Evaluation Manual for the Authorisation of plant protection products according to Regulation (EC) No 1107/2009

EU part

Plant protection products

Chapter 6 Ecotoxicology: terrestrial; birds and mammals

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ctgb

Board for the Authorisation of plant protection products and biocides

Chapter 6 Ecotoxicology; terrestrial; birds and mammals

Category: Plant Protection Products

Changes in the Evaluation Manual

Evaluation manual PPP EU part Chapter 6 Ecotoxicology; terrestrial; birds and mammals			
Version	**Date**	**Paragraph**	**Changes**
2.0	January 2014		
2.1	October 2016		Text from data requirements deleted from the Manual, replaced with reference/links to Regulations (EU) No 283/2013 and 284/2013. Short list of data requirements included in the text. General editing and formatting.
		1.3.1	Guidance included on: - Uses in playfields and lawns (amateur uses) – presence of small herbivorous mammals - PD small herbivorous mammal and the use of study by Rinke (1991) - Higher tier refinements agreed upon by the CZSC - Uncertainty analyses - Unclear scenarios - Renewed interception values
2.2	April 2017	1.3.2	- PD small herbivorous mammal, updated by the Luthi study - Update higher tier refinements agreed upon by the CZSC (workshop Vienna, 2015)
2.3	May 2018	1.3.2	- Relevant scenarios for herbicidal use in orchards, ornamental/nursery, bush and cane fruit and vineyard - Seedling scenario for treated seeds - PEC sw twa for secondary poisoning (text only)
2.4	January 2020	1.3.1	-Update agreements according to the Pesticide peer review meeting on general recurring issues in ecotoxicology; 185, October 2018
		1	Sentence included on the administrative EFSA guidance
2.5	July 2020		Potato-eating mammals added
		1.3.1.2	- Update higher tier refinements agreed upon by the CZSC (workshop Dessau, 2018)
2.6	September 2023		Minor changes (text)
2.7	October 2025	all	Update to EFSA 2023. Relevant for submissions after 30-09-2025 Old agreements from earlier guidance have been removed if those are considered incorporated in the new guidance and/ or not relevant anymore
2.7	October 2025	1.3.1	Specific chapter is added with discussion on guidance mixing (EFSA 2009 - EFSA 2023)
2.8	May 2026	1.3.2	Update with Bullet points Ecotox from the 7th CZHW, December 2023 (adopted by the CZSC October 2025)

GENERAL INTRODUCTION

This chapter describes the data requirements for estimation of the effects on birds and mammals of a plant protection product and its active substance and how reference values are derived in the EU framework (§1 - §1.5) Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC.

1. EU FRAMEWORK

In this document, the procedures for the evaluation and re-evaluation of active substances as laid down in the EU are described; the NL procedure for evaluation of a substance is reverted to when no EU procedure has been laid down. The NL-procedure for the evaluation of a substance is described in §2 - §2.5 of part 2 of the Evaluation Manual (plant protection products). This document aims to give procedures for the approval of active substances and inclusion in Commission Implementing Regulation (EU) No 540/2011 of 25 May 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards the list of approved active substancesText with EEA relevance.

Notifiers preparing an assessment report for active substances need to comply with the relevant guidance, instructions and format laid down in the EFSA Administrative guidance on submission of dossiers and assessment reports for the peer-review of pesticide active substances.

1.1 Introduction

This chapter describes the risk assessment of plant protection products for birds and mammals. The risk of plant protection products to birds and mammals is evaluated to prevent products that present an unacceptable risk to the environment reaching the market.

For submissions from 01-10-2025 the EFSA guidance on Risk assessment for birds and mammals (2023) is valid. For submissions prior to that date, it can be proposed by the applicant to perform the complete risk assessment according to the updated guidance. The choice can be made once and is considered relevant for the whole risk assessment, i.e. for birds ánd mammals, for all timescales.

Dossiers submitted to the Netherlands since 13/07/2012 and until 01/10/2025 are normally evaluated according to the EFSA guidance on risk assessment for birds and mammals (2009). For risk assessments that still fall within the EFSA 2009 guidance, please check Evaluation manual version 2.6, September 2023. In addition, chapter 1.3.1 below gives guidance on the use of certain refinements based on the revised guidance.

1.2 Data requirements

In order to qualify for inclusion of an active substance in Commission Implementing Regulation (EU) No 540/2011, a dossier that meets the provisions laid down in Commission Regulation (EU) No 283/2013 and Commission Regulation (EU) No 284/2013 of Regulation (EC) No 1107/2009 must be submitted for the active substance as well as for the product.

Generally, EU and OECD guidelines for the protocol of experiments are mentioned in Commission Communication 2023/C 344/02 and Commission Communication 2023/C 344 01.

When, according to the applicant, a certain study is not necessary, a relevant scientific justification can be provided for the non-submission of the particular study.

1.2.1 Data requirements for the active substance

The data requirements regarding the risk of the active substance to birds and mammals are described in Commission Regulation (EU) No 283/2013, point 8.1 (effects on birds and other terrestrial vertebrates).

Point 8.1 consists of the following data requirements:
8.1.1.1: Acute oral toxicity
8.1.1.2: Short-term dietary toxicity to birds
Please note the provisions with regard to this study in EFSA 2023 (5.2.3).

8.1.1.3: Sub-chronic toxicity and reproduction toxicity to birds
A test for effects on reproduction in birds is currently requested if birds are likely to be exposed during the breeding season. It should be noted that if exposure is outside the breeding season this can still lead to effects during the breeding season, especially in case of substances which are expected to have endocrine disruption effects. Also, the breeding season may differ between species and no definition is set across member states. Thus, the mere argument that application is outside the breeding season is not considered sufficient to disregard the long-term risk assessment. The EFSA 2023 guidance (5.2.1) states 'Overall, a reproductive risk assessment is considered mandatory for all substances under assessment, as the WG considers it difficult to demonstrate that effects will not occur during the breeding season (either through a direct exposure or through delayed effects of previous exposure)'.

8.1.2.1: Acute oral toxicity to mammals
8.1.2.2: Long-term and reproductive toxicity to mammals
8.1.3: Active substance bioconcentration in prey of birds and mammals
8.1.4: Effects on terrestrial vertebrate wildlife (birds, mammals, reptiles and amphibians)

Note Ctgb:
There are no guidelines available for investigating toxicity effects of pesticides on amphibians and reptiles. In line with EC 283/2013 this datapoint 8.1.4 is therefore best addressed with available open literature and any other relevant data.

NB: The OECD 231 Amphibian Metamorphosis Assay is a screening assay intended to empirically identify substances which may interfere with the normal function of the HPT axis. It is not intended to quantify or confirm endocrine disruption, or to provide a quantitative risk assessment for amphibians, but only provide evidence that thyroid regulated processes may be sufficiently perturbed to warrant more definitive testing. This assay is therefore not suitable to address datapoint 8.1.4.

8.1.5: Endocrine disrupting properties

1.2.2 Data requirements for the product

The data requirements regarding the risk of the plant protection product for birds and mammals are described in Commission Regulation (EU) No 284/2013, point 10.1 (Effects on birds and other terrestrial vertebrates).

Point 10.1 consists of the following data requirements:
10.1.1.1: Oral toxicity to birds
10.1.1.2: Higher tier data on birds
10.1.2.1: Acute oral toxicity to mammals
10.1.2.2: Higher tier data on mammals

1.2.3 Data requirements for metabolites

Data requirements for metabolites are not clearly reported for the section ecotoxicology. The

only reference in Commission Regulation (EU) No 283/2013 and Commission Regulation (EU) No 284/2013 for ecotoxicology is:

'It may be necessary to conduct separate studies for metabolites, breakdown or reaction products derived from the active substance where non-target organisms may be exposed and where their effects cannot be evaluated by the available results relating to the active substance. Before such studies are performed, the applicant shall take into account the information from Sections 5, 6 and 7.

Studies undertaken shall permit characterisation of metabolites, breakdown or reaction products as being significant or not, and reflect the nature and extent of the effects judged likely to arise.'

Several guidance documents have included a more detailed section on metabolites. More detailed information on data requirements for metabolites is given below, taken from the different guidance documents.

1.2.3.1 Metabolites -As a general principle it should be kept in mind that data requirements for metabolites mentioned in this section do not always need to be met by means of experimental studies. Applicants may also answer the open questions by means of other available information in support of a scientific and rational risk assessment.

Valuable sources of information are e.g.:
- the molecular structure of the metabolite (is the active part still intact?);
- the presence of metabolites in existing tests with the active substance and/or major metabolites (≥ 10%);
- general knowledge about the relationship between the toxicity of metabolites and the active substances from which these are formed;
- information about the pesticidal activity from biological screening data;
- available knowledge about substances that are related to the metabolites.

No further studies are required where a metabolite is CO_2 or an inorganic substance, not being or containing a heavy metal, or an organic substance with an aliphatic structure, with a chain length of 4 or less, which only consists of C, H, N or O atoms and contains no "structures" or functional groups that are known as ecotoxicologically relevant.

The metabolite is in such cases considered as ecotoxicologically not relevant and has a low risk to the environment.

Generally, a risk assessment is required for all metabolites. Minor metabolites (<10%), however, only need consideration in exceptional cases, e.g. if containing the active moiety of the molecule. By definition the PEC for a minor metabolite is lower than the PEC for the parent compound by more than a factor of 10; accordingly minor metabolites even if up to 10 times as toxic as their parent compound can be considered as safe, provided that the parent compound is safe and also provided that no new concern with regard to persistence is brought in.

Where metabolites are identified in laboratory studies but not in field studies, the field studies must be considered as most relevant unless the difference is caused by the methods used.

Tests with metabolites may not be required in case they are formed relatively rapidly and are present for a short time because they may in such cases have been taken into account in the toxicity tests with the active substance. Such conclusions must, however, be supported by analytical measurements.

