considered as not relevant for this review.	1695

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.2.2	Nath, S.; Bose, S. and Kundu, I.	2012	Effects of Thiamethoxam on Liver Protein of *Oreochromis niloticus* (Trewavas).	Proc Zool Soc (July-Dec 2012) 65(2):118–120	Does not fulfil criteria 1 (well defined test material including purity/content). Does not fulfil criteria 4 (Test organism are not previously exposed to the test material or other contaminants). Does not fulfil criteria 9 (Sufficient experimental information provided to substantiate and evaluate whether the study conclusions and endpoints are robust). *Oreochromis niloticus* were exposed to Thiamethoxam 25% WG for 7 or 14 days and the effects on protein levels in the liver were examined. No information on the test item was given. It is not clear where the test organism were obtained, as they were “collected from a local market”. Experimental information is limited to the nature of the article (short communication). The primary endpoint was effect on liver proteins levels and no mortality data were reported. Therefore, this has been considered as not relevant for this review.	745
CA 8.2.2	Roy, B. and Nath, S.	2011	Some haematological investigations on *Oreochromis niloticus* (Trewavas) following exposure to Thiamethoxam.	Acta Zoologica Lituanica (2011), Volume 21, Number 4, pp. 301-305	Does not fulfil criteria 1 (well defined test material including purity/content). Does not fulfil criteria 4 (Test organism are not previously exposed to the test material or other contaminants). *Oreochromis niloticus* were exposed to Thiamethoxam for 7 or 14 days and the effects on haematological parameters were examined. No information on the test item was given. It is not clear where the test organism were obtained, as they were “collected from a local market”. The primary endpoint was effect on haematological parameters and no mortality data were reported. Therefore, this has been considered as not relevant for this review.	821

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.2.2.1	Padilla S., Corum D., Padnos B., Hunter D.L., Beam A., Houck K.A., Sipes N., Kleinstreuer N., Knudsen T., Dix D.J. and Reif D.M.	2012	Zebrafish developmental screening of the ToxCast™ Phase I chemical library.	Reproductive Toxicology (2012), 33 (2), 174-187.	A 6 day embryo toxicity test was conducted in which the effects of thiamethoxam and clothianidin on zebra fish were evaluated. Test methodology similar to OECD 236 (Fish Embryo Acute Toxicity Test) was used. Embryos were maintained in a 10% Hank's solution in 96-well plates. AC_{50} for thiamethoxam was 74.7322 µM (equivalent to 21.8 mg/L). An AC_{50} was not able to be calculated for clothianidin. The regulatory data suggests that zebrafish embryos show similar toxicity as the species tested in the early life stage studies. This study type is not a data requirement. Therefore, this study has been considered as not relevant for this review.	1604

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.2.4.2 8.3.2	Lee, K. Y.; Kim, Y. H.; Lee, J. W.; Song, M. K.; Nam, S. H.	2008	Toxicity of firefly, *Luciola lateralis* (Coleoptera: Lampyridae) to commercially registered insecticides and fertilizers.	Korean Journal of Applied Entomology (2008), Volume 47, Number 3, pp. 265-272	Does not fulfil criteria 5 (Several dose levels tested, at least 3, including a negative control.) Does not fulfil criteria 10 (Study condition should not differ significantly from recommended protocols). The formulation Actara was tested with eggs, 3rd stage larva and adults of the Korean firefly, *Luciola lateralis*. Only one concentration was tested, so LC_{50} values could not be determined. Test rates and results were calculated in ppm of active ingredient (100 ppm thiamethoxam; 100 mg a.s./L). Eggs were exposed in 50mL of test solution for 24 hours. They were then removed from the test solution and hatching success was recorded over 20 days. 33% hatching success compared to control was observed. Larvae were exposed in 50mL of test solution for 48 hours and mortality was recorded. 87% mortality was observed. Adults were exposed via a direct overspray method and mortality was recorded after 24 hours. 100% mortality was observed. While direct overspray is an exposure route is environmentally relevant, it is not considered in testing conducted for the regulatory Tier I or II risk assessment for non-target arthropods. However, this exposure route would be accounted for in regulatory higher tier field studies. There are 5 thiamethoxam foliar application field studies that examine effects on and recovery of full fauna populations. Additionally, according to the Escort II guidance document, the endpoints reported should be based on the application rate (e.g. g/ha) not concentration (e.g. ppm). Therefore this study is considered as supplemental information only and does not alter the existing risk assessment.	1198

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.2.5.2	Stark, J.D.	2004	How closely do acute lethal concentration estimates predict effects of toxicants on populations?	Integrated Environmental Assessment and Management Volume 1, Number 2, pp. 109–1	Does not fulfil criteria 1 (well defined test material including purity/ content). Does not fulfil criteria 5 (Several dose levels tested, at least 3, including a negative control.) Does not fulfil criteria 10 (Study condition should not differ significantly from recommended protocols). The formulation Actara was tested with *Daphnia pulex* in a 10d population/growth study. After a 10d exposure to a nominal concentration of 41 mg/L Actara, there was 0.5% of the population remaining compared to control. No information on the test item was given. Only one concentration was tested and not quantified, therefore a NOEC or ECx could not be calculated. The test duration was 10 days which is not an adequate chronic toxicity test period according to recommended standard population protocols. Additionally, there is ample regulatory references for *Daphnia* species and they indicate that *Daphnia* sp. do not drive the risk assessment. Therefore, this has been considered as not relevant for this review.	255
CA 8.2.8	Anderson, J.C.; Dubetz, C.; Palace, V.P.	2015	Neonicotinoids in the Canadian aquatic environment: A literature review on current use products with a focus on fate, exposure, and biological effects.	Science of the Total Environment 505 (2015) 409 – 422	This article is an evaluation of neonicotinoids in the Canadian aquatic environment, with a focus on imidacloprid. Only few data on thiamethoxam and clothianidin are reported. A review of toxic endpoints for aquatic invertebrates including open literature, industry studies and government reports was done. One open literature reference (Bose et al, 2011) on the effects of thiamethoxam on fish growth was not found in the literature search, as the journal is not indexed. This article was obtained and reviewed for relevancy. This review is included below.	13

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.2.8	Morrissey, C.A.; Mineau, P.; Devries, J. H.; Sanchez-Bayo, F.; Liese, M.; Cavallaro, M. C.; Liber,K.	2015	Neonicotinoid contamination of global surface waters and associated risk to aquatic invertebrates: A review.	Environment International 74 (2015) 291 - 303	This article is a summary of the available data on different neonicotinoid concentrations in surface waters and comparison with data from laboratory, field and mesocosm studies. A review of toxic endpoints for aquatic invertebrates including industry studies and government reports was done. Three open literature references were not found in the literature search. Two of the articles (Mineau and Palmer, 2013; Sánchez-Bayo et al, 2013) were assessed as not relevant. These reviews are included below. The article by Riaz et al, 2013 only indexed the chemical name imidacloprid. This study was reviewed for relevancy and considered relevant. Therefore it has been included in the list of relevant articles in Table 9.6-5 below.	262
CA 8.2.8	Smalling,K.L; Reeves, R.; Muth, E.; Vandever,M. Battaglin, W. A.; Hladik, M.L., Pierce, C.L.	2015	Pesticide concentrations in frog tissue and wetland habitats in a landscape dominated by agriculture.	Science of the Total Environment 502 (2015) 80 – 90	The objective of this study was to determine if restored wetlands in an agricultural landscape provide similar quality habitat for amphibians as adjacent reference wetlands. Occurrence and distribution of contaminants of complex mixtures of pesticides (including thiamethoxam) were investigated in water, sediment and amphibian tissues. As the occurrence of thiamethoxam cannot be related directly to any application, this has been considered as not relevant for this review.	263

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.2.8	Păunescu, A.; Ponepal, C.M.; Drăghici,O.; Marinescu, Al. G.	2010	The influence of Reldan 40EC and Actara 25WG insecticides upon gall-bladder structure in *Rana (Pelophylax) ridibunda.*	Lucrări ştiinţifice USAMVB, Seria B, vol. LIV, 2010	Does not fulfil criteria 2 (Number of animals per group are sufficient to establish a statistical significance.) Does not fulfil criteria 4 (Test organism are not previously exposed to the test material or other contaminants). Does not fulfil criteria 6 (Exposure route is environmentally relevant). The histopathology on the gall-bladder in frog *Rana (Pelophylax) ridibunda* was determined by light microscopy after thiamethoxam exposure. Wild caught frogs were used and no detailed information on the collection site was reported, therefore previous exposure to any contaminants cannot be excluded. Test material was administered by intraperitoneal injection, which is not an environmentally relevant exposure route. No information on how many animals were tested. The primary endpoint was effect on gallbladder histopathology and no apical endpoints were reported. Therefore, this has been considered as not relevant for this review.	910

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.2.8	Paunescu, A.; Ponepal, C. M; Octavian, D.M.; Gabriel, A.	2009	Research on the changes of some physiological parameters in *Rana ridibunda* under the action of the Actara 25WG insecticide.	Annals Food Science and Technology (2009), Volume 10, Number 2, pp. 644-647	Does not fulfil criteria 2 (Number of animals per group are sufficient to establish a statistical significance.) Does not fulfil criteria 4 (Test organism are not previously exposed to the test material or other contaminants). Does not fulfil criteria 6 (Exposure route is environmentally relevant). The effect of Actara 25WG on physiological parameters in the frog *Rana (Pelophylax) ridibunda* was determined. It is not reported where the frogs were obtained from; therefore previous exposure to any contaminants cannot be excluded. Test material was administered by intraperitoneal injection, which is not an environmentally relevant exposure route. The primary endpoint was effect on haematological parameters and no apical endpoints were reported. Therefore, this has been considered as not relevant for this review.	1041