Where more than one metabolite is considered as significant, it may be sufficient to conduct tests only with the most important metabolite (highest formation percentage, structure most comparable to the active substance).

Where higher tier studies have been carried out with the active substance, or a relevant formulation, the metabolites may have been taken into account in these studies (depending on the duration of the study and the degradation behaviour of active substance and metabolites).

In principle, the risk assessment for metabolites is the same as for the active substance. In case the metabolite is less toxic than the active substance, it will in most cases entail no greater risk than the active substance, which means that a detailed quantified risk assessment is not required. Exceptions are those metabolites that are more persistent and show more bioaccumulation than the active substance, which may result in differences in long-term exposure.

1.2.3.2 Metabolites - birds and mammals
In the EFSA guidance on Risk assessment for birds and mammals (2023) a separate section on metabolites can be found. In general, metabolites should be taken into account but additional testing on birds or mammals should be prevented a much as possible. See for further information EFSA GD (2023), Chapter 9.

1.3 Risk assessment
The risk assessment methodology for birds and mammals has in EU context been elaborated in the EFSA guidance on Risk assessment for birds and mammals (2023).

Each study is summarised and analysed separately. The final conclusion and the endpoint per aspect (such as LD_{50}) are presented in a list of endpoints. Risk assessment is based on comparison of predicted exposure with endpoints.

The EFSA GD (2023) still holds open points, management choices and MS issues. These are maily mitigation measures but may also concern higher tier refinements.
It should be noted that in higher tier risk assessment, refinement of parameters in both exposure and effect assessment may be influenced by local conditions (see section 3.2.2) . For a core assessment, these refinements should in principle cover the situation in all member states in the relevant zone. As example, when selecting focal species, coastal birds will probably not be selected in central Europe, but those might be highly relevant in The Netherlands, while mountain species will hardly occur in the Netherlands. A true core assessment should cover the risk in the whole region.
Due to these kind of possible differences, EFSA 2023 states that tier 3 assessments and higher are usually region or MS specific.

The EFSA 2023 guidance introduces the Terrestrial area of interest (TAI), which may be further refined at MS level (section 4.2). The TAI includes a drift component. Thus for the Netherlands, this section is further discussed in the NL evaluation manual.

As the exclusion of small mammals in some tier 1 assessment is based on crop cover, the guidance also assumes that if the small mammals are relevant in the TAI, at least a minimum of crop cover is assumed This means that a certain amount of interception can be considered. Appendix L indicate which interception value should be considered:
‘*Furthermore, interception by plants in the Terrestrial Area of Interest (TAI) has not been previously considered. However, the WG considered that it would be a reasonable approach to also apply half of the crop interception in grass to account for plant interception in TAI. This*

means that deposition to soil surface food items is assumed to always be 55% irrespective of the crop growth stage but deposition to weeds/plants/foliar-dwelling arthropods, etc. is 100%. It is acknowledged that the interception by plants in the TAI area will vary significantly. However, since plant coverage is key for the small mammal GMS for which the risk assessment is being performed, the WG considered that it was reasonable to assume plant interception in the TAI'.

Based on the relevant information the relevant scenarios, relevant SV values can be calculated. These are taken from available information in the guidance including appendix L, annex b and annex e. Worst-case SV values, without interception were corrected with the DV as specified. For small herbivorous mammals a diet of 50% monocot and 50% dicots has been taken, assuming that the off-field will always represent a mixture, as is in line with EFSA 2023.

Scenario	Crops	BBCH	Feeding guild GMS	BW GMS (g)	Diet	DV	SV acute	SV chronic
TAI	All crops except broadleaf forest trees and biomass trees	All	Small insectivorous	4	Ground arthropods	0.55	7.92	1.1
TAI	broadleaf forest trees and biomass trees	All	Small insectivorous	9	Ground arthropods	0.55	6.27	0.88
TAI	All crops	All	Small herbivorous	25	Dicot foliage& monocot foliage (50:50)	1	148.1	50.5
TAI	All crops	All	Granivorous	6	Weed seeds*	0.55	14.19	6.55

*This may not be worst case as seeds may also be on the plants weeds itself, however this is what the EFSA 2023 guidance indicate to be relevant for risk assessment.

These SV values can be used while the maximum exposure is corrected with the relevant drift factor.

Please refer to section 1.5 for requirements with regard to dossier submission.

1.3.0 Chronic endpoint for birds and mammals

It has been common practice that the chronic endpoints for birds and mammals that are used in the risk assessment are determined during active substance assessments (DAR, RAR), and finalized in expert meetings with EFSA and member states. Based on expert discussions, the acute and chronic endpoints for the active substance are set and included in the LoEP. During product assessment, these active substance endpoints are not revisited.

The EFSA 2023 guidance includes more information on how an endpoint should be calculated and determined, when compared to EFSA 2009. This does not require new data but gives more information on how the existing data should be interpretated, treated and calculated. For a long time it has been acknowledged that using an effect level endpoint (EC10, EL10, BMD10) is scientifically more sound than a no effect level endpoint (NOAEL). The latter merely

concerns the highest dose rate at which no (significant/ relevant) effects are found. The EL10 or BMD10 is a statistical or model-based calculation to determine the level on which 10% effects are seen.
The data requirements (Commission regulation 283/2013) already included the necessity of the EC10 in the chronic endpoints, if possible (8.1.1.3, 8.1.2.2). Thus the EFSA 2023 guidance does not include something new. Additionally, it is clarified that in case that no suitable EL10/EC10/BMD10 can be determined, the NOAEL should be used. This means that an EL10/EC10/BMD10 is not a critical data requirement and that a risk assessment according to EFSA 2023 can be performed without it (i.e., based on the NOAEL).

Currently, it is under discussion whether, once the EFSA 2023 guidance is into force (from 01/10/2025 for both active substance and product), this implies that for each product (whether new authorization or extension), the chronic active substance endpoints should be recalculated with a BMD10 model.

The developments in modelling tools have made a BMD10 more reliable and accessible than several years ago. But at this moment, it seems that the different models still have issues in predicting stable EL10/EC10/BMD10. Also, in-depth statistical, modelling, toxicological and ecotoxicological knowledge is required to determine the most suitable EL10/EC10/BMD10. It is furthermore noted that for the chronic endpoint for mammals, the responsibility lies actually with the mammalian section, rather than the ecotoxicological section. Thus the main discussion on the calculations and the reliability of an EL10 for mammals should be (should have been) part of the mammalian active substance discussion since Commission regulation 283/2013 was implemented. For ecotoxicology, the main focus in the discussion on the chronic endpoints for mammals should actually be the ecological relevance of a certain endpoint, which may need some additional modelling of a specific parameter, but not the recalculation of the whole data set of the chronic studies in the mammalian section.

Issues such as data access, workload and timelines, challenges in harmonization when several reporting member states work on the same active substance at the same time, and the high level of expertise that is required, make it very impractical to re-assess the chronic endpoints for birds and mammals, for each product and each amendment or extension of use. Applicants also claim that different models and different versions of the same model result in different outcomes of the BMD10.

This issue has been disucssed at the PAI. The PAI group agreed to the following approach:

- **Bench Mark Dose (BMD):** until the BMD for the active substance concerned has been derived at EU level (in particular as part of the approval or renewal of approval of the active substance) the NO(A)EL will be used.

See also section 1.3.2

1.3.1 Use of new information in risk assessment according to EFSA 2009

With the update of the guidance document on birds and mammals (EFSA 2023), several adaptations and further clarifications are made to the EFSA 2009 guidance. In terms of scientific knowledge the updated guidance can be considered as the scientific state of the art and may therefore be preferred to the EFSA 2009 guidance. It can occur that for a refined risk assessment in EFSA 2009 guidance one or certain elements are taken from the EFSA 2023 guidance. In most cases this is only done if the presented refinements seem to be beneficial for the dossier, while other more critical parts of the guidance are ignored.

Therefore, it is generally not considered appropriate to take only certain aspects of the 2023 guidance as refinements of calculations according to the 2009 guidance. With guidance mixing, the risk exists that only the less conservative choices from either guidance are combined (the so-called “cherry picking”).
However, several elements from the updated guidance may be used for refined risk assessment. This is especially the case for issues in which EFSA 2009 does not give any specific guidance or for parameters for which EFSA 2009 states that values were preliminary and needed an update.
The risk assessment for birds and mammals in product assessment has been discussed in the 7th and 8th central zone harmonization workshops for ecotoxicology.

In the 7th CZHW (Warsaw, Poland; 13-14 December 2023), the following agreements were made, which were confirmed by the CZSC in October 2025:

The majority of experts agreed to the following:

In reference to the birds and mammals guidances, in case a risk assessment is initially based on the EFSA (2009) B&M guidance document:

- The exposure may be refined using EFSA (2023) but only concerning parameters indicated in EFSA (2009) as provisional or based on the limited data;
- In case some parameters are taken from EFSA (2023) to refine the exposure, this has to be done for both, birds and mammals (even if refinement was necessary for only one group) and for all crops listed in the GAP. This requirement may be waived when it is demonstrated that worst-case situation was covered in the risk assessment based entirely on EFSA (2009) indications.

In the 8th CZHW (Brussels, Belgium; 13 April 2025), several additional agreements were reached. These have not been fully formalized at the central zone level and are therefore not yet included in the central zone evaluation manual. However, they reflect the Ctgb viewpoint and current way of working in product risk assessment.

<u>The following agreements were made with regard to refinements of risks identified using the EFSA (2009) bird and mammal guidance document:</u>

- <u>Interception values</u>
  For refinement of deposition estimates on food items, the revised FOCUS interception values – included in EFSA GD BM (2023) – may be applied. These values are acceptable only within the crop stage windows deemed relevant in EFSA GD BM (2009). The use of interception values for earlier growth stages than those identified in the 2009 guidance is not permitted.

- <u>RUD for food items other than fruits</u>
  When the applicant refers to the updated RUD database provided in EFSA GD BM (2023), the revised RUD must be consistently applied across:
  - Both acute and chronic risk assessments.
  - Both bird and mammal risk assessments.

  For chronic risk assessments conducted under EFSA GD BM (2009), the updated arithmetic mean values from the 2023 guidance should be used, instead of the geometric mean values, to preserve the 2009 methodology.

- <u>RUD values for fruits</u>
  Given the overall small RUD values and the limited dataset available in EFSA GD BM (2009), an exception is made for fruits. If the applicant refers to the updated RUD database of EFSA GD BM (2023) for fruits, the geometric mean value from EFSA GD

BM (2023) is accepted for the refined reproductive risk assessment under EFSA GD BM (2009).

In Appendix J in the 2023 guidance, both arithmetic and geometric mean values are reported. In several cases the geometric mean RUD values mentioned in appendix J are lower than the arithmetic mean RUDs from the 2009 guidance, while when comparing only arithmetic mean values the new database might actually lead to an increase in RUD. This can also be seen if the 90th percentile RUD are compared.

In the table below can be seen that for most food items, the revised RUD values in the EFSA 2023 guidance would lead to an increase in the exposure.

Food item*	EFSA 2009 (Appendix F)		EFSA 2023 (Appendix J)		
	90th percentile	Arithmetic mean	90th percentile	Arithmetic mean	Geometric mean
Ground-dwelling arthropods without interception	13.8	7.5	**20.2**	**8.4**	2.8
Foliar-dwelling arthropods	**54.1**	**21.0**	24.8	13.6	8.4
Grass &cereals renamed to 'monocotyledons'	102.3	54.2	**117.8**	**61.6**	47.2
Non-grass weeds renamed to 'dicotyledons'	70.3	28.7	**84.8**	**36.3**	21.9
*Maize***			*71.3*	*38.9*	*29.7*

Values in bold represent the worst-case
*Fruit items are not included in this short overview table but are addressed below. For seeds the EFSA 2009 values should still be used.
**Maize has become a separate category in the 2023 guidance. This might be relevant if the diet is based on maize.

We noted an issue with the RUD derivation for fruits, which is that the database seems to be based on measurements in the whole fruit (both in EFSA 2009 and 2023). This might be unrealistic for larger fruits such as apples, where only part of the fruit may be eaten, and if so, this logically would be the outer part. Especially shortly after application, most of the residue is likely to be present on the outside of the fruit. Thus, RUDs based on whole fruits may underestimate the exposure for large fruits. We will note this as an uncertainty to be reconsidered for a future update of the guidance document.

Food item*	EFSA 2009 (Appendix F)		EFSA 2023 (Appendix J, Table J.8)		
	90th percentile	Arithmetic mean	90th percentile	Arithmetic mean	Geometric mean
Large fruits from orchards (e.g. apple, lemon, mandarin, nectarine, orange, pear and peach)	41.1	19.5			
'Small fruits from	6.5	3.3			

orchards' (e.g. apricot, cherry, fate, fig, kiwi and plum)					
Berries (e.g. black currant, blueberry, grape and raspberry)	16.7	8.3			
Stone fruits (apricots, peaches, plums and cherries)	**- (41.1** for peaches **or 6.5** for apricots, plums and cherries**)**	- (19.5 or 3.3)	3.61		1.22
Pome fruits (apples, pears)	**- (41.1)**	- (19.5)	2.87		0.97
Citrus fruits (oranges, mandarins, lemons)	**- (41.1)**	- (19.5)	17		1.34
Grapes	**- (16.7)**	- (8.3)	5.33		2.28
Gourds, renamed as 'Fruiting cucurbitaceous vegetable crops'	**61.5**	34.3	1.4		0.47
Tomato, renamed as 'Fruiting solanaceous vegetable crops'	**30.6**	12.8	2.52	(1.1 – see Table J.3)	0.73

Values in bold represent the worst-case.

Proposal for fruits as food items if the applicant refers to the updated RUD database:
In view of the overall small RUD values, and since the database for fruits in EFSA GD BM 2009 was limited, the EFSA GD BM 2023 geometric mean is accepted for the refined reproductive risk assessment.

1.3.2 EU and Zonal agreements

Note that in previous versions of the E.M. (2.6 and before) several EU and zonal agreements are reported. Those are still valid for risk assessment under EFSA 2009. Most of these agreements are included in the revised guidance document, EFSA 2023.

PAI september 2025 (see also discussion above on chronic endpoints)

The updated Guidance document on birds and mammals is applicable to dossiers submitted from 1 October 2025 onwards, in the context of (renewal of) approval of active substances and in the context of (renewal of) authorisation of plant protection products submitted under Regulation (EC) No 1107/2009.

For products, the PAI group agreed the following approach:

- Bench Mark Dose (BMD): until the BMD for the active substance concerned has been derived at EU level (in particular as part of the approval or renewal of approval of the active substance) the NO(A)EL will be used

- Time Weighted Average factor (fTWA): The decision, if the TWA may be used, is to be made/assessed by one MS on behalf of the other MS of the EU. To set the fTWA, the procedure described in the GD on the evaluation of new data on an active substance submitted post (renewal of) approval (GD SANCO/10328/2004-rev 10)* is to be followed.

*Some uncertainty remains as this guidance has not been adopted yet.

1.3.2.1 EU agreements (substance)
No agreements were made up to now.

1.3.2.2 Zonal agreements
No agreements were made up to now for the risk assessment according to the EFSA (2023) guidance document. It is noted that for product risk assessment, the topic of endpoint setting (the need for and practical consequences of BMD derivation) and use of ftwa are currently under discussion in the PAI (Post Annex I Group, which is responsible for procedural guidance related to the authorisation and renewal of authorisations).

Zonal agreement on the PD refinement for the common vole (CZHW, Warsaw (PL), December 2023; CZSC October 2025)

For risk assessessment under EFSA (2009), the majority of experts agreed to the following:

1. Common vole may be considered as the relevant focal species for small herbivores feeding guild without submission of specific monitoring studies in the central zone;
2. Monitoring studies must be submitted always, when the Applicant would like to reject common vole as the focal species;
3. The following PD values will be used (in the long-term risk assessment):
   - Monocot dominated underground (i.e. orchards, vines, hops, grassland and cereals): PD of 0.75 and 0.25 for monocots and dicots, respectively, regardless of the timing of application;
   - Other crops: PD of 0.5 and 0.5 for monocots and dicots, respectively, regardless of the timing of application.
4. The PD refinement for common vole agreed above will be considered always when the tier 1 risk assessment indicates a high risk for vole.

1.3.3 Further elaboration on the risk assessment
The Ctgb approach on certain aspects of the higher tier risk assessment is given below.

Crop group selection for foliar spray crops

In Appendix E of the guidance, a selection of different crop groups is given. In appendix A of this chapter a translation of the crop groups to the Dutch DTG list is given.

Guidance on certain specific scenarios

Seed treatment – incorporation rates- precision drilling

In EFSA 2009, a reference is made to incorporation values for seeds remaining at the surface

based on De Snoo and Luttik, 2004. However, the reliability of this data was questioned during Pesticide Peer Review Teleconference 155 for the active substance metalaxyl-M due to: limited dataset (amount of soils, locations, seed types), no raw data and large standard deviations.
More studies were reviewed in EFSA 2023, appendix P. However it was noted that the information in appendix P.1 only considered the number of seeds per m^2 surface area from different sources of literature. As the number of seeds per m^2 is directly related to the seeding densities, which are not mentioned in the gathered information, the data collected in the table has limited value in risk assessment concerning the amount of seeds remaining at the surface.
In TC 155 on metalaxyl M the available information was further discussed. As this may still be relevant for risk assessment under EFSA 2023, the minutes from the discussion on seed percentages for precision drilling is given below.
"*Concerning the selection of % drilled seeds remaining on the soil surface,*
it was noted that the study by de Snoo & Luttik (2004), along with additional data are also reported in the Norther Zone Guidance Document to derive generic values for seed availability in the Northern Zone. The study by de Snoo & Luttik (2004) was considered uncertain. Therefore, data in the Northern Zone Guidance Document (De Snoo and Luttik 2004, Defra 2009, Pascual et al 1999, and Tamis 1994) were considered in more detail. These studies showed a range of values and sometimes higher numbers of seeds on the soil surface (e.g. sugar beet and oilseed rape). It was also highlighted that a high variability across studies in the % of seeds on the soil surface is evident. It was considered likely that such a variation in the number of seeds may also depend on the types of drilling machines used across studies, their changing technology, and the conditions across studies.
Given the variation across studies and the uncertainties around the study by de Snoo & Luttik (2004), some experts suggested to use NEU guidance worst-case value derived for precision drilled oilseed rape (10 % seeds left on the surface) or, alternatively, the NEU guidance value for sugar beet (1.32 %). The morphology of these seeds was considered sufficiently similar to spinach. One expert indicated the preference for taking the worst-case value from the Northern Zone guidance considering the identified uncertainties. However, it was noted that the oilseed rape study included in the Northern Zone Guidance Document was not evaluated as part of the risk assessment of metalaxyl-M. Some experts considered that using the value for oilseed rape (absolute worst-case across available studies) may result in an overly conservative assessment. It was therefore finally suggested not to exclude the applicant values, despite the uncertainties highlighted above. Other experts supported this approach and considered that, even if the data presented by the applicant have several uncertainties, they are informative and should be accounted for in the risk assessment.
It was therefore suggested to take a reasonable worst-case value from de Snoo & Luttik (2004) (rather than the absolute worst case from the Northern Zone Guidance Document) and to communicate to the risk managers what are the uncertainties with such an assessment.
The applicant used a value of 0.14 % from table 3 of de Snoo & Luttik (2004) and applied to this value a factor of 3.5 (0.49 %) to account for the higher seed availability in the headland. de Snoo & Luttik (2004) in their paper recommended assuming 0.5% of seed remaining on the soil surface for precision drilling.
In order to account for the uncertainty and variation in the data by de Snoo & Luttik (2004), the experts agreed to select the worst-case mean % of seed remaining on the soil surface for precision drilling and standard drilling from De Snoo and Luttik (2004) (i.e., the highest value for each respective group presented in table 2 of the published paper). This value was added to its standard deviation (to account for the uncertainties related to the data variability), before multiplying it by 3.5 (to account for the higher seed density in the headland, as suggested in De Snoo and Luttik (2004)). By doing this, the experts assumed 2.135 % seeds would be left on the soil surface after precision drilling in the headland. The experts acknowledged the limitation of the proposed approach and considered that it would be more scientifically underpinned to perform a study of the underlying data distribution and to select a worst-case

percentile value. However, the raw data were not available to the experts to estimate the distribution percentiles. This was considered to make best use of the data presented by the applicant and to address some key uncertainties identified in this specific assessment. It was reflected that according to EFSA (2023) the applicant should provide robust data and clear justification to the GAP under assessment including a consideration of the drilling equipment used in the studies. It is, therefore, expected that future assessment would require a more robust consideration of the available data.
Overall, all experts agreed that the WoE, foraging area approach should assume 2.135% spinach seeds to be left on the soil surface upon sowing.'