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.2.8	Minakshi, R.; Mahajan, A. Y.	2013	Effect of thiamethoxam on oxygen consumption of the freshwater bivalve, *Lamellidens marginalis* (Lamarck).	The Bioscan 8(2): 469-472	Does not fulfil criteria 1 (well defined test material including purity/content). Does not fulfil criteria 4 (Test organism are not previously exposed to the test material or other contaminants). Does not fulfil criteria 5 (Several dose levels tested, at least 3, including a negative control). Does not fulfil criteria 9 (Sufficient experimental information provided to substantiate and evaluate whether the study conclusions and endpoints are robust). The effects of thiamethoxam on the oxygen consumption of freshwater bivalves was evaluated in acute and chronic tests. No information on the test item was given. The test organism was collected from the wild and limited information on the collection site was provided; therefore it cannot be excluded that they were previously exposed to pesticides. Only one concentration for acute and one for chronic toxicity was tested each; therefore NOEC and ECx values could not be calculated. Only limited information on study conditions (no information on temperature, medium, etc.) are reported. The primary endpoint was effect on respiration and no findings on mortality or growth were reported. Therefore, this has been considered as not relevant for this review.	1551
CA 8.2.8	Brock, T.C.M. and Van Wijngaarden, R.P.A.	2012	Acute toxicity tests with *Daphnia magna, Americamysis bahia, Chironomus riparius* and *Gammarus pulex* and implications of new EU requirements for the aquatic effect assessment of insecticides.	Environ Sci Pollut Res (2012) 19:3610 – 3618	Evaluation of the Tier 1 effect assessment procedure for insecticides based on the current and the proposed new EU dossier data requirements; Single-species acute toxicity data and micro-/mesocosm data were collected from an existing open access toxicity data base (ECOTOX database, US EPA). No new data is presented, therefore this reference is not consider relevant.	1583

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.2.8	Sánchez-Bayo, F.	2005	Comparative acute toxicity of organic pollutants and reference values for crustaceans. I. Branchiopoda, Copepoda and Ostracoda.	Environmental Pollution 139 (2006) 385-420	This study compares the acute toxicity of 468 organic pollutants (including thiamethoxam) to planktonic crustaceans (Branchiopoda, Copepoda and Ostracoda) from pre-existing data by means of statistical analysis and relative tolerance indices. One thiamethoxam endpoint was included (cladoceran species; acute LC_{50} > 100,000 µg a.s./L), but the explicit reference not shown. Additionally, there is ample regulatory references for cladoceran species and they indicate that cladocerans do not drive the risk assessment. Therefore, this reference has been considered as not relevant.	1742
CA 8.2.8	Fothergill, K.; Tindall, K.	2010	Impact of the insecticide seed treatments, Cruiser and Dermacor on nontarget, aquatic invertebrates, in flooded rice fields.	Conference: 33rd Rice Technical Working Group Meeting (RTWG 2010), Biloxi, Mississippi, 22 Feb 2010 - 25 Feb 2010	This article is an abstract published from a conference (33rd Rice Technical Working Group Meeting, Biloxi, Mississippi, 22 - 25 Feb 2010). It is not sufficiently detailed and does not contain any data. Therefore this reference is not considered relevant.	1786

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Johnson, S.; Sah, K.; Jain, S.K.; Bhatt, J. C; Sushil S.N.	2015	Evaluation of pesticide toxicity at their field recommended doses to honeybees, *Apis cerana* and A. *mellifera* through laboratory, semi-field and field studies.	Chemosphere, Vol. 119, pp. 668-74.	Does not fulfil criteria 5 (several doses tested, at least 3, including a negative control, to establish a dose-response). Dose not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). In this study the toxicity of thiamethoxam to *Apis cerana* and *Apis mellifera* L. was investigated in laboratory acute contact toxicity studies with only one concentration (Actara 25 WG; 50 ppm). Contact exposure included topical application and filter paper. Mortality was recorded at 24 and 48 hours. *A. cerana* (Asiatic honeybee) Filter paper = 27% mortality at 48h Topical = 100% mortality at 48h *A. mellifera* Filter paper = 73% mortality at 48h Topical = 100 % mortality at 48h Semi-field studies were also conducted using potted flowering mustard plants (application = Actara 25 WG, 0.25 g/L at full bloom). Bees were exposed for 1 hour and mortality was recorded at 1, 24 and 48 h after treatment. *A. cerana* 48 hr mortality = 100% *A. mellifera* 48 hr mortality = 100% Field studies were not conducted on thiamethoxam or clothianidin. In the lab study, only one concentration of thiamethoxam was tested (full application rate). Also, one of the exposure methods used does not correspond to recommended exposure routes for laboratory tests. Existing label mitigation for thiamethoxam includes 'No application during flowering'. Therefore, this study provides supplemental information only.	1

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Stewart, S. D. L., Gus, M.; Catchot, A. L.; Gore, J.; Cook, D.; Skinner, J.; Mueller, T. C.; Johnson, D.R.; Zawislak, J.; Barber, J.	2014	Potential exposure of pollinators to neonicotinoid insecticides from the use of insecticide seed treatments in the mid-southern United States.	Environmental science & technology, Vol. 48, No. 16, pp. 9762-9	This article presents insecticide residues (including thiamethoxam and clothianidin) measured in crops (soybean, cotton, corn), wild flowers, honey bee and soil samples. Field studies were conducted in the USA in which soybean, cotton and corn seeds were treated with insecticides. The following samples were collected and analysed for residues: 1. Pre-planting soil 2. Post-planting wild flowers in the field margins (that could be exposed to seed dust) 3. Bees and bee pollen (apiaries located 180 m from fields) during planting and crop flowering. 4. Crop flowers (soybean) and crop pollen (cotton and corn) 5. Soil during crop flowering The crops and rates used in this study are not included in this assessment as representative uses. Therefore, this study provides supplemental information only.	4

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Oliveira, Regiane Alves; Roat, Thaisa, Cristina; Carvalho, Stephan, Malfitano; Malaspina, Osmar	2014	Side-effects of thiamethoxam on the brain and midgut of the africanized honeybee *Apis mellifera* (Hymenopptera: Apidae).	Environmental toxicology, Vol. 29, No. 10, pp. 1122-33.	In this study the toxicity of thiamethoxam to the africanized honey bee *Apis mellifera* L. was investigated. An acute oral toxicity study was conducted to determine the 24 hr LD_{50}. A survival assay was also conducted at sublethal doses to determine the LT_{50}. Additionally, the effect of the sublethal doses on the histopathology of the midgut and brain was determined. Acute oral 24h LC_{50} = 4.28 ng a.s./µL This study used africanized honeybees, which are not relevant to Europe. Recommended study protocols provide dose-response curves and not time curves. The histopathological endpoints bear no relation to recommended endpoints used for risk assessment purpose (endpoints on growth, mortality, behaviour, reproduction). Therefore, this study provides supplemental information only.	9

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Catae, A.F.; Roat, T.C.; De Oliveira, R.; Alves, N.; Cornelio Ferreira, R.; Malaspina, O.	2014	Cytotoxic Effects of Thiamethoxam in the Midgut and Malpighian Tubules of Africanized *Apis mellifera* (Hymenoptera: Apidae)	Microscopy research and technique, (2014 Apr) Vol. 77, No. 4, pp. 274-81	Does not fulfil criteria 4 (Test organisms are not previously exposed to the test material or other contaminants). Does not fulfil criteria 8 (A quantitative relationship exists between the reported endpoint and risk assessment endpoints of growth, mortality, behaviour and/or reproduction). Cytotoxic effects to the midgut and to the Malpighian tubules of the bee *A. mellifera* following exposure to a sublethal dose of thiamethoxam were investigated in this study. Newly emerged workers were exposed for 8 days to a diet containing 0.0428 ng/mL a.s./bee. Results showed that thiamethoxam is cytotoxic to midgut and Malpighian tubules. The endpoints bear no relation to recommended endpoints used for risk assessment purpose (endpoints on growth, mortality, behavior, reproduction). Additionally, it does not state where the test organisms were originally sourced from. Therefore the reference is considered not relevant.	17
CA 8.3.1	Maxim, L., Arnold, G.	2010	Pesticides and bees.	EMBO reports Vol 15/ No 1/ 2014	This reference is an “Opinion” article that summarizes the reasons behind the current 2 year restriction on the use of neonicotinoid pesticides and no new data is presented. No new data is presented. Therefore this is not considered relevant for risk assessment purposes.	29
CA 8.3.1	Sanchez-Bayo, F.; Goka, K.	2014	Pesticide Residues and Bees – A Risk Assessment.	PloS one, (2014) Vol. 9, No. 4, pp. e94482.	Using data from recent residue surveys and toxicity of pesticides to honey and bumble bees, an evaluation of risks combining standard risk assessments with new approaches were conducted. As no new toxicity data is presented which are not covered by regulatory or other literature references and the risk assessment was not conducted according to recommended procedures, this reference is not considered relevant.	33

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Cressey, D.	2013	Europe debates risk to bees.	Nature, (2013 Apr 25) Vol. 496, No. 7446, pp. 408	This reference is a “News” article summarising history of neonicotinoid use and the ongoing debate concerning bees. No new data is presented. Therefore this is not considered relevant for risk assessment purposes.	63
CA 8.3.1	Henry, M.	2013	Assessing homing failure in honeybees exposed to pesticides: Guez's (2013) criticism illustrates pitfalls and challenges.	Frontiers in physiology, (2013) Vol. 4, pp. 352.	This reference is an “Opinion article” in response to another “Opinion article” (Guez, 2013) where the article by Henry *et al* 2012 (Ref. ID 98, Initial search) is criticized for its evaluation of homing failure. Here the author provides an explanation of the relevance of homing failure as a sublethal effect, why the original article calculated homing failure the way it did and critizises the proposal for calculating homing behaviour in Guez, 2013. No new data is presented. Therefore this is not considered relevant for risk assessment purposes.	64
CA 8.3.1	Dicks, L.	2013	Bees, lies and evidence-based policy.	Nature, (2013 Feb 21) Vol. 494, No. 7437, pp. 283.	Personal opinion on the proposed two-year ban on some uses of clothianidin, thiamethoxam and imidacloprid. No new data is presented. Thus, this reference is not considered relevant for risk assessment purposes.	67
CA 8.3.1	Stoner, A.K.; Eitzer, B. D.	2013	Using a hazard quotient to evaluate pesticide residues detected in pollen trapped from honey bees (*Apis mellifera*) in Connecticut.	PloS one, (2013) Vol. 8, No. 10, pp. e77550.	Does not fulfil criteria 15 (Exposure route is clearly defined). Pollen from apiaries in five locations in Connecticut were collected, analysed for pesticide residues and compared to LC_{50} values of the found substances (incl. thiamethoxam and clothianidin). As the reference does not present any new toxicity data which are not covered by regulatory or other literature references and as an exposure route cannot be identified for the pesticides found, this reference is considered not relevant.	79