Considering the above, the incorporation percentage for seeds used in product risk assessments should be well justified.

Uses in grasslands - Presence of small herbivorous mammals
The group 'grasslands' can include very different types of grasslands, such as meadows, sod cultivation, golf greens, sport fields etc. The EFSA 2023 guidance identified several different grass crop groups, which always include small herbivorous mammals. It has been argued before that in early growth stages with limited crop cover small herbivorous mammals are not relevant. However the guidance states "*However, it is noted that under no-till, or low-till, practices these species may nevertheless persist in the field, also during earlier growth stages. Since the assessment cannot be directly linked to agricultural practices at the moment, it is suggested that the evaluators in the MS should ascertain whether the crop in question is commonly grown under no-tillage and decide whether the small herbivore might be relevant at early growth stages, dependent upon the case in question'.*
It was decided in the past (see also EM version 2.6 and earlier) that sport fields, golf courses (only fairway, golf greens and golf tees) and grass sods are intensively managed and the presence of small herbivorous mammals can be considered low. Because the grass is kept very short on golf greens and golf tees or grass sods, there is little cover. Therefore, it is not expected that small herbivorous mammals occur in these areas in such levels as to constitute a relevant focal species. However, in these cases an off-field risk assessment is required for small herbivorous mammals.
For other grass types, including grass seed crops, lawns, playfields and grass verges, in-field assessment of small herbivorous mammals is required. Note that lawns, playfields, and grass verges will be probably mowed occasionally or even relatively frequently. However, they are not consistently and rigorously maintained at a low level.

1.4 Approval
This section describes the approval criteria for active substances (section 1.4.1) and plant protection products (section 1.4.2 and 1.4.3). For the EU approval procedure of active substances a representative formulation has to be included in the dossier. Therefore section 1.4.1 to 1.4.3 apply. For the zonal applications of plant protection products only section 1.4.2 and 1.4.3 apply.

1.4.1 Approval of the active substance
Annex II of Regulation (EC) No 1107/2009 provides the procedure and criteria for the approval of an active substances, safeners and synergists..

Point 3 of Annex II of Regulation (EC) No 1107/2009 gives the criteria for the approval of an active substance.

1.4.2 Evaluation of plant protection products
The principles for the evaluation regarding the effects on the environment are presented in Commission Regulation (EU) No 546/2011 (i.e. the Uniform Principles). The specific principles for evaluation for birds and other terrestrial vertebrates are included in Part B Evaluation, point

2.5.2.1.

1.4.3 Decision making for plant protection products

The principles for the decision-making regarding the effects on the environment are presented in Commission Regulation (EU) No 546/2011 (i.e. the Uniform Principles).

The specific principles for decision making for birds and other non-target terrestrial vertebrates are included in Part C Decision making, point 2.5.2.1.

Note: the BCF in this case should actually be the BAF (bioaccumulation factor)

1.5 Data submission

Due to the complexity of the EFSA 2023 guidance, it is necessary to be as transparent as possible on the available data and calculations.
Study summaries, should be clear, transparent and contain all essential information to a level that other member states do not require to open the original study reports in order to understand the results and conclusions.
Applicants are requested to make sure that the Ctgb has easy access to all relevant study reports and public literature studies that are essential for the risk assessment.
Several tools are made available by EFSA for modelling and risk assessment. If these tools are to be used in the risk assessment, the modelling input (excel files or text file (.txt tab delimited)) and all modelling output should be included in the submission.

1.6 Developments

- Discussions on harmonising the approach for endpoint selection and twa discussions for formulation assessments is ongoing
- EFSA tool ‘birds and mammals’ is still in beta version

APPENDIX A: TRANSLATION OF THE DUTCH CROP DEFINITIONS LIST (DTG-LIST) TO BIRDS AND MAMMAL CROP GROUPS.

In the EFSA 2023 B&M guidance, the screening and Tier 1 risk assessment are performed for certain Indicator Model Species (IMS) and Generic Model Species (GMS), respectively. The relevant IMS and GMS are chosen based on the crop group in which a crop belongs. IMS are listed in Table 11 of the guidance document. GMS are assigned in Annex B to the guidance document, with a summary of the resulting daily dietary doses in Annex E.
The crop groups used in EFSA 2023 are listed in Appendix E, Table E.1 of the guidance document. However, that table does not fully cover all crops relevant for the Netherlands. Therefore, the current list was made. This list specifies which crop group(s) in the EFSA 2023 B&M guidance is (are) relevant for the crops or crop groups in the Dutch crop list (DTG-lijst). Version 2.2 of the DTG-lijst is presented below, with an added column for the 'crop group' as specified in the Birds and Mammals guidance.

Note: there are scenarios identified in the EFSA 2023 guidance which are not assigned to any crop in the DTG list. This includes among others 'stubble', 'citrus fruit crops' and 'cotton' . Those scenarios can still be relevant for other Member States or for uses not specified in the DTG list.

For many uses in the DTG-list, it is clear to which crop group it belongs. However, there are also uses in the DTG-list for which it is not clear which crop group can be used as representative. Those crops are indicated with #.

- Where deemed possible based on expert judgement regarding crop comparability, such unclassified crops in a group were given the same B&M scenario as the EFSA-included crops. This has the advantage that BBCH-differentiation can be included in the exposure calculations.

- In some cases, no clear scenarios could be determined, but the screening assessment is considered to be too much worst-case. In those cases, worst-case tier 1 scenarios may be used. These are selected based on Annex E of the guidance. In the table below, this is indicated with 'Tier 1'. The worst- case tier 1 short cut values (calculated as (FIR / bw (kg)) x RUD) are:
  - -Acute birds: 91.3
  - -Reproductive birds: 25.9
  - -Acute mammals: 157.1
  - -Reproductive mammals: 63.0

  These scenarios can be found groups listed below. Nota that for mammals an overall worst-case crop group can be selected, while for birds the worst-cse for acute cis found in different group groups than the worst-case for reproductive risk assessment:

  - Acute birds: Artichokes and cardoons, buckwheat, cotton, fruiting cucurbitaceaous and solanaceous vegetable crops, herb crops, jerusalem artichoke, leafy vegetable crops (excluding brassica), Legume crops, linseed/flax, pineapple, poppy, potatoes, quinoa, rhubarb, root and stem vegetables, salsify, spring and winter sown brassica arable crops, strawberry, sugar beet, sunflower, sweet potatoes, tobacco, vegetable brassica crops, sesame. All medium omnivorous bird, BBCH 10-19, (except legume crops, BBCH 10-49)
  - Chronic birds: Allium vegetable crops, asparagus, spring and winter sown cereals, amenity grassland, ornamental plants(unspecified, or herbaceous or cactuses and succulents). All medium omnivorous bird, BBCH 10-19
  - Acute and chronic mammals: Amenity grassland, grass crops, grassland, ornamental plants (unspecified, broadleaved trees, conifers, woody (monocotyledonous) plants. Small herbivorous mammals, all BBCH stages.

- For some uses on the DTG list, it is not clear which crop group could be used as representative. For the time being, the risk assessment should be performed with the screening assessment, see chapter 6.2.2, and table 11 in the EFSA 2023 guidance. In the appendix A below, this is indicated with 'crop group 1/2'. Note that Table 11 contains also a crop group 3. This crop group is not taken here because it results in (slightly) less worst-case exposure assumptions.
- The worst-case screening short cut values are:
  -Acute birds: 195
  -Reproductive birds: 55.3
  -Acute mammals: 161
  -Reproductive mammals: 64.5

In the risk assessment, all crops mentioned in the column 'B&M scenario' have to be included for the specific use applied for. Applicants may provide data and/or argumentation to support why a crop should be included in a different crop group. It is noted that quite often larger groups 'crop (sub) group' are selected with 'tier 1'or 'crop group 1/2', which is often due to just one or a few uses that are added in the DTG-list, but are both very uncertain for scenarios in bird and mammal risk assessment, and are often not intended in the use. In those cases, they could also be excluded on the label.

Professioneel gebruik/Professional use

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group	Crops/Objects	Remarks
1. Akkerbouwgewassen					**1. Arable crops**			
	1.1 Aardappelen			Potatoes		1.1 Potatoes		
		Pootaardappel		Potatoes			Seed potato	
		Consumptieaardappel		Potatoes			Ware potato	
		Zetmeelaardappel		Potatoes			Starch potato	
	1.2 Bieten			Sugar beet		1.2 Beet		
		Suikerbiet		Sugar beet			Sugar beet	
		Voederbiet		Sugar beet			Fodder beet	
	1.3 Granen			Winter sown cereal crops, spring sown cereal crops		1.3 Cereals		
		1.3.1 Wintergraan		Winter sown cereal crop			1.3.1 Winter cereals	
		Wintertarwe		Winter cereals			Winter wheat	
		Wintergerst		Winter cereals			Winter barley	
		Winterrogge*		Winter cereals			Winter rye*	
		Triticale		Winter cereals			Triticale	
		Spelt		Winter cereals			Spelt	
		Kanariezaad (kanariegras)		Winter cereals			Canary grass	
		1.3.2 Zomergraan		Spring sown cereal crop			1.3.2 Spring cereals	
		Zomertarwe		Spring cereals			Spring wheat	
		Zomergerst		Spring cereals			Spring barley	
		Zomerrogge*		Spring cereals			Spring rye*	
		Haver		Spring cereals			Oats	
		1.3.3 Overige granen		Spring cereals, winter cereals			1.3.3 Other cereals	

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group	Crops/Objects	Remarks
	1.4 Maïs			Maize and millet crop		1.4 Maize		
		Snijmaïs		Maize and millet			Forage maize	
		Korrelmaïs		Maize and millet			Grain maize	
		Corn cob mix		Maize and millet			Corn cob mix	
		Maiskolvensilage		Maize and millet			Corn cob silage	
	1.5 Peulvruchten			Legume vegetable crops, soybean		1.5 Pulses		
		1.5.1 Droog te oogsten erwten		Legume vegetable crops			1.5.1 Peas (dry)	
		Kapucijner		Legume vegetable crops			Marrowfat pea	
		Gele erwt		Legume vegetable crops			Yellow pea	
		Grauwe erwt		Legume vegetable crops			Grey pea	
		Groene erwt		Legume vegetable crops			Green pea	
		Rozijnerwt		Legume vegetable crops			Maple pea	
		Schokker		Legume vegetable crops			Brown Marrowfat	
		Suikererwt		Legume vegetable crops			Sugar pea	
		Linze		Legume vegetable crops			Lentil	
		Kikkererwt		Legume vegetable crops			Chickpea	
		1.5.2 Droog te oogsten bonen		Legume vegetable crops, soybean			1.5.2 Beans (dry)	
		Bruine boon		Legume vegetable crops			Brown bean	
		Gele boon		Legume vegetable			Yellow bean	

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group	Crops/Objects	Remarks
				crops				
		Kievitsboon		Legume vegetable crops			Pinto bean	
		Witte boon		Legume vegetable crops			White bean (haricot)	
		Kidneyboon		Legume vegetable crops			Kidney bean	
		Tuinboon *	= Veldboon *	Legume vegetable crops			Green bean *	= Broad bean *
		Lupine *		Legume crops			Lupin *	
		Sojaboon *		soybean			Soybean	
	1.6 Graszaadteelt			Grass crops		1.6 Grass seed crops		
	1.6.1 Raaigras*			Grass crops		1.6.1 Ryegrass*		
		Engels raaigras		Grass crops			English ryegrass	
		Italiaans raaigras		Grass crops			Italian ryegrass	
		Frans raaigras		Grass crops			False oatgrass	
		Westerwolds raaigras		Grass crops			Annual ryegrass	
		Gekruist raaigras		Grass crops			Hybrid ryegrass	
		Overige raaigrassen		Grass crops			(Other) ryegrasses	
	1.6.2 Zwenkgras			Grass crops		Grass crops	1.6.2 Fescue	
		Roodzwenkgras		Grass crops			Red Fescue	
		Hardzwenkgras		Grass crops			Sheep’s Fescue	
		Rietzwenkgras		Grass crops			Tall Fescue	
		Overige zwenkgrassen		Grass crops			Other fescues	
	1.6.3 Beemdgras			Grass crops		Grass crops	1.6.3 Bluegrass	
		Veldbeemd		Grass crops			Kentucky bluegrass	
		Moerasbeemdgras		Grass crops			Fowl bluegrass	
		Bosbeemdgras		Grass crops			Wood bluegrass	
		Beemdlangbloem		Grass crops			Meadow fescue	
		Overige beemdgrassen		Grass crops			Other bluegrasses	
	1.6.4 Overige grassen			Grass crops		Grass crops	1.6.4 Other grasses	
		Timothee		Grass crops			Timothy-grass	

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
			Kropaar		Grass crops				Cock's-foot	
			Struisgras		Grass crops				Colonial bent	
			Kamgras		Grass crops				Crested dog's-tail	
			Ruwe smele		Grass crops				Tufted hair-grass	
			Fakkelgras		Grass crops				June grass	
			Overige graszaadgewassen		Grass crops				Other grass seed crops	
	1.7 Oliehoudende zaden				Poppy, Linseed, Sunflower Spring sown brassica Winter sown brassica		1.7 Oilseeds			
			Blauwmaanzaad *		Poppy			-	Poppy seeds*	
			Karwij *		# poppy, Spring sown brassica Winter sown brassica				Caraway*	
			Vlas *	lijnzaad (consumptie en zaaizaad) en vezelvlas	Linseed				Flax*	Linseed (consumption and seed production) and fibre flax
			Mosterd *	Gele of witte mosterd zwarte- en bruine mosterd	Spring sown brassica Winter sown brassica				Mustard *	Yellow or white mustard Black and brown mustard
			Koolzaad *	winter en zomerkoolzaad, incl. raapzaad	Spring sown brassica Winter sown brassica				Oilseed rape*	Winter- and spring oilseed rape, including rapeseed
			Teunisbloem		# Poppy, Spring sown brassica Winter sown				Evening primrose	

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
					brassica					
			Zonnebloem		Sunflower				Common Sunflower	
			Huttentut		# Poppy, Spring sown brassica Winter sown brassica				Gold-of-pleasure	
			Crambe		# Poppy, Spring sown brassica Winter sown brassica				Crambe	
			Sojaboon *		soybean				Soybean	
			Overige oliehoudende zaden		# Poppy, Spring sown brassica Winter sown brassica				Other oilseeds	
	1.8 Vezelgewassen				Tier 1		1.8 Fibre crops			
			Hennep		# Tier 1			-	Hemp	
			Vlas*	lijnzaad (zaaizaad) en vezelvlas	linseed				Flax*	Linseed (seed production) and fibre flax
			Brandnetel		# Tier 1				Common nettle	
			Overige vezelgewassen		# Tier 1				Other fibre crops	
	1.9 Groenbemesters				Tier 1		1.9 Green manure crops			
		1.9.1 Vlinderbloemige groenbemesters			Legume & legume vegetable crops			1.9.1 Leguminous green manure crops		
			Klaver*	rode klaver witte klaver bastaardklaver inkarnaatklaver Perzische klaver Alexandrijnse klaver hopklaver	Legume crops				Clover *	red clover white clover alslike clover carnation clover Persian clover berseem clover hop clover birds-foot trefoil

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
				rolklaver witte honingklaver overige klaver soorten						honey clover other clover species
			Lupine*		Legume crops				Lupin*	
			Voederwikke*		# Legume crops				Common vetch*	
			Serradella		# Legume crops				Serradella	
			Hanekam*		# Legume crops				Celosia *	
			Esparcette*		# Legume crops				Esparcet*	
			Veldboon*		# Legume vegetable crops				Broad bean*	
			Overige vlinderbloemige groenbemesters		# Legume crops				Other leguminous green manure crops	
		1.9.2 Grasachtige groenbemesters			Spring and/or winter sown cereals, Grass crops/Grassland[2]			1.9.2 Gramineae green manure crops		
			Rogge*		Spring and/or winter sown cereals				Rye*	
			Raaigras*	Italiaans raaigras Westerwolds raaigras Engels raaigras	Grass crops				Ryegrass*	Italian ryegrass Annual ryegrass English ryegrass
			Japanse haver		Spring or winter sown cereals				Black oat	
		1.9.3 Kruisbloemige groenbemesters			Spring sown brassica Winter sown brassica			1.9.3 Cruciferae green manure crops		
			Bladrammenas		# Spring sown				Oil radish	

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
					brassica Winter sown brassica					
			Koolzaad*		Spring sown brassica Winter sown brassica				oilseed rape*	
			Gele mosterd*		Spring sown brassica Winter sown brassica				Yellow mustard seed*	
			Blad- en mergkool		# Spring sown brassica Winter sown brassica				Marrow-stem kale	
		1.9.4 Overige groenbemesters			# Tier 1			1.9.4 Other green manure crops		
			Facelia		# Tier 1				Tansy phacelia	
			Spurrie		# Tier 1				Corn spurrey	
			Afrikaantjes	Tagetes	# Tier 1				African Marigold	
			Raketblad		# Tier 1				Sticky nightshade	
			Sudangras		# Tier 1				Sudangrass	
			Deder		# Tier 1				gold-of-pleasure	
			Bladraap	raapzaad, stoppelknol of meiraap	# Tier 1				forage turnip	
			Zwaardherik		# Tier 1				Arugula	
			Niger		# Tier 1				niger-seed	
	1.10 Voedergewassen				Legume (vegetable) crops, Spring sown brassica Winter sown brassica		1.10 Fodder crops			

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
		1.10.1 Vlinderbloemige voedergewassen			Legume crops			1.10.1 Leguminous fodder crops		
			Klaver*	rode klaver witte klaver bastaardklaver inkarnaatklaver Perzische klaver Alexandrijnse klaver Klaver soorten spp hopklaver rolklaver witte honingklaver	Legume crops				Clover *	Red clover white clover alslike clover carnation clover Persian clover berseem clover clover species spp hop clover birds-foot trefoil honey clover
			Luzerne		Legume crops				alfalfa	
			Voederwikke*		# Legume crops				Common vetch*	
			Lupine *		Legume crops				Lupin*	
			Hanekam*		# Legume crops				Celosia*	
			Esparcette*		# Legume crops				Esparcet	
			Veldboon (voedergewas)*		Legume vegetable crops				Broad bean (feed crop) *	
		1.10.2 Overige voedergewassen			# Spring sown brassica Winter sown brassica			1.10.2 Other fodder crops		
			Stoppelknol		# Spring sown brassica Winter sown brassica				Forage turnip	
	1.11 Overige akkerbouwgewassen				Tier 1		1.11 Other arable crops			
		1.11.1			Tier 1			1.11.1 -		
			Witlof (pennenteelt)		Leafy vegetable crops (excluding				Witloof Chicory (roots)	