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Pilling, E.; Campbell, P.; Coulson, M.; Ruddle, N.; Tornier, I.	2012	A four-year field program investigating long-term effects of repeated exposure of honey bee colonies to flowering crops treated with thiamethoxam.	PloS one, Vol. 8, No. 10, pp. e77193.	This article describes a regulatory field study conducted by the notifier to investigate the effects of thiamethoxam on honeybee colonies. The study investigated the longterm risk to honey bee colonies, including the sensitive overwintering period, from four years of consecutive single treatment crop exposures to flowering maize and OSR grown from thiamethoxam treated seeds at maximum label rates. The authors also reported residues in pollen, nectar and bee products from 12 residue trials conducted in OSR and maize. Honeybee colonies were exposed to bee attractive flowering crops. This exposure is not relevant to the representative use considered in this assessment (sugar beet is harvested prior to flowering and the flowers are not attractive to honeybees). The measured residues are from maize and OSR, which are not crops that are considered in this assessment. Therefore, this reference provides supplemental information only.	80
CA 8.3.1	Stoner, K.A.; Eitzer, B.D.	2012	Movement of soil-applied imidacloprid and thiamethoxam into nectar and pollen of squash (*Cucurbita pepo*).	PloS one, Vol. 7, No. 6, pp. e39114.	This study investigated residues of neonicotinoid insecticides (including thiamethoxam) in squash flowers from soil spray and drip irrigation application. Thiamethoxam was applied at 140 g a.s./ha for both application techniques. The application types used in this study are not relevant to the uses considered in this assessment (foliar spray and seed treatment). Additionally, the rate used far exceeds the rates considered in this assessment (foliar, 20-50 g a.s./ha; seed treatment, 58.5 g a.s/ha). Therefore, this reference provides supplemental information only.	81

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Krupke, C.H.; Hunt, G.J.; Eitzer, B.D.; Andino, G.; Given, K.	2012	Multiple routes of pesticide exposure for honey bees living near agricultural fields.	PloS one, Vol. 7, No. 1, pp. e29268.	This article presents insecticide residues (including thiamethoxam and clothianidin) measured in maize, honey bee and soil samples. Field studies were conducted in the USA in which maize seeds were treated with insecticides. The following samples were collected and analysed for residues: 1. Soil (experimental field and adjacent fields) 2. Waste talc (from machinery used for drilling) 3. Crop pollen 3. Bees, bee pollen and nectar during planting (apiaries located in field adjacent to the experimental field). 5. Wild flowers (in field adjacent to experimental field) The crop and rate used in this study is not included in this assessment as a representative use. Therefore, this study provides supplemental information only.	83
CA 8.3.1	Dively, G.P.; Kamel, A.	2012	Insecticide residues in pollen and nectar of a cucurbit crop and their potential exposure to pollinators.	Journal of agricultural and food chemistry, Vol. 60, No. 18, pp. 4449-56.	This study investigated residues of insecticides (including thiamethoxam) in pumpkin flowers from foliar spray and drip irrigation application. Thiamethoxam was applied at 2 x 96 g a.s./ha (14d interval) (Actara 25WG) for the foliar spray. The foliar spray rate used in this study far exceeds the rates considered in this assessment (1 x 20-50 g a.s./ha). Additionally, the drip irrigation application is not relevant to the two uses considered in this assessment (foliar spray and seed treatment). Therefore, this reference provides supplemental information only.	85

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
8.3.1	Badiou-Beneteau, A.; Carvalho, S. M.; Brunet, J-L.; Carvalho, G. A.; Bulete, A.; Giroud, B.; Belzunces, L. P.	2012	Development of biomarkers of exposure to xenobiotics in the honey bee *Apis mellifera*: application to the systemic insecticide thiamethoxam.	Ecotoxicology and environmental safety, (2012 Aug) Vol. 82, pp. 22-31.	This study describes the development of acetylcholinesterase (AChE), carboxylesterases (CaE1, CaE2, CaE3), glutathion-S-transferase (GST), alkaline phosphatase (ALP) and catalase (CAT) as enzyme biomarkers of exposure to xenobiotics such as thiamethoxam in the honey bee *Apis mellifera*. Honeybees were exposed to thiamethoxam at the LD_{50} (51.16 ng/ bee) and two sublethal doses, 5.12 and 2.56 ng/bee. The endpoints bear no relation to recommended endpoints usually used for risk assessment purposes (endpoints on growth, mortality, behavior, reproduction). Therefore this reference is considered not relevant for this review.	104
CA 8.3.1	Tapparo, A.; Giorio, C.; Marzaro, M.; Marton, D.; Solda, L.; Girolami, V.	2011	Rapid analysis of neonicotinoid insecticides in guttation drops of corn seedlings obtained from coated seeds.	Journal of environmental monitoring : JEM, Vol. 13, No. 6, pp. 1564-8.	This study investigated residues of insecticides (including thiamethoxam and clothianidin) in guttation fluid of corn plants grown from treated seeds. Thiamethoxam was applied at 1 mg a.s./seed. The crop and rate used in this study is not included in this assessment as a representative use. Therefore, this study provides supplemental information only.	108
CA 8.3.1	Tremolada, P.; Mazzoleni, M.; Saliu, F.; Colombo, M.; Vighi, M.	2010	Field trial for evaluating the effects on honeybees of corn sown using Cruiser and Celest xl treated seeds.	Bulletin of environmental contamination and toxicology, Vol. 85, No.3, pp. 229-34.	This study investigated the effects of corn seeds treated with thiamethoxam on honeybees during sowing. Direct mortality in the hive area and foraging activity intensity was measured before and after corn sowing up to 2 weeks. A theoretical contact exposure was calculated for a bee when flying over sown fields (9.2 ng/bee). The crop used in this study is not included in this assessment as a representative use. Additionally, corn seed is dustier than the representative crop (pelleted sugar beet) considered in this assessment. Therefore, this study provides supplemental information only.	152

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Decourtye, A.; Devillers, J.	2010	Ecotoxicity of neonicotinoid insecticides to bees.	Advances in experimental medicine and biology, (2010) Vol. 683, pp. 85-95.	This reference reviews available data on the toxicity of neonicotinoid insecticides to bees. As no new toxicity data was presented which are not covered by regulatory or other literature references, this has been considered as not relevant for this review.	159
CA 8.3.1	Girolami V; Mazzon L; Squartini A; Mori N; Marzaro M; Di Bernardo A; Greatti M; Giorio C;Tapparo A	2009	Translocation of neonicotinoid insecticides from coated seeds to seedling guttation drops: a novel way of intoxication for bees.	Journal of economic entomology, Vol. 102, No. 5, pp. 1808-15.	This study investigated residues of insecticides (including thiamethoxam and clothianidin) in guttation fluid of corn plants grown from treated seeds. Thiamethoxam was applied at 1 mg a.s./seed. Additionally, the study looked at effects of spiked guttation fluid honeybees under lab conditions. The time between drinking from spiked guttation drops and the appearance of intoxication symptoms was measured. For the residue analysis - the crop and rate used in this study is not included in this assessment as a representative use. For the lab exposure - recommended study protocols provide dose-response curves, not time to effect curves. Therefore, this study provides supplemental information only.	168

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	A. L. Alarcon, M. Canovas, R. Senn, R. Correia	2005	The safety of thiamethoxam to pollinating bumble bees (*Bombus terrestris* L.) when applied to tomato plants through drip irrigation.	Communications in agricultural and applied biological sciences, Vol. 70, No. 4, pp. 569-79.	This study investigated the effects of drip irrigation (to tomatoes) on bumblebees under greenhouse conditions. Thiamethoxam (Actara 25WG) was applied at either 1 x 200 g a.s./ha or 2 x 100 g a.s./ha (with a 7d interval). The following endpoints were evaluated: 1. Number of flowers pollinated 2. Fruit development 3. Adult and larval mortality 4. Consumption of sugar water 5. Nest weight 6. Number of adults, larvae and pupa within the nest 7. Adult bee weight The application type used in this study is not relevant to the uses considered in this assessment (foliar spray and seed treatment). Additionally, the rate used far exceeds the rates considered in this assessment (foliar, 20-50 g a.s./ha; seed treatment, 58.5 g a.s/ha). Therefore, this reference provides supplemental information only.	248
CA 8.3.1	Samson-Robert, O.; Fournier, V.; Labrie, G.; Chagnon, M.	2014	Neonicotinoid-contaminated puddles of water represent a risk of intoxication for honey bees.	PLoS ONE, (1 Dec 2014) Vol. 9, No. 12.	Does not fulfil criteria 15 (exposure route is clearly defined and suitably quantified). A multi-residue method based on LC-MS/MS was used to analyse samples of puddle water taken in the field during the planting of treated corn and one month later. No information is given regarding the pesticide treatment of corn that was being sown in the area during collection of water samples. Additionally, the authors explain that the field had been previously treated with neonicotinoids, but give no further information. Therefore a direct exposure route cannot be clearly defined and linked to measured residues. This reference is not considered relevant.	267