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
					brassica)					
			Cichorei		Leafy vegetable crops (excluding brassica)				Large-rooted chicory	
			Boekweit		buckwheat				Buckwheat	
			Hop		hops				Common hop	
			Meekrap		# Tier 1				Common madder	
			Miscanthus	prachtriet	# Tier 1				Chinese fairy grass	
			Olifantsgras		# Tier 1				Elephant grass	
			Quinoa		quinoa				Quinoa	
			Wede		# Tier 1				Woad	
			Wouw		# Tier 1				Wild woad	
			Sorghum		Maize and millet				Sorghum	
			Teff		# Spring and winter sown cereals				Teff	
			Gierst		Maize and millet				Millet	
			Russische paardenbloem		# Tier 1				Russian dandelion	
2. Cultuurgrasland					Grass crops/Grassland[2]	**2. Cultivated grassland**				
	2.1 Voedergrasland				Grassland		2.1 Fodder grassland			
		-	Weiland		Grassland				Permanent pasture	
			Maaigrasland		Grassland				Mowing grassland	
	2.2 Graszodenteelt				Grass crops/Grassland[2]		2.2 Turf production			
3. Fruitgewassen **Betreft alleen de productieteelt van te oogsten vruchten**						**3. Fruit crops** **Only refers to production of fruits**				
	3.1 Groot fruit				Pome and stone fruit crops		3.1 Large fruits			
		3.1.1 Pitvruchten			Pome fruit crops			3.1.1 Pome fruit		
			Appel		Pome fruit crops				Apple	
			Peer		Pome fruit crops				Pear	

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
				incl. Japanse peer						including oriental pear
			Kweepeer		Pome fruit crops				Quince	
			Mispel		Pome fruit crops				Common medlar	
			Overige pitvruchten		Pome fruit crops				Other pome fruit	
		3.1.2 Steenvruchten						3.1.2 Stone fruit		
			Kers	Zoete kers Zure kers	Stone fruit crops				Sweet cherry Sour cherry	
			Pruim	Incl. kroosje of kriekpruim	Stone fruit crops				Plum	Including bullace and damson plum
			Abrikoos		Stone fruit crops				Apricot	
			Perzik Nectarine		Stone fruit crops				Peach Nectarine	
			Overige steenvruchten		Stone fruit crops				Other stone fruit	
	3.2 Kleinfruit (Houtig kleinfruit is 3.2.2, 3.2.3 en 3.2.4 samen)				Strawberry, small fruit crop, vines		3.2 Small fruits (Woody small fruit consist of 3.2.2, 3.2.3 and 3.2.4)			
		3.2.1 Aardbei			strawberry			3.2.1 Strawberries		
		3.2.2 Bessen			Small fruit crop			3.2.2 Berries		
			Aalbes	Rode en witte bes Zwarte bes	Small fruit crop				Currant	Red and white currant Black currant
			Kruisbes		Small fruit crop				Gooseberry	
			Blauwe bes	Incl (blauwe) bosbes rode bosbes (vossebes)	Small fruit crop				Blueberry	including Bilberry Foxberry (cowberry)
			Veenbes	Incl cranberry (grote veenbes)	Small fruit crop				Small Cranberry	American or large cranberry

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
			Moerbei		Small fruit crop				Mulberry	
			Rozenbottel		Small fruit crop				Rose hip	
			Kiwibes		Small fruit crop				Kiwiberry	
			Vlierbes	Appelbes Duindoorn	Small fruit crop				Elderberry	Chokeberries Sea buckthorn
			Blauwe honingbes		Small fruit crop				Blue honeysuckle	
			Overige bessen		Small fruit crop				Other berries	
		3.2.3 Druif			Vines			3.2.3 Grapes		
			Tafeldruif		Vines				Table grapes	
			Wijndruif						Wine grapes	
		3.2.4 Braam- en framboos-achtigen (Rubus spp.)			Small fruit crop			3.2.4 Blackberry and raspberry family (Rubus spp.)		
			Braam		Small fruit crop				Blackberry	
			Framboos	incl. Taybes Japanse wijnbes	Small fruit crop				Raspberry	Including, Tayberry Japanese wine berry
			Dauw-bramen	Loganbes Boysenbes	Small fruit crop				Common dewberry	Loganberry Boysenberry
	3.3 Noten				Nut crops		3.3 Tree Nuts			
			Hazelnoot		Nut crops				Hazelnut	
			Kastanje		Nut crops				Chestnut	
			Walnoot		Nut crops			-	Walnut	
	3.4 Overige fruitsoorten				Fig, Kiwifruit		3.4 Other fruits			
			Vijg		Fig				Fig	
			Kiwi		Kiwifruit				Kiwi	
4. Groenteteelt						**4. Vegetable crops**				
	4.1 Bladgroenten				#Crop group 1/2		4.1 Leafy vegetables			
		4.1.1 Sla; *Lactuca* spp			Leafy vegetable			4.1.1 Lettuce (*Lactuca* spp.)		

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group	Crops/Objects	Remarks
				crops (excluding brassica)				
			incl. krulsla, snijsla (= babyleaf), pluksla (=baby leaf) eikenbladsla, lollo rosso, kropsla, ijsbergsla, bindsla, lolla bionda, Batavia	Leafy vegetable crops (excluding brassica)				Including curled leaf lettuce, oak leaf lettuce, lollo rosso, head lettuce, iceberg lettuce, Roman (cos) lettuce, lolla bionda, Batavia and babyleaves
		4.1.2 Andijvie		Leafy vegetable crops (excluding brassica)			4.1.2 Endive	
		Andijvie	incl. kropandijvie, krulandijvie, maaiandijvie, groenlof, radicchio rosso	Leafy vegetable crops (excluding brassica)			Endive	Including escarole, curled leaf endive, cutting endive, sugar loaf, radicchio rosso
		4.1.3 Spinazie-achtigen		Leafy vegetable crops (excluding brassica)			4.1.3 Spinach family	
		Spinazie	incl. Nieuw-Zeelandse spinazie raapstelen klaroen	Leafy vegetable crops (excluding brassica)			Spinach	Including New-Zealand spinach turnip tops spleen amaranth

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
			Snijbiet		Leafy vegetable crops (excluding brassica)				Chard	
			Tuinmelde		# Leafy vegetable crops (excluding brassica)				Garden orache	
			Postelein	incl. winterpostelein	#Leafy vegetable crops (excluding brassica)				Purslane	Including winter purslane
		4.1.4 Overige bladgroenten			#Crop group 1/2			4.1.4 Other leafy vegetables		
			Witlof (trekteelt)	incl. roodlof	Leafy vegetable crops (excluding brassica)				Witloof chicory (forced cultivation)	
			Waterkers		#Crop group 1/2				Watercress	
			Veldsla	*Valerianella locusta*	Leafy vegetable crops (excluding brassica)				Lamb's lettuce	*Valerianella locusta*
			Rucola	raketsla	Leafy vegetable crops (excluding brassica)				Rocket	Rucola
			Zeeaster	= lamsoor	#Crop group 1/2				Sea aster	
		4.1.5 Kiemgroenten			#Tier 1			4.2.5 Vegetable sprouts		
			Tuinkers		Vegetable brassica crops				Garden cress	
			Taugé		Legume vegetable crops crops				Bean sprouts (Mung bean sprouts)	
			Alfalfa		Legume crops				Alfalfa	
			Rucolakers		Vegetable brassica crops				Rucola cress	
			Overige kiemgroenten		#Tier 1				Other vegetable sprouts	

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group	Crops/Objects	Remarks
		4.1.6 Baby leaves	Alle groentegewassen die geoogst worden voor BBCH 19 (voor de meeste gewassen betreft dit het 8 bladstadium)	#Tier 1			4.1.6 Baby leaf crops	All vegetable crops harvested before BBCH 19 (for most crops this concerns the 8 true leaf stage)
	4.2 Peulgroenten			Legume vegetable crops		4.2 Legume vegetables (fresh)		
		4.2.1 Boon met peul		Legume vegetable crops			4.2.1 Beans with pod	
		Stamslaboon	sperzieboon, boterboon wasboon	Legume vegetable crops			Dwarf French bean	French bean, green bean, snap bean
		Stamsnijboon		Legume vegetable crops			Slicing bean	
		Stokslaboon	sperzieboon, boterboon wasboon, spekboon	Legume vegetable crops			Climbing French bean	French bean, green bean, snap bean
		Stoksnijboon		Legume vegetable crops			Climbing slicing bean	
		Pronkboon		Legume vegetable crops			Scarlet runner bean	
		Kouseband	incl. korte kouseband	Legume vegetable crops			Yardlong bean	including cowpea
		4.2.2 Boon zonder peul		Legume vegetable crops			4.2.2 Beans without pod	
		Tuinboon		Legume vegetable crops			Broad bean	
		Limaboon		Legume vegetable			Lima bean	

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group	Crops/Objects	Remarks
				crops				
		Flageolet		Legume vegetable crops			Flageolets	
	4.2.3 Erwt met peul			Legume vegetable crops		4.2.3 Peas with pod		
		Peul	stam- en rijspeul	Legume vegetable crops			Mangetout	
		Asperge-erwt		Legume vegetable crops			Asparagus pea	
		Suikererwt		Legume vegetable crops			sugar pea	
	4.2.4 Erwt zonder peul			Legume vegetable crops		4.2.4 Pea without pod		
		Doperwt		Legume vegetable crops			Green pea	
		Kapucijner		Legume vegetable crops			Field pea	
	4.3 Vruchtgroenten			#Tier 1		4.3 Fruiting vegetables		
	4.3.1 Vruchtgroenten van Cucurbitaceae eetbare schil			fruiting cucurbitaceous vegetable crops		4.3.1 Fruiting vegetables of Cucurbits - edible peel		
		Augurk		fruiting cucurbitaceous vegetable crops			Gherkin	
		Courgette	incl. patisson	fruiting cucurbitaceous vegetable crops			zucchini	including bush pumpkin
		Komkommer		fruiting cucurbitaceous vegetable crops			Cucumber	
	4.3.2 Vruchtgroenten van Cucurbitaceae niet-eetbare schil			fruiting cucurbitaceous vegetable crops		4.3.2 Fruiting vegetables of Cucurbits non-edible peel		

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
			Pompoen-achtigen	incl. winterpompoen en winter squash	fruiting cucurbitaceous vegetable crops				Pumpkins	including winter squash
			Meloen	netmeloen, suikermeloen, honingmeloen	fruiting cucurbitaceous vegetable crops				Melon	
			Watermeloen		fruiting cucurbitaceous vegetable crops				Watermelon	
		4.3.3 Vruchtgroenten van Solanaceae			fruiting solanaceous vegetable crops			4.3.3 Fruiting vegetables of Solanaceae		
			Aubergine		fruiting solanaceous vegetable crops				Aubergine	
			Tomaat		fruiting solanaceous vegetable crops				Tomato	
			Paprika	incl. Spaanse peper en Cayenne peper	fruiting solanaceous vegetable crops				sweet pepper	including red pepper and Cayenne pepper
			Tomatilo		fruiting solanaceous vegetable crops				Husk tomato	
		4.3.4 Vruchtgroenten van Malvaceae			#Tier 1			4.3.4 Fruiting vegetables of Malvaceae		
			Okra		#Tier 1				Okra	
	4.4 Koolgewassen				Vegetable brassica crops		4.4 Brassica vegetables			
		4.4.1 Sluitkoolachtigen			Vegetable brassica crops			4.4.1 Head cabbages		
			Sluitkool	rode kool, gele- en groene	Vegetable brassica crops				Head cabbage	Red cabbage, yellow and green

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
				savooie kool, spitskool, witte kool						savoy cabbage, head cabbage, white cabbage
			Spruitkool	Incl. flower sprouts	Vegetable brassica crops				Brussels Sprouts	Including flower sprouts
		4.4.2 Bloemkoolachtigen			Vegetable brassica crops			4.4.2 Flowering brassica		
			Bloemkool	witte, groene, paarse en romanesco	Vegetable brassica crops				Cauliflower	White, green, purple and romanesco
			Broccoli	incl. Chinese broccoli of kailaan	Vegetable brassica crops				Broccoli	including Chinese broccoli or Kai-lan, Choi sum
		4.4.3 Bladkoolachtigen			Vegetable brassica crops			4.4.3 Leafy brassica		
			Chinese kool	incl. amsoi, choisum , paksoi, komatsuna , tat soi, mibuna, mizuna, overige oosterse bladkolen.	Vegetable brassica crops				Chinese cabbage	including amsoi, Pak-choi, Spinach mustard, komatsuna, Tatsoi, Mibuna, Mizuna, other oriental cabbage leaves.
			Boerenkool	incl. maaiboerenkool en palmkool	Vegetable brassica crops				Kale	including cutting curly kale and palm tree kale
		4.4.4 Stengelkool			Vegetable brassica crops			4.4.4 Stern cabbage		
			Koolrabi	groene, witte en blauwviolette	Vegetable brassica crops				Kohlrabi	Green, white and purple
	4.5 Wortel- en knolgewassen				#Tier 1		4.5 Root and tuber vegetables			

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group	Crops/Objects	Remarks
	4.5.1 Radijs-achtigen			Vegetable brassica crops		4.5.1 Radishes		
		Radijs		Vegetable brassica crops			Small radish	
		Rammenas	incl. rettich, daikon	Vegetable brassica crops			Black/white radish	including Rettich, Daikon radish
	4.5.2 Wortelgewassen (Umbelliferae)			Root and stem vegetables		4.5.2 Root vegetables (Umbelliferae)		
		Wortelen	bospeen, Parijse wortelen, waspeen, winterwortel	Root and stem vegetables			Carrots	Bunched-up carrots, Parisian carrots
		Suikerwortel		Root and stem vegetables			Skirret	
		Wortelpeterselie		Root and stem vegetables			Turnip-rooted parsley	
		Pastinaak		Root and stem vegetables			Parsnips	
	4.5.3 Overige wortel- en knolgewassen			#Tier 1		4.5.3 Other root and tuber vegetables		
		Knolraap	raap en meiknol stoppelknol	Vegetable brassica crops			Turnip cabbage	
		Koolraap		Vegetable brassica crops			Swede	
		Aardpeer		Jerusalem artichoke			Jerusalem artichoke	
		Japanse aardappel (crosne)		# Root and stem vegetables			Japanese artichoke	
		Zoete aardappel		Sweet potato			Sweet potato	
		Rode biet		Leafy vegetable crops (excluding brassica)			Red beet	Beetroot, garden beet
		Knolselderij		Root and stem			Celeriac	

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
					vegetables					
			Schorseneer	incl. haverwortel	salsify				Black salsify	including common salsify
			Mierikswortel		Vegetable brassica crops				Horseradish	
			Yam		#Tier 1				Yam	
	4.6 Ui-achtigen				Allium vegetable		4.6 Bulb vegetables			
		4.6.1. Uien			Allium vegetable			4.6.1. Onions		
			Allium vegetable		Allium vegetable				Seed onion	
			Allium vegetable		Allium vegetable				First year bulb onion	
			Allium vegetable		Allium vegetable				Second year bulb onion	
			Allium vegetable		Allium vegetable				Silverskin onions	
			Allium vegetable		Allium vegetable				Picklers	
		4.6.2 Sjalotten			Allium vegetable			4.6.2 Shallots		
			Allium vegetable		Allium vegetable				Seed shallot	
			Allium vegetable						Bulb shallot	
		4.6.3 Bosuien			Allium vegetable			4.6.3 Spring onion		
			Allium vegetable	incl. stengelui, lente-ui, grove bieslook	Allium vegetable				Spring onion	including Welsh onion and escallion
		4.6.4. Knoflook			Allium vegetable			4.6.4. Garlic		
			Allium vegetable		Allium vegetable				Garlic	
	4.7 Stengelgroenten				#Crop group 1/2		4.7 Stem vegetables			
			Asperge	witte en groene asperges	asparasgus			-	Asparagus	white and green asparagus
			Bleekselderij		Root and stem vegetables				Celery	
			Kardoen		Artichokes and cardoons				Cardoon	
			Rabarber		rhubarb				Rhubarb	

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
			Knolvenkel		Root and stem vegetables				Fennel	
			Prei		Allium vegetable crops				Leek	
			Artisjok		Artichokes and cardoons				Globe artichoke	
			Zeekool		#Crop group 1/2				Sea kale	
			Zeekraal		#Crop group 1/2				Marsh samphire	
	4.8 Overige groentegewassen				Maize and millet		4.8 Other vegetable crops			
			Suikermaïs		Maize and millet				Sweet corn	
5. Kruidenteelt vers of gedroogd						**5. Herbs fresh or dried**				
	5.1 Aromatische kruidgewassen				#Tier 1		5.1 Aromatic herbs			
			Basilicum		Herb crops				Basil	
			Bieslook	incl knoflookbieslook	Allium vegetable crops				Chives	incl. chinese chives
			Bonenkruid	Incl bergbonenkruid	Herb crops				Summer savory	Incl winter savory
			Citroenmelisse		Herb crops				Lemon balm	
			Dille		Herb crops				Dill	
			Dragon	Russische en Franse dragon	Herb crops				Tarragon	Russian and French Tarragon
			Hysop		Herb crops				Hyssop	
			Kervel		Herb crops				Chervil	
			Koriander		Herb crops				Coriander	
			Peterselie	krulpeterselie en platte peterselie	Herb crops				Parsley	Curly and flat-leaf parsley
			Maggiplant	maggiblad (Lavas)	Herb crops				Lovage	Lovage leaves (Lavas)
			Majoraan	marjolein	Herb crops				Marjoram	

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
			Oregano	wilde marjolein	Herb crops				Oregano	Wild marjoram
			Munt		Herb crops				Mint	
			Pimpernel		Herb crops				Burnet	
			Rozemarijn		Herb crops				Rosemary	
			Salie		Herb crops				Sage	
			Tijm		Herb crops				Thyme	
			Venkel		Root and stem vegetables				Fennel	
			Bladselderij		Root and stem vegetables				Celery leaves	stalk celery
			Veldzuring		Herb crops				Sorrel	
			Camellia sinensis	= thee	#Tier 1				Tea	
			Overige aromatische tuinkruiden		#Tier 1				Other aromatic garden herbs	
			Eetbare bloemen	o.a. courgette, afrikaantjes (Tagetes), Oost-Indische kers, goudsbloem	#Tier 1				Edible flowers	e.g. zucchini African Marigold common nasturtium pot marigold
	5.2 Aromatische wortelgewassen				#Root and stem vegetables		5.2 Aromatic root crops			
			Maggi		#Root and stem vegetables			-	Lovage root	
			Engelwortel		#Root and stem vegetables				Angelica	
			Bevernelwortel		#Root and stem vegetables				Burnet Saxifrage root	
			wortelpeterselie		#Root and stem vegetables				turnip-rooted parsley	
			Overige aromatische wortelgewassen		#Root and stem vegetables				Other aromatic root crops	