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Stokstad, E.	2013	Pesticides under fire for risks to pollinators.	Science, (2013) Vol. 340, No. 6133, pp. 674-676.	"News" article summarising information on the history and current situation of neonicotinoid seed treatment applications regarding pollinators. As no new data is presented, this reference is not considered relevant.	274
CA 8.3.1	Henry, M; Decourtye, A.	2013	Ecological relevance in honeybee pesticide risk assessment: Developing context-dependent scenarios to manage uncertainty.	Frontiers in Physiology, (2013) Vol. 4 APR. arn. Article 62.	This reference is an "Opinion article" in response to another "Opinion article" (Guez, 2013; Ref ID 276, Initial search) where the article by Henry *et al* 2012 (Ref. ID 98, Initial search) is criticized for the relevancy of the study design. Here the author addresses the uncertainties raised by Guez, 2013. No new data is presented. Therefore this is not considered relevant for risk assessment purposes.	275
CA 8.3.1	Guez, D.	2013	A common pesticide decreases foraging success and survival in honey bees: Questioning the ecological relevance.	Frontiers in Physiology, (2013) Vol. 4 MAR. arn. Article 37.	This reference is an "Opinion article" critizising the study by Henry *et al* 2012 (Ref. ID 98, Initial search). Here the author states that the ecotoxicological and ecological significance of the study is compromised by experimental design flaws. Therefore this is not considered relevant for risk assessment purposes.	276
CA 8.3.1	Campbell, P.J.	2013	Declining European bee health: Banning the neonicotinoids is not the answer.	Outlooks on Pest Management (Apr 2013) Volume 24, Number 2, pp. 52-57,	This reference discusses the current suspension of neonicotinoid uses and critizises the EFSA risk assessment conclusions. No new data is presented. Therefore, this reference is not considered relevant.	297
CA 8.3.1	Blatzheim, L.; Bower,C.; Polk, T.; Ikizo; Lu, D.; Karahn, A. Levinson, B.; Gune, N.; Cakmak, I.; Wells, H.; Hranitz J. M.	2014	The neonicotinoid pesticide thiamethoxam affects motor responses and foraging behaviour of honey bees.	SO Integrative and Comparative Biology, (2014) Vol. 54, No. Suppl. 1, pp. E244.	This reference is a poster presented on a conference (Annual Meeting of the Society-for-Integrative-and-Comparative-Biology. Austin, TX, USA. Jan 03-07, 2014.). The methods lack sufficient detail and clarification. Therefore this reference is considered not relevant.	314

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Lodesani, M.; Mutinelli, F.; Liberta, A.; Porrini, C.	2013	The National Bee Monitoring Network In Italy (2009-2013).	Bulletin of Insectology, (JUN 2013) Vol. 66, No. 1, pp. 160.	Article introducing the national bee monitoring network in Italy as an organisation. No data is presented. Therefore, this article is not relevant for risk assessment purpose.	328
CA 8.3.1	Blacquiere, T.; Smagghe, G.; van Gestel, C.; Cornelis, A.M.; Mommaerts, V.	2012	Neonicotinoids in bees: a review on concentrations, side-effects and risk assessment (vol 21, pg 973, 2012).	Ecotoxicology, (JUL 2012) Vol. 21, No. 5, pp. 1581.	This reference reviews available data on the toxicity of neonicotinoid insecticides to bees and environmental neonicotinoid residue levels in plants, bees and bee products. As no new toxicity data was presented which are not covered by regulatory or other literature references, this has been considered as not relevant.	342
CA 8.3.1	DeGrandi-Hoffman, G.; Sammataro, D.; Simonds; R.	2012	Are agrochemicals present in High Fructose Corn Syrup fed to honey bees (*Apis mellifera* L.)?.	Journal of Apicultural Research, (2012) Vol. 51, No. 4, pp. 371-372.	Does not fulfil criteria 9 (Sufficient experimental information provided to substantiate and evaluate whether the study conclusions and endpoints are robust.) High Fructose Corn Syrup (HFCS) samples from commercial suppliers were analysed for the presence of 174 different agrochemicals. No pesticides (including thiamethoxam and clothianidin) were detected in any of the samples. If pesticides had been detected, an exposure route could not be clearly defined and suitably quantified. Therefore, this reference is not considered relevant.	345

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Pohorecka, K.; Skubida, P.; Miszczak, A.; Semkiw, P.; Sikorski, P.; Zagibajlo, K.; Teper, D.; Koltowski, Z.; Skubida, M.; Zdanska, D.; Bober, A.	2012	Residues of neonicotinoid insecticides in bee collected plant materials from oilseed rape crops send their effect on bee colonies	Journal of Apicultural Science, Vol. 56, No. 2, pp. 115-134.	This study investigated the impact of insecticide treated WOSR (including thiamethoxam and clothianidin) on honeybee colonies. Insecticide residues were measured in nectar, honey, pollen, bee bread and bees. Thiamethoxam seed treatment was followed by spraying of acetamiprid or thiacloprid during the growing period. Clothianidin seed treatment was followed by spraying of zeta-cypermethrin, clopyralid and pikloram. All the neonicotinoid insecticides applied to were present in the samples of nectar and pollen. No adverse effects were reported on bee mortality, brood development, strength, and honey yield of healthy bee colonies were found throughout the study period. Honeybee colonies were exposed to a bee attractive flowering crop. This exposure is not relevant to the representative use considered in this assessment (sugar beet is harvested prior to flowering and the flowers are not attractive to honeybees). The measured residues are from WOSR, which is not a crop that is considered in this assessment. Therefore, this reference provides supplemental information only.	347

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Costa, E. M.; Araujo, E. L.; Maia, A. V. P.; Silva, F. E. L.; Bezerra, C. E. S.; Silva, J. G.	2014	Toxicity of insecticides used in the Brazilian melon crop to the honey bee *Apis mellifera* under laboratory conditions.	Apidologie, Volume 45, Number 1, pp. 34-44	Does not fulfil criteria 5 (several doses tested, at least 3, including a negative control, to establish a dose-response). Dose not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). This study measured the acute toxicity to honeybees via over-spray, contaminated food and contact with sprayed leaves. Only one concentration was tested (0.15 g a.s/L) to determine the time to effect at recommended field rates. Overspray bee: LT_{50} = 1 hr Overspray food: LT_{50} = 1.51 hr Overspray leaves: LT_{50} = 2.61 hr Recommended study protocols provide dose-response curves and not time curves. Therefore, this study provides supplemental information only.	510
CA 8.3.1	European Food Safety Authority	2013	Evaluation of the FERA study on bumble bees and consideration of its potential impact on the EFSA conclusions on neonicotinoids	EFSA Journal 2013;11(6):3242, 20 pp.,	This reference is an EFSA evaluation of a study conducted by FERA (2013*). Here the authority conducts an in-depth review of the study design and data interpretation. No new data or data analysis is presented. Therefore this is not considered relevant for risk assessment purposes. *The FERA (2013) study was not found in the literature search as it was not indexed by the databases used.	525

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Gama, J. S. N; de L. A Bruno, R.; Quirino, Z. G. M.; de S. Ramalho, F. ; Pereira Junior, L.L.R.; de S. Ramalho; F.	2013	Behaviour of pollinators and reproductive system of fennel grown in field intercropped with cotton	Revista Caatinga (2013), Vol. 26, Number 4, pp. 39-47, 27	Does not fulfil criteria 12 (Appropriate and relevant geoclimatic conditions (setting)). Does not fulfil criteria 17 (Study conditions should not differ significantly from recommended protocols). The objective of this study was the reproductive biology of fennel in the field intercropped with coloured cotton in the presence and absence of the insecticide Actara 25WG and evaluation of the performance of their floral visitors. The behaviour and frequency of floral visitors were evaluated during the flowering period; registered aspects related to time, frequency, duration and visiting behaviour. The insects were captured for later identification. *Apis mellifera* was the most frequent pollinator. As the focus of this field study was plant reproduction, not effects of thiamethoxam on bees, as well as the location in Brazil, the reference is considered not relevant.	636
CA 8.3.1	Carreck, N.	2013	Are pesticides the most important cause of colony losses?	Bee World (2013), Volume 90, Number 2, pp. 38-39, 10 refs	Article discussing some of the recently published literature that led to the suspension of neonicotinoid insecticides and calls for a full Environmental Impact Assessment on the implications of the suspension. No new data is presented. Therefore, this reference is not considered relevant.	637
CA 8.3.1	Bacandritsos, N.; Granato, A.; Budge, G.; Papanastasio, I.; Roinioti, E.; Caldon, M.; Falcaro, C.; Gallina, A.; Mutinelli, F.	2010	Sudden deaths and colony population decline in Greek honey bee colonies.	Journal of Invertebrate Pathology (2010), Volume 105, Number 3, pp. 335-340	A preliminary study was carried out to investigate the unexplained phenomena of sudden deaths, tremulous movements and population declines of adult honey bees in a distinct region in Greece. The presence of multiple pathogens and pesticides made it difficult to associate a single specific cause to the depopulation phenomena observed in Greece. Therefore this reference is not considered relevant.	930

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Carvalho, S. M.; Carvalho, G. A.; Carvalho, C. F.; Bueno Filho, J. S. S.; Baptista, A. P. M.	2009	Toxicity of acaricides/insecticides for citrus crop to the africanized honeybee *Apis mellifera* L., 1758 (Hymenoptera: Apidae)	Arquivos do Instituto Biologico (Sao Paulo) (2009), Volume 76, Number 4, pp. 597-606,	Does not fulfil criteria 5 (several doses tested, at least 3, including a negative control, to establish a dose-response). Dose not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). In this study the toxicity of thiamethoxam to the africanized honey bee Apis mellifera L. was investigated in time assays with only one concentration (Actara 25 WG; 150 g/100 L). Direct spray LT_{50} = 1.7 hrs Contaminated food LT_{50} = 4.77 hrs Residual contact (glass) LT_{50} = 3.99 hrs Residual contact (leaves) LT_{50} = 3.82 hrs Recommended study protocols provide dose-response curves and not time curves. Therefore this reference is not considered relevant.	1047
CA 8.3.1	Thomazoni, D.; Soria, M. F.; Kodama, C.; Carbonari, V.; Fortunato, R. P.; Degrande, P. E.; Valter Junior, V. A.	2009	Selectivity of insecticides for adult workers of *Apis mellifera* (Hymenoptera:Apidae).	Revista Colombiana de Entomologia, Volume 35, Number 2, pp. 173-176	A semi-field study was conducted using potted flowering cotton plants (application = Actara 25 WG, 200 g/ha at full bloom) under greenhouse conditions. Evaluations on bee mortality were made every 30 minutes for six hours. There was 100% mortality after 330 minutes. Existing label mitigation for thiamethoxam includes ‘No application during flowering’. Additionally, the rate used far exceeds the rates considered in this assessment (foliar, 20-50 g a.s./ha). Therefore, this study provides supplemental information only.	1100

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Bortolotti, L.; Sabatini, A. G; Mutinelli, F; Astuti, M; Lavazza, A; Piro, R.; Tesoriero, D.; Medrzycki, P.; Sgolastra, F.; Porrini, C.;	2009	Spring honey bee losses in Italy.	Julius-Kuehn-Archiv (2009), Number 423, pp. 148-152 Conference: Hazards of pesticides to bees. 10th International Symposium of the ICP-Bee Protection Group. Bucharest, Romania, 8-10 October, 2008.	Does not fulfil criteria 15 (Exposure route is clearly defined, environmentally relevant and, if appropriate, suitably quantified). Does not fulfil criteria 16 (Sufficient experimental information provided to substantiate and evaluate whether the study conclusions and endpoints are robust; e.g. pre-treatment details, characterization of physical-chemical parameters, replication, statistical methods and appropriate sample regimes). Residue analysis of samples collected in two regions in Italy after noted damage to bees. Collected data indicate that the higher number of bee losses events occurred in intensively cultivated flat areas, located in the North of Italy, mainly during or after corn sowing. However, no quantitative relationship between insecticide exposure and mortality or damage of the bees can be shown from the data presented. Therefore this reference is not considered relevant.	1105
CA 8.3.1	Forster, R.	2009	Bee poisoning caused by insecticidal seed treatment of maize in Germany in 2008.	Julius-Kuehn-Archiv (2009), Number 423, pp. 126-131. ISSN: 1868-9892	This article is published from a conference (Hazards of pesticides to bees. 10th International Symposium of the ICP-Bee Protection Group. Bucharest, Romania, 8-10 October, 2008.). This article describes an investigation into bee mortality events in Spring 2008 in Germany. The authorities confirmed the cause as clothianidin poisoning from poorly treated maize seeds in combination with use of un-mitigated pneumatic drilling and several special circumstances leading to a worst-case exposure scenario. Effects on bees from dust containing clothianidin is not relevant to a thiamethoxam risk assessment, as clothianidin is a plant and soil metabolite. This reference is not considered relevant.	1112

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Frilli, F.; Greatti, M.; Vedova, G. della; Belletti, P. A.; della Vedova, G.	2009	Monitoring of spring bee mortality in Friuli-Venezia-Giulia.	Notiziario ERSA (2009), Volume 22, Number 4, pp. 45-49	This article was not available from our copyright-cleared document delivery sources. While we placed an order to purchase this document from an advanced reference source, we were unable to obtain this article. This article describes a bee monitoring program in Italy, that was set up following bee mortality incidents. Results indicated that mortality occurred mainly in maize growing areas. As maize is not a represenetative crop considered here, as well as the abstract being insufficniently detailed for review, this article is considered not relevant.	1144
CA 8.3.1 and CA 8.3.2	Fernandes, M. E. de S.; Fernandes, F. L.; Picanco, M. C.; Queiroz, R. B.; Silva, R. S. da; Huertas, A. A. G.; de S. Fernandes, M. E.; da Silva, R. S.	2008	Physiological selectivity of insecticides to *Apis mellifera* (Hymenoptera: Apidae) and *Protonectarina sylveirae* (Hymenoptera: Vespidae) in citrus.	Sociobiology (2008), Volume 51, Number 3, pp. 765-774	Does not fulfil criteria 4 (Test organisms are not previously exposed to the test material or other contaminants). Does not fulfil criteria 5 (several dose levels tested, at least 3). Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). Toxicity assays were performed in the laboratory with thiamethoxam on P. sylveirae and A. mellifera. The bioassay used leaves immersed in test solution (Actara 25 WG, 0.20 and 0.100 mg a.s./mL) to examine the effects of residual contact on mortality (48 hours). *A. mellifera*: 100% mortality at 0.2 and 0.1 mg a.s./mL *P. sylveirae*: 79 and 78% mortality at 0.2 and 0.1 mg a.s./mL, respectively Limited details on the source of the test organisms were given. Only two concentrations of thiamethoxam were tested (full and half the maximum application rate). Also, the exposure method used does not correspond to recommended exposure routes for laboratory tests (oral or contact). Therefore this reference is not considered relevant.	1183

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Pastagia, J. J.; Patel, M. B.	2007	Relative contact toxicity of some insecticides to worker bees of *Apis cerana* F.	Journal of Plant Protection and Environment (2007), Volume 4, Number 2, pp. 89-92	Does not fulfil criteria 4 (Test organisms are not previously exposed to the test material or other contaminants). Does not fulfil criteria 5 (several doses tested, at least 3, including a negative control, to establish a dose-response). Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). A laboratory experiment was conducted using the dry film method to test the relative toxicity of only one concentration of thiamethoxam to worker bees of A*pis cerana* over 48 hours (Actara 25WG at 0.005%). Mortality increased over time; 29% at 6 hours increasing to 78% at 48 hours. The exposure route does not correspond to recommended study protocols for laboratory tests (oral or contact). Additionally, limited details are given on the source of the test organism. Therefore this reference is not considered relevant.	1308
CA 8.3.1	Fanti, M.; Maines, R.; Angeli, G.	2006	Evaluation of the repellency and acute toxicity of Neonicotinoids insecticides on *Apis mellifera ligustica*.	Giornate Fitopatologiche 2006, Riccione (RN), 27-29 marzo 2006. Atti, volume primo (2006), pp. 51-58	This article is published from a conference (Atti, Giornate Fitopatologiche, Riccione, Italy, 27-29 March 2006). A semi-field study was carried out to examine the effect of Actara 25WG on *Apis mellifera*. One spray application (30mL/hL, 12±0.5 hL/ha; corresponding to approximately 90 g a.s./ha) was made during flowering of *Phacelia* and bees were released two hours after treatment. Existing label mitigation for thiamethoxam includes 'No application during flowering'. Additionally, the application rate used here exceeds the foliar application rate supported in this assessment (20-50 g a.s./ha). Therefore, this study provides supplemental information only.	1344

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Gulati R.; Sharma, S.K.; Sharma, P.D.	2005	Field and Residual Toxicity of Commonly Used Insecticides to Asian Honeybees (*Apis Dorsata* F. and *A. Florea* F.) in Cotton	Honeybee Science (2005) 26 (1): 29-32	Does not fulfil criteria 12 (Appropriate and relevant geoclimatic conditions (setting)). Does not fulfil criteria 17 (Study conditions should not differ significantly from recommended protocols). The toxicity of thiamethoxam 25 (100 g/ha) was measured for *Apis dorsata* and *Apis florae* as toxicity from exposure during application (field toxicity) and toxicity after application (residual toxicity) in trials conducted in India. The mortality rate observation for the field toxicity to honey bees was determined one hour after direct overspray. The mortality rate honey bee residual toxicity was recorded 2 - 72 hours after exposure to contaminated flowers. As this field study was conducted in India, geoclimatic conditions were not appropriate and relevant for Europe. As this study method differs from the standard methods used for Tier I and II toxicity testing, this study is considered as supplementary information only.	1489
CA 8.3.1	Neetu Singh; Karnatak, A. K.; Singh, N.	2005	Relative toxicity of some insecticides to the workers of *Apis mellifera* L.	Shashpa (2005), Volume 12, Number 1, pp. 23-25,	This article was not available from our copyright-cleared document delivery sources. While we placed an order to purchase this document from an advanced reference source, we were unable to obtain this article. This article compares the relative toxicity of some insecticides (incl. thiamethoxam) against the honey bee, *Apis mellifera*. At the recommended concentrations, no insecticide was safe to honey bees. As the abstract was insufficiently detailed for review, this article is considered not relevant.	1492

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Hakala, K.; Kukkola, M.; Ruottinen, L.; Raiskio, S.; Pelkonen, S.; Peltonen, K.; Ketola, J.	2014	Impact of neonicotinoid insecticides use to honey bees in spring oilseed cultivation in Finland	Abstracts of Papers, 248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014 (2014),	This article is an abstract published from a conference (248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014). It is not significantly detailed and does not contain any data. Therefore this reference is not considered relevant.	1515
CA 8.3.1	Scott-Dupree, C.; Cutler, C.	2014	Field studies examining exposure and effects of neonicotinoid insecticides on bee colonies	Ecotoxicology, Volume 23:1755–1763	This study investigated the impact of insecticide treated corn (including thiamethoxam and clothianidin) on bumble bee (*Bombus impatiens)* colonies. Insecticide residues were measured in pollen. Corn pollen was only rarely collected from bumble bee foragers and the majority of pollen was from wild plants around the corn fields. Neonicotinoid seed treatments had no effect on any hive endpoints measured, except the number of workers, where significantly fewer workers were recovered from hives placed next to conventional fields compared to organic fields. The authors concluded that exposure during pollen shed to corn grown from neonicotinoid-treated seed poses low risk to *B. impatiens*. Bumble bee colonies were exposed to a bee attractive flowering crop. This exposure is not relevant to the representative use considered in this assessment (sugar beet is harvested prior to flowering). The measured residues are from corn, which is not a crop that is considered in this assessment. Therefore, this reference provides supplemental information only.	1516

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Kasiotis, K. M.; Anagnostopoulos, C.; Anastasiadou, P.; Machera, K.	2014	Pesticide residues in honeybees, honey and bee pollen by LC-MS/MS screening: Reported death incidents in honeybees	Science of the Total Environment (2014), 485-486, 633-642	This study investigated cases of honeybee death incidents with regard to the potential interrelation to the exposure to pesticides. Honeybee, bee pollen and honey samples from different areas of Greece were analysed for the presence of pesticide residues. Since no quantitative relationship between insecticide exposure, detected residues and mortality or damage of the bees could be shown from the data presented, this reference is not considered relevant.	1517
CA 8.3.1	Purdy, J. R.	2014	Concentrations and distribution of neonicotinoid residues in honeybees (*Apis mellifera*) in Ontario, Canada	Abstracts of Papers, 248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014 (2014), AGRO-616.	This article is an abstract published from a conference (248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014). It is not significantly detailed and does not contain any data. Therefore this reference is not considered relevant.	1519
CA 8.3.1/35	Baok, R.a; Bari, J. I.; Uzelac, V. D.; Kos, T.; Drmi, Z.; Pedisi, S.; Zori, Z.	2014	Sugar beet seed treatment with neonicotinoids: Do they pose a risk for bees?	Abstracts of Papers, 248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014 (2014), AGRO-612	This article is an abstract published from a conference (248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, 2014). It is not significantly detailed and does not contain any data. Therefore this reference is not considered relevant.	1520