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
	5.3 Medicinale kruidgewassen				#Tier 1		5.3 Medicinal herbs			
			Opgeblazen Lobelia		#Tier 1			-	Indian tobacco	
			Wollig vingerhoedskruid		#Tier 1				Woolly foxglove	
			Driekleurig viooltje		#Tier 1				Wild pansy	
			Echte kamille		#Tier 1				Wild chamomile	
			Zonnehoed		#Tier 1				Purple cone flower	
			Bekergoudsbloem		#Tier 1				Pot marigold	
			Overige medicinale kruidgewassen		#Tier 1				Other medicinal herbs	
	5.4 Medicinale wortelgewassen				#Tier 1		5.4 Medicinal root crops			
			Valeriaan		#Tier 1				Valerian	
			Ginseng		#Tier 1				Asiatic ginseng	
			Zonnehoed		#Tier 1			-	Purple coneflower root	
			Overige medicinale wortelgewassen		#Tier 1				Other medicinal root crops	
	5.5 Kruidenzaadgewassen				#Tier 1		5.5 herb seed crops			
			Karwijzaad*		#Poppy, Spring sown brassica Winter sown brassica				Caraway*	
			Blauwmaanzaad*		Poppy				Poppy seed*	
			Overige kruidenzaadgewassen		#Tier 1			-	Other seed herbs	
	5.6 Vruchten of bessen (kruidenteelt)				#Tier 1		5.6 Fruits or berries (herbs)			
			Vanille		#Tier 1				Common vanilla	
6. Paddenstoelenteelt						**6. Mushrooms**				
	6.1 Eetbare paddenstoelen				-		6.1 Edible mushrooms			
			Champignon	witte champignon, kastanje champignon, portobello	-				Button mushroom	Common mushroom, Chestnut mushroom, Portabello

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
										mushroom
			Oesterzwam	gewone oesterzwam, trechteroesterzwam, goudkleurige esterzwam, kruisdistel oesterzwam, zalmoesterzwam, roze oesterzwam	-				Oyster mushroom	oyster mushroom, golden oyster mushroom, pink oyster mushroom, king oyster mushroom
			Overige paddestoelen	Shiitake paarse schijnridderzwam nameko anijschampignon geschubde inktzwam fluweelpootje populierleemhoed shimeji, blauwplaatstropharia, eikhaas lakzwam judasoor amandelchampignon	-				Other mushrooms	Shiitake Blue stalk mushroom Nameko Horse mushroom Shaggy ink cap Winter mushroom Poplar fieldcap shimeji, wine cap mushroom hen-of-the-woods, Lingzhi mushroom Judah's ear almond portobello

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group	Crops/Objects	Remarks
7. Sierteeltgewassen					**7. Ornamental crops**			
	7.1 Bloembol- en bloemknolgewassen			Bulb-like ornamental herbaceous plants		7.1 Flower bulb and flower tuber crops		
		7.1.1 Bloembollen en bloemknollen	Vermeerderingsteelt van amaryllis, dahlia, gladiool, hyacint, lelie, narcis, tulp, iris, krokus, overige bloembollen en bloemknollen	Bulb-like ornamental herbaceous plants			7.1.1 Flower bulbs and flower tubers	Cultivation for reproduction of amaryllis, dahlia, gladiolus, hyacinth, lily, narcissus, tulip, iris, crocus, other flower bulbs and tubers
		7.1.2 Bolbloemen en knolbloemen	Bloementeelt / potplantenteelt van bloembollen en bloemknollen van amaryllis, dahlia, gladiool, hyacint, lelie, narcis, tulp, iris, krokus, overige bloembollen en bloemknollen	Bulb-like ornamental herbaceous plants			7.1.2 Bulb flower and tuber flower	Flower / pot plants cultivation of amaryllis, dahlia, gladiolus, hyacinth, lily, narcissus, tulip, iris, crocus, other flower bulbs and tubers
	7.2 Bloemisterijgewassen			Ornamental plants (unspecified)[1]		7.2 Floriculture crops		
		7.2.1 Potplanten	incl. eenjarige perkplanten, bolbloemen en knolbloemen	Ornamental plants (unspecified)			7.2.1 Pot plants	including annual bedding plants, and potted bulb flowers and tuber flowers
		7.2.2 Snijbloemen	incl.	Ornamental			7.2.2 Cut flowers	including

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group	Crops/Objects	Remarks
			zomerbloemen, droogbloemen, bolbloemen en knolbloemen	plants (unspecified)[1]				summer flowers, dried flowers, bulb flowers and tuber flowers
		7.2.3 Trekheesters		Ornamental plants (unspecified)[1]			7.2.3 Forced shrubs	
		7.2.4 Snijgroen		Ornamental plants (unspecified)[1]			7.2.4 Cut green	
	7.3 Boomkwekerijgewassen			Ornamental plants (unspecified)[1]		7.3 Tree nursery crops		
		7.3.1 Laanbomen		Ornamental broad-leavedtrees, shrubs, and climbingplants Ornamental woody plants			7.3.1 Avenue trees	
		7.3.2 Klimplanten		Ornamental broad-leavedtrees, shrubs, and climbingplants Ornamental woody plants			7.3.2 Climbing plants	
		7.3.3 Sierheesters (inclusief rozen)	incl. onderstammen en buitenrozen	Ornamental broad-leavedtrees, shrubs, and climbingplants Ornamental			7.3.3 Ornamental shrubs (including roses)	including rose stocks and outdoor roses

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group	Crops/Objects	Remarks
				woody plants				
		7.3.4 Coniferen (inclusief kerstbomen)		Ornamental conifers Ornamental woody plants			7.3.4 Conifers (including Christmas trees)	
		7.3.7 Heide soorten		Ornamental broad-leavedtrees, shrubs, and climbingplants Ornamental woody plants			7.3.7 Heather	
		7.3.8 Bos- en haagplantsoen		Ornamental broad-leavedtrees, shrubs, and climbingplants Ornamental conifers Ornamental woody plants ornamental woody monocotyledonous plants			7.3.8 Forest trees and hedging plants	
		7.3.9 Vruchtbomen en -struiken[4]	incl. vruchtboom onderstammen	Ornamental broad-leavedtrees, shrubs, and climbingplants Ornamental woody plants			7.3.9 Fruit trees and shrubs[4]	including fruit tree stocks
	7.4 Vaste plantenteelt			Ornamental		7.4 Perennial crops		

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group	Crops/Objects	Remarks
				plants (unspecified)[1]				
	7.5 Bloemenzaadteelt			Ornamental plants (unspecified)[1]		7.5 Flower seed crops		
	7.6 Moeras- en Waterplanten			#Crop group 1/2		7.6 Marsh and Water plants		
	7.7 Veredeling en zaadteelt			#Crop group 1/2		7.7 Plant breeding crops and seed production		
8. Openbaar groen en particuliere tuinen					**8. Amenity areas**			
	8.1 Grasvegetatie			Amenity grassland, Ornamental plants (unspecified)[1]		8.1 Managed amenity turf		
		Gazon	incl. graszodenteelt	Amenity grassland			Lawn	including turf production
		Speelweide	incl. graszodenteelt	Amenity grassland			Playground	including turf production
		Sportveld	incl. golfterrein en graszodenteelt	Amenity grassland			Sports field	including golf courses and turf production
		Grasbermen		Amenity grassland			Grassy verges	
	8.2 Houtige beplanting			Ornamental plants (unspecified)[1]		8.2 Woody plantings		
		Laan- en perkbomen		Ornamental plants (unspecified)[1]			Avenue and border trees	
		Windsingels en -schermen en -hagen		Ornamental plants (unspecified)[1]			Shelter belts, windbreaks and hedgerows	
		Overige houtige	bosplantsoen en	Ornamental			Other woody	forest trees and

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
			beplantingen	wegbeplanting	plants (unspecified)[1]				plantings	roadside verges
	8.3 Kruidachtige beplanting				Ornamental plants (unspecified)[1]		8.3 Herbaceous plantings			
9. Bosbouw						**9. Forestry**				
	9.1 Loofhout				Broadleaf forest tree		9.1 Broad-leaved trees			
	9.2 Naaldhout				Coniferous forest trees		9.2 Coniferous trees			
10. Onbeteeld terrein						**10. Uncultivated land**				
	10.1 Tijdelijk onbeteeld terrein				#Tier 1		10.1 Temporarily uncultivated terrain			
			Kaalslagterrein		#Tier 1				Deforestation area	
			Tijdelijk onbeteeld land		Bare fallow				Temporarily uncultivated land.	
			Akkerranden		#Tier 1				Buffer areas of fields	
	10.2 Permanent onbeteeld terrein				Bare fallow		10.2 Permanently uncultivated land			
			Gesloten verharding	verharding zonder voegen (bijv. asfalt of beton)	Bare fallow[3]				Hard surfaces	Impermeable surface e.g. asphalt, concrete
			Half open verharding	elementverhardingen met voegen (bijv. trottoirtegels, straatstenen of ZOAB).	Bare fallow				Half open surfaces	Surfaces made of paving, blocks or slabs, with joins (e.g. paving stones on pavements and roads, dual-layer porous asphalt
			Open verharding	gestort of waterdoorlatend materiaal (bijv grint, schelpen	Bare fallow				Permeable surfaces	Poured or water-permeable material (e.g. gravel, shells or

Sector	Gewas (sub) groep		Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group		Crops/Objects	Remarks
				of grasbetontegels)						grass concrete tiles)
			Onverhard terrein		Bare fallow				Unpaved surfaces	
	10.3 Objecten				# Tier 1		10.3 Objecten			
			Groene daken	Vegetatiedak, daktuin	# Tier 1				Green roofs	Vegetation roof, roof garden
			Grinddaken		# Tier 1				Gravel roofs	
			Groene wanden	Verticale geveltuin, groene gevel, muren	# Tier 1				Plant wall	Vertical house front, green house front, walls
11. Watergangen						**11. Water courses**				
	11.1 (droog) Talud				#Crop group 1/2		11.1 (dry) slope			
	11.2 Droge slootbodems				#Crop group 1/2		11.2 Dry ditches			
	11.3 Watervoerende watergangen				#Crop group 1/2		11.3 Water courses which contain water			
	11.4 Onderhoudspaden van watergangen				#Crop group 1/2		11.4 Maintenance paths of water courses			
	11.5 Vijvers				#Crop group 1/2		11.5 Ponds