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Arena, M.; Sgolastra, F.	2014	A meta-analysis comparing the sensitivity of bees to pesticides	Ecotoxicology (2014), 23 (3), 324-334	A systematic review of the relevant literature on the sensitivity of bees to pesticides followed by a meta-analysis has been performed. Both the contact and oral acute LD_{50} and the chronic LC_{50} reported in laboratory studies for many substances (incl. thiamethoxam) have been extracted from open literature in order to compare the sensitivity to pesticides of honey bees and other bee species. The median sensitivity ratio for thiamethoxam was 1.14, indicating that species other than *Apis mellifera* are of similar sensitivity. As the reference does not present any new toxicity data which are not covered by regulatory or other literature references, this reference is considered not relevant.	1525
CA 8.3.1	Overmeyer, J.; Campbell, P.; Coulson, M.; Ruddle, N.; Tornier, I.	2013	Honey bee field studies: Assessing hive health after four consecutive years of exposure to flowering crops grown from thiamethoxam-treated seed	Abstracts of Papers, 246th ACS National Meeting & Exposition, Indianapolis, IN, United States, September 8-12, 2013 (2013), AGRO-150.	This article is an abstract published from a conference (246th ACS National Meeting & Exposition, Indianapolis, IN, United States, September 8-12, 2013). It is not significantly detailed for assessment. Additionally, the data referenced is described fully in Pilling et al. 2012 (Ref. ID 80, Initial search). Therefore this reference is not considered relevant.	1526

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Yu, W.; Pei, H.; Yi, Z.; Bai, J.; Yu, K.	2013	Indoor toxicity determination of neonicotinoid insecticides to *Apis mellifera*	Shijie Nongyao (2013), 35 (2), 28-31	Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). Actara 25 WG was tested on honeybees (A. mellifera) with test methods designed by Arzone and Vidano. These methods (intake test without previous fasting and indirect contact test) are different from the methods specified in OEPP/EPPO (2003) (uptake with previous fasting and direct contact test). Intake test (48 h): LD_{50} = 4.411 ng/bee (3.612 ~ 5.252) Indirect contact test: LC_{50} = 3.313 mg/L (2.786 ~ 3.806) As this study method differs from the standard methods used for Tier I and II toxicity testing, this study is considered as supplementary information only.	1575
CA 8.3.1	Chen, Y.; Gao, J.	2013	Pesticide residue in pollen and nectar and its threaten to pollinating insects	Shijie Nongyao (2013), 35 (2), 16-21, 27	Field experiments were conducted to perform residue analysis in cucurbit plant pollen, nectar and leaf samples after treatment with thiamethoxam insecticide solution during transplanting. Applications were via drip irrigation (96 g a.s./ha during transplanting and again three weeks later), foliar application (at four and six weeks after transplanting at a dose of 96 g a.s./ha) and a seed dressing method (0.75 mg a.s./seed). Thiamethoxam and clothianidin residues were detected in pollen, nectar and leaf samples. The crop used in this study is not included in this assessment as a representative use. Drip irrigation is not a representative use considered in this assessment. The foliar application rate is well above the representative rates considered here (20 and 50 g a.s./ha). Additionally, the seed treatment application rate is well above the rate considered here (0.45 mg a.s./seed). Therefore, this study provides supplemental information only.	1577

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Tapparo, A.; Marton, D.; Giorio, C.; Zanella, A.; Solda, L.; Marzaro, M.; Vivan, L.; Girolami, V.	2012	Assessment of the Environmental Exposure of Honeybees to Particulate Matter Containing Neonicotinoid Insecticides Coming from Corn Coated Seeds	Environmental Science & Technology, Vol. 46 (5), 2592-2599	This study investigated the effects of sowing insecticide treated corn seed (including thiamethoxam and clothianidin) on honeybees. Quantitative measurements of both the emitted particulate and the consequent direct contamination of single bees approaching the drilling machine during corn sowing were evaluated. Foraging bees were induced to fly over the sowing field to reach a sugar dispenser, where they were captured and maintained under laboratory conditions for observations of intoxication and mortality. The measured residues in dust emissions and bees exposed to dust particulates are from sowing treated corn seed, which is not a crop that is considered in this assessment. Additionally, corn seed is dustier than the representative crop (pelleted sugar beet). Effects on bees from dust containing clothianidin is not relevant to a thiamethoxam risk assessment, as clothianidin is a plant and soil metabolite. Therefore, this reference provides supplemental information only.	1588
CA 8.3.1	Whitehor, P. R.; O'Connor, S.; Wackers, F. L.; Goulson, D.	2012	Neonicotinoid Pesticide Reduces Bumble Bee Colony Growth and Queen Production	Science (Washington, DC, United States) (2012), 336 (6079), 351-352	Thiamethoxam and clothianidin were not tested in this study; therefore, this reference is considered not relevant.	1597
CA 8.3.1	Fazekas, B.; Lang Woynarovich, M.; Paulus D., Petra; Csaba, G.; Orosz, E.	2012	Pesticide poisoning of honey bees between 2007 and 2011	Magyar Allatorvosok Lapja (2012), 134 (4), 213-220	Does not fulfil criteria 15 (Exposure route is clearly defined, environmentally relevant and, if appropriate, suitably quantified). In thus study 222 honey bee samples and 129 plant samples from cases of suspicious bee mass deaths were examined. However, no quantitative relationship between insecticide exposure and mortality or damage of the bees can be shown from the data presented. Therefore this reference is not considered relevant.	1601

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Xia, Q.; Yang, W.; Zhou, L.	2012	Comparison of insecticide sensitivity to *Apis mellifera* and insects	Shijie Nongyao (2012), 34 (1), 21-25, 30.	This paper summarizes toxicity data of a variety of tested insecticides (among them thiamethoxam) to determine the relative susceptibility of honey bees to insecticides by comparing *Apis mellifera* with other insects. Toxicity data obtained from literature are reviewed in this paper and the relative susceptibility of honey bees to 62 insecticides from six classes is compared. No new data is presented. This reference is therefore considered not relevant.	1616
CA 8.3.1	Wu, J.Y.; Anelli, C.M.; Sheppard, W.S.	2011	Sub-lethal effects of pesticide residues in brood comb on worker honey bee (*Apis mellifera*) development and longevity	PLoS One, 6(2), e14720.	Does not fulfil criteria 8 (Effects are related to single test item). This study examined the sub-lethal effects of exposure to pesticide residues during the developmental phase on worker honeybees. Bees were reared in brood comb containing high levels of pesticide residues in mixture. Egg patches were monitored for larval mortality and development. Emergence of adult bees was recorded. The brood combs used in this experiment contained residues of several neonic insecticides (including thiamethoxam, imidacloprid, clothianidin and thiacloprid, among other chemicals). Therefore this reference is not considered relevant.	1620
Ca 8.3.1	Wiest, L.; Bulete, A.; Giroud, B.; Fratta, C.; Amic, S.; Lambert, O.; Pouliquen, H.; Arnaudguilhem, C.	2011	Multi-residue analysis of 80 environmental contaminants in honeys, honeybees and pollens by one extraction procedure followed by liquid and gas chromatography coupled with mass spectrometric detection	Journal of Chromatography A (2011), 1218 (34), 5743-5756	Multi-residue analysis of 80 environmental contaminants (including thiamethoxam) in honeys, honeybees and pollens by one extraction procedure followed by liquid and gas chromatography coupled with mass spectrometric detection. No quantitative relationships between insecticide exposure, detected residues and mortality or damage of the bees could be shown from the data presented. Therefore this reference is not considered relevant.	1624

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.1	Jeyalakshmi, T.; Shanmugasundaram, R.; Saravanan, M.; Geetha, S.; Mohan, Sweatha S.; Goparaju, A.; Murthy, P. Balakrishna	2011	Comparative toxicity of certain insecticides against *Apis cerana indica* under semi field and laboratory conditions	Pestology (2011), 35 (12), 23-26.	This article was not available from our copyright-cleared document delivery sources. While we placed an order to purchase this document from an advanced reference source, we were unable to obtain this article. This article describes comparative toxicity of several insecticides (incl. Thiamethoxam 25%WG) to *Apis cerana indica.* at three dose levels under laboratory and semi-field conditions. In the semi field study, treated sunflowers were brought under laboratory conditions at different time points after spray in the field and bees were exposed. Simultaneously, acute contact toxicity was performed for the same set of insecticides by dosing the bees with different test concentrations. Mortality was observed at 24 h after exposure for both the tests. As the abstract was insufficiently detailed for review, this article is considered not relevant.	1644
CA 8.3.1	Chandramani, P.; Usha Rani, B.; Muthiah, C.; Kumar, S.	2008	Evaluation of toxicity of certain insecticides to Indian honeybee, *Apis cerana indica* F.	Pestology (2008), 32 (8), 42-43	This article was not available from our copyright-cleared document delivery sources. While we placed an order to purchase this document from an advanced reference source, we were unable to obtain this article. The recommended dose of thiamethoxam was tested for oral toxicity against the Indian honey bee, *Apis cerana indica* (F.) under laboratory conditions. As the abstract was insufficiently detailed for review, this article is considered not relevant.	1702

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Frewin, A. J; Schaafsma, A.W.; Hallett, R. H.	2014	Susceptibility of *Aphelinus certus* (Hymenoptera: Aphelinidae) to neonicotinoid seed treatments used for soybean pest management.	Journal of economic entomology, (2014 Aug) Vol. 107, No. 4, pp. 1450-7.	This study employed a tritrophic experimental system to examine the effects of thiamethoxam-treated soybeans on soybean aphid and its associated parasitoid *Aphelinus certus*. The parasitoid wasp was exposed to excised plant material (grown from treated seed) infested with aphids. Only one rate was tested (Cruiser 5FS, 47.6% a.s.; 83 mL/100 kg seed). The wasp was removed after 24h. Petri dishes were monitored daily for 8d and the number of alive, dead, juvenile, and parasitized aphids was recorded. While this exposure route is environmentally relevant, it is not considered in testing conducted for the regulatory Tier I or II risk assessment for non-target arthropods. However, this exposure route for predatory wasps would be accounted for in regulatory higher tier field studies. There are 4 thiamethoxam seed treatment field studies that examine effects on and recovery of full fauna populations. Therefore this study is considered as supplemental information only and does not alter the existing risk assessment.	6

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Costa, M. A.; Moscardini, V.F.; da Costa, G. P.; Carvalho, G.A.; de Oliveira, R.L.; de Oliveira, H.N.	2014	Sublethal and transgenerational effects of insecticides in developing *Trichogramma galloi* (Hymenoptera: Trichogrammatidae): toxicity of insecticides to *Trichogramma galloi*.	Ecotoxicology (London, England), (2014 Oct) Vol. 23, No. 8, pp. 1399-408.	Does not fulfil criteria 5 (Several dose levels tested, to establish a dose response curve). Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). This study assessed the transgenerational effects of insecticides in developing *Trichogramma galloi*. Laboratory bioassays were performed in which insecticides were sprayed on egg-larval, pre-pupal and pupal stages of the parasitoid. Only one rate was tested (Actara, 250 g a.s./kg formulation; 2.64 g/ha). While this exposure route is environmentally relevant, it is not considered in the testing conducted for regulatory Tier I or II risk assessment for non-target arthropods. However, this exposure route for predatory wasps would be accounted for in regulatory higher tier field studies. There are 5 thiamethoxam foliar application field studies that examine effects on and recovery of full fauna populations. Therefore this study is considered as supplemental information only and does not alter the existing risk assessment.	8

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Amirzade, N.; Izadi, H.; Jalali, M. A.; Zohdi, H.	2014	Evaluation of three neonicotinoid insecticides against the common pistachio psylla, *Agonoscena pistaciae,* and its natural enemies	Journal of Insect Science: Vol. 14/ Article 35	Does not fulfil criteria 4 (Test organisms are not previously exposed to the test material or other contaminants). Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). Susceptibility of fourth instar larvae of *Adalia bipunctata* L. (Coleoptera: Coccinellidae) and *Coccinella undecimpunctata aegyptiaca* Reiche to thiamethoxam was investigated. Larvae were exposed via a topical application and mortality was recorded after 24 hours. *Adalia bipunctata* 24h LC_{50} = 232.37 mg a.s./L *Coccinella undecimpunctata aegyptiaca* 24h LC_{50} = 296.63 mg a.s./L A topical application exposure route is environmentally relevant, however it is not considered in the testing conducted for regulatory Tier I or II risk assessment for non-target arthropods. This exposure route would be accounted for in regulatory higher tier field studies. There are 5 thiamethoxam foliar application field studies that examine effects on and recovery of full fauna populations. According to the Escort II guidance document, the endpoints reported should be based on the application rate (e.g. g/ha) not concentration (e.g. mg/L). As this study method differs from the standard methods used for Tier I and II toxicity testing, this study is considered as supplementary information only.	27

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Gontijo, P. C.; Moscardini, V. F.; Michaud, Jp.; Carvalho, G. A.	2014	Non-target effects of two sunflower seed treatments on *Orius insidiosus* (Hemiptera: Anthocoridae).	Pest management science, (2014 Apr 11). Electronic Publication Date: 11 Apr 2014	Does not fulfil criteria 4 (Test organisms are not previously exposed to the test material or other contaminants). Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols) Investigation on whether thiamethoxam would have any detectable impacts on the survival, development or reproduction of *O.insidiosus* when various life stages of the bug were exposed to sunflower seedlings grown from seeds treated. Adults of *Orius insidiosus* were collected from a maize field at the Agricultural Research Center-Hays in Hays, Kansa and little information is given about the collection site's historical use of presticides. While this exposure route is environmentally relevant, it is not considered in testing conducted for the regulatory Tier I or II risk assessment for non-target arthropods. However, this exposure route for predatory wasps would be accounted for in regulatory higher tier field studies. There are 4 thiamethoxam seed treatment field studies that examine effects on and recovery of full fauna populations. Additionally, only one concentration was tested. Therefore this study is not considered relevant.	37

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Döker, I.; Pappas, M.L.; Samaras, K.; Triantafyllou, A.; Kazak, C.; Broufas, G.D.	2014	Compatibility of reduced-risk insecticides with the non-target predatory mite *Iphiseius degenerans* (Acari: Phytoseiidae)	Pest Manag Sci (2014)	Does not fulfil criteria 4 (Test organisms are not previously exposed to the test material or other contaminants). Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols) Effects of thiamethoxam at the highest recommended field dose (via direct overspray) on eggs, larvae and young adult females of *Iphiseius degenerans* were tested. Furthermore, a LC_{50} of 468 g a.s./L for adults was determined. Adults of *Iphiseius degenerans* were collected from a commercial citrus orchard in the district of Arta and little information is given about the collection site's historical use of presticides. While this exposure route is environmentally relevant, it is not considered in the testing conducted for regulatory Tier I or II risk assessment for non-target arthropods. However, this exposure route would be accounted for in regulatory higher tier field studies. There are 5 thiamethoxam foliar application field studies that examine effects on and recovery of full fauna populations. According to the Escort II guidance document, the endpoints reported should be based on the application rate (e.g. g/ha) not concentration (e.g. mg/L). As this study method differs from the standard methods used for Tier I and II toxicity testing, this study is considered as supplementary information only.	38

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Tirello, P.; Pozzebon, A.; Duso, C.	2013	The effect of insecticides on the non-target predatory mite *Kampimodromus aberrans*: Laboratory studies	Chemosphere 93 (2013) 1139–1144	Does not fulfil criteria 5 (Several dose levels tested, to establish a dose response curve). Does not fulfil criteria 6 (Exposure route is environmentally relevant). Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). A dried residue method was used to assess the effects of pesticides (including thiamethoxam) on *K. aberrans*is Leaf sections were immersed in the exposure solutions for 30 s and left to dry. Only one concentration was tested (50 mg a.s./L). Effects on mortality and reproduction were recorded. According to the Escort II guidance document, the endpoints reported should be based on the application rate (e.g. g/ha) not concentration (e.g. mg/L). As this study method differs from the standard methods used for Tier I and II toxicity testing, this study is considered as supplementary information only.	54

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	El-Zahi, S.	2013	Insect predators and control of Aphis gossypii comparing to certain insecticides under caged-cotton plants conditions.	Pakistan journal of biological sciences: PJBS, (2013 Mar 1) Vol. 16, No. 5, pp. 233-8.	Does not fulfil criteria 12 (Appropriate and relevant geoclimatic conditions (settings), appropriate observation data (biological relevance) to derive endpoints)). Field experiments with thiamethoxam were conducted at in Egypt to examine the impact of naturally occurring insect predators on cotton aphid, *Aphis gossypii* Glover (Homoptera: Aphididae) at its recommended rate using caged-plants technique. The number of predators per cotton plant were reported up to 40 days after application. There was a significant decrease in predator population compared to control for three weeks after application. The predator population returned to control levels approximately four weeks after application. Climatic conditions in Egypt are not considered appropriate for risk assessment in Europe. Additionally, the primary aim of the study was effects on aphid populations, thus the test design was not optimized for non-target species. Therefore this study is not considered relent.	69

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Yanhua, W.; Liping, C.; Xuehua, A.; Jinhua, J.; Qiang, W.; Leiming, C.; Xueping, Z.	2013	Susceptibility to selected insecticides and risk assessment in the insect egg parasitoid *Trichogramma confusum* (Hymenoptera: Trichogrammatidae).	Journal of economic entomology, (2013 Feb) Vol. 106, No. 1, pp. 142-9.	This study assessed the effects of insecticides (including thiamethoxam) on *Trichogramma confusum*. Laboratory bioassays were carried out by exposing adults to residues of the insecticides applied on glass tubes according to the procedures described by Wang et al. (2008). After 1 h of exposure, the wasps were transferred into a clean insecticide-free tube. After 24 h, the number and percentage mortality of dead parasitoids in the tubes were counted. 24h LC_{50} = 0.24 mg a.s./L According to the Escort II guidance document, the endpoints reported should be based on the application rate (e.g. g/ha) not concentration (e.g. mg/L). As this study method differs from the standard methods used for Tier I and II toxicity testing, this study is considered as supplementary information only.	73

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Frank, S.D.	2012	Reduced risk insecticides to control scale insects and protect natural enemies in the production and maintenance of urban landscape plants.	Environmental entomology, (2012 Apr) Vol. 41, No. 2, pp. 377-86.	The effect of insecticides (including thiamethoxam) on natural enemies of Euonymus scale was investigated under laboratory and field conditions. Two thiamethoxam formulations were tested (Flagship 25WG and Flagship G; 1 x 2.27 g /3.79 L and 1 x 20 g/gallon, respectively). In the laboratory, *Encarsia citrina* and *Orius insidiosus* were exposed to 10 d aged residues of thiamethoxam on Euonymus leaves. Mortality after 1 and 24 hours of exposure was recorded. However, results were not reported as NOER or LR_{50} and thus can not be used in risk assessment. In the field, natural enemy abundance was assessed 42 and 90 days after application with a beating method. On day 42, only parasitoids were counted but on day 90 parasitoids and nitidulids (beetles) were counted. The method employed here are not sufficient for a NTA field study. The effect of insecticides on Euonymus scale was also tested. As this is a pest species, this part of the study is not considered relevant. The laboratory results presented are not appropriate for use in risk assessment. The field study was not conducted to methods similar to standard NTA field study methods. Therefore, this study presents supplemental information only.	96

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Xueping, Z.; Changxing, W.; Yanhua, W.; Tao, C.; Liping, C.; Ruixian, Y.; Qiang, W.	2012	Assessment of toxicity risk of insecticides used in rice ecosystem on *Trichogramma japonicum*, an egg parasitoid of rice lepidopterans.	Journal of economic entomology, (2012 Feb) Vol. 105, No. 1, pp. 92-101.	A dry film residue method was used to assess the toxicity of insecticides (including thiamethoxam) on *Trichogramma japonicum* following Desneux et al. (2006). Acetone solutions of insecticide were made in glass tubes. After 1 h of exposure, the wasps were transferred into a clean insecticide-free tube. Parasitoid mortality was determined at 24 h post treatment. 24h LC_{50} = 0.4 mg a.s./L According to the Escort II guidance document, the endpoints reported should be based on the application rate (e.g. g/ha) not concentration (e.g. mg/L). As this study method differs from the standard methods used for Tier I and II toxicity testing, this study is considered as supplementary information only.	101
CA 8.3.2	Prabhaker, N.; Castle, S.J.; Naranjo, S. E.; Toscano, N. C.; Morse, J. G.	2011	Compatibility of two systemic neonicotinoids, imidacloprid and thiamethoxam, with various natural enemies of agricultural pests.	Journal of economic entomology, (2011 Jun) Vol. 104, No. 3, pp. 773-81.	Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). Toxicity of thiamethoxam to six beneficial arthropods was investigated by using a systemic uptake bioassay (exposure to systemically treated leaves). *Aphytis melinus*: LC_{50} = 0.105 µg a.s./L *Gonatocerus ashmeadi:* LC_{50} = 1.44 µg a.s./L *Eretmocerus eremicus:* LC_{50} = 1.01 µg a.s./L *Encarsia Formosa:* LC_{50} = 0.397 µg a.s./L *Geocoris punctipes:* LC_{50} = 2.17 µg a.s./L *Orius insidiosus:* LC_{50} = 1.67 µg a.s./L According to the Escort II guidance document, the endpoints reported should be based on the application rate (e.g. g/ha) not concentration (e.g. mg/L). As these study methods differs from the standard methods used for Tier I and II toxicity testing, this study is considered as supplementary information only.	113

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Pozzebon, A.; Duso, C.; Tirello, P.; Ortiz, P. Bermudez	2011	Toxicity of thiamethoxam to *Tetranychus urticae* Koch and *Phytoseiulus persimilis* Athias-Henriot (Acari Tetranychidae, Phytoseiidae) through different routes of exposure.	Pest management science, (2011 Mar) Vol. 67, No. 3, pp. 352-9.	Does not fulfil criteria 6 (Exposure route is environmentally relevant). Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). This study evaluates the effect of thiamethoxam on *T. urticae* and its predator by considering different routes of exposure: topical (microimmersion), residual (dipped bean leaves) and contaminated food exposure and their combinations, which are not standard exposure methods. In all experiments, an aqueous dispersion of thiamethoxam 250 g/kg (Actara 25 WG) containing 95 mg a.s./L was used Thiamethoxam effects on *T. urticae* were higher when residual and contaminated food exposures were considered. The total effect was higher than 90% where contaminated food exposure was involved. On *P. persimilis*, the total effect was higher in residual and contaminated prey exposures compared with topical exposure, and all combinations of routes of exposure attained total effect higher than 90% According to the Escort II guidance document, the endpoints reported should be based on the application rate (e.g. g/ha) not concentration (e.g. mg/L). As these study methods differs from the standard methods used for Tier I and II toxicity testing, this study is considered as supplementary information only.	120

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Koppel, A.; Herbert, D. A. Jr.; Kuhar, T. P.; Malone, S.; Arrington, M.	2011	Efficacy of selected insecticides against eggs of *Euschistus servus* and *Acrosternum hilare* (Hemiptera: Pentatomidae) and the egg parasitoid *Telenomus podis*i (Hymenoptera: Scelionidae).	Journal of economic entomology, (2011 Feb) Vol. 104, No. 1, pp. 137-42.	Does not fulfil criteria 5 (Several dose levels tested, to establish a dose response curve). Does not fulfil criteria 6 (Exposure route is environmentally relevant). Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). Laboratory bioassays and field trials were conducted to determine the efficacy of common field rates of thiamethoxam on *Telenomus podisi* Ashmead (Hymenoptera: Scelionidae) parasitoids developing in *E. servus* eggs. In laboratory bioassays, egg masses were dipped into insecticide solutions and assessed for mortality after 2 weeks. In the field trials, egg masses on a cloth section were pinned to leaves in each plot and returned to the laboratory 24 h after exposure to insecticide sprays. Mortality was assessed after 2 weeks. In the laboratory study, egg masses were dipped in the test solutions, which is not a relevant exposure route. While egg mass exposure to overspray is an environmentally relevant exposure route, it is not considered in the regulatory Tier I or II risk assessment for non-target arthropods. However, this exposure route for parasitoids would be accounted for in regulatory higher tier field studies. There are 5 for thiamethoxam foliar application field studies that examine effects on and recovery of full fauna populations. As only one concentration was tested and the methods used differ from standard methods, this study is considered as supplementary information only.	126

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Cloyd, R.A.; Bethke, J.A.	2011	Impact of neonicotinoid insecticides on natural enemies in greenhouse and interiorscape environments.	Pest management science, (2011 Jan) Vol. 67, No. 1, pp. 3-9.	This is a review article on effects of foliar and drench applied neonicotinoids (including thiamethoxam and clothianidin) on natural enemies. No new data is presented, therefore this reference is considered not relevant.	128
CA 8.3.2	Bostanian, N.J.; Hardman, J.M.; Thistlewood, H.A.; Racette, G.	2010	Effects of six selected orchard insecticides on *Neoseiulus fallacis* (Acari: Phytoseiidae) in the laboratory.	Pest management science, (2010 Nov) Vol. 66, No. 11, pp. 1263-7.	Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). Laboratory bioassays were conducted to determine the toxicity of common field rates of thiamethoxam on *Neoseiulus fallacis* parasitoids developing on two-spotted spider mites, *Tetranychus urticae* Koch (Acari: Tetranychidae). Thiamethoxam was applied as Actata 25 WG at 0.178 g a.s./L to *N. fallacis*, *T. urticae* and leaf discs (interior substrate of the test petri dishes) via direct overspray. Thiamethoxam was classified as moderately toxic to adults, and its label rate was 2.87-fold the LC_{50}. According to the Escort II guidance document, the endpoints reported should be based on the application rate (e.g. g/ha) not concentration (e.g. mg/L). While these exposure routes are environmentally relevant, they are not considered in the testing conducted for regulatory Tier I or II risk assessment for non-target arthropods. However, these exposure routes for non-target arthropods would be accounted for in regulatory higher tier field studies. There are 5 thiamethoxam foliar application field studies that examine effects on and recovery of full fauna populations. Therefore this study is considered as supplemental information only.	135

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Peck, D. C., Olmstead, D.	2010	Neonicotinoid insecticides disrupt predation on the eggs of turf-infesting scarab beetles.	Bulletin of entomological research, (2010 Dec) Vol. 100, No. 6, pp. 689-700.	Does not fulfil criteria 16 (Sufficient experimental information provided to substantiate and evaluate whether the study conclusions and endpoints are robust (e.g. pre-treatment details, replication and appropriate sampling scheme)). Does not fulfil criteria 17 (Study conditions should not differ significantly from recommended protocols if available for field study). The effect of neonicotinoids on Japanese beetle (*Popillia japonica* Newman) predation was examined by measuring removal of eggs implanted into non-irrigated field plots. Only the 'egg removal rate' was reported and the non-target taxa contributing to the removal rate of the eggs were not identified. Therefore this study is considered not relevant for this review.	144
CA 8.3.2	Ohnesorg, W. J.; Johnson, K.D.; O'Neal, M.E.	2009	Impact of reduced-risk insecticides on soybean aphid and associated natural enemies.	Journal of economic entomology, (2009 Oct) Vol. 102, No. 5, pp. 1816-26.	Field studies were conducted in soybeans to examine the effect of pesticides on aphid population and their natural enemies. Thiamethoxam was applied as a seed treatment at 2 loading rates. However later in the season, other insecticides were applied as a foliar treatment. Therefore effects can not be attributed to thiamethoxam alone. Therefore this reference is considered not relevant for this review.	167

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Cloyd, R.A.; Timmons, N. R.; Goebel, J. M.; Kemp, K. E.	2009	Effect of pesticides on adult rove beetle *Atheta coriaria* (Coleoptera: Staphylinidae) survival in growing medium.	Journal of economic entomology, (2009 Oct) Vol. 102, No. 5, pp. 1750-8	Does not fulfil criteria 5 (Several dose levels tested, to establish a dose response curve). Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). In this study the effect of thiamethoxam (35 mg/60mL) on adults of the rove beetle *Atheta coriaria* (Kraatz) was investigated. *A. coriaria* adults were exposed in containers with a growing media either by direct overspray or by residual contact. Residues were allowed to age for 24, 48, 72, or 96 hours. Only one concentration was tested (0.035 g a.s./60 mL; Flagship). According to the Escort II guidance document, the endpoints reported should be based on the application rate (e.g. g/ha) not concentration (e.g. mg/L). As the study methods differ from the standard methods used for Tier I and II toxicity testing, this study is considered as supplementary information only.	169

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Bostanian, N.J.; Thistlewood, H.A.; Hardman, J.M.; Laurin, M.C.; Racette, G.	2009	Effect of seven new orchard pesticides on *Galendromus occidentalis* in laboratory studies.	Pest management science, (2009 Jun) Vol. 65, No. 6, pp. 635-9.	Does not fulfil criteria 4 (Test organisms are not previously exposed to the test material or other contaminants). Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). This study reports laboratory exposure of thiamethoxam formulated as Actara 25 WG to *G.occidentalis* developing on *T. urticae.* The pesticides were applied to *G. occidentalis*, its prey (*T. urticae*) and the interior substrate (leaf disc and wet cotton strand) in petri dishes via direct overspray. The corrected cumulative percentage mortality for eggs was 4.3% for thiamethoxam. No LC_{50} could be determined. Adults of *G. occidentalis* were collected from IPM (integrated pest management) orchards in the Okanagan Valley, British Columbia, for which no information regarding the test field history are available. While these exposure routes are environmentally relevant, they are not considered in the testing conducted for regulatory Tier I or II risk assessment for non-target arthropods. However, these exposure routes would be accounted for in regulatory higher tier field studies. There are 5 thiamethoxam foliar application field studies that examine effects on and recovery of full fauna populations. Therefore this study is considered as supplemental information only.	178

CA data point number	Author(s)	Year	Title	Source	Reason(s) for not including the study in the dossier	Ref. ID
CA 8.3.2	Laurin, M-C.; Bostanian, N. J.	2007	Laboratory studies to elucidate the residual toxicity of eight insecticides to *Anystis baccarum* (Acari: Anystidae).	Journal of economic entomology, (2007 Aug) Vol. 100, No. 4, pp. 1210-4.	Does not fulfil criteria 10 (Study conditions should not differ significantly from recommended protocols). In this study, the residual toxicity of thiamethoxam to *A. baccarum* adults under laboratory conditions was investigated. A thin coat of the test insecticides suspended in water was applied to petri dishes. Five concentrations were tested based on the field application rate of 0.1778 g a.s./L. Even when applied at 8x the field rate thiamethoxam caused no residual toxicity to adult *A. baccarum*. According to the Escort II guidance document, the endpoints reported should be based on the application rate (e.g. g/ha) not concentration (e.g. mg/L). As this study method differs from the standard methods used for Tier I and II toxicity testing, this study is considered as supplementary information only.	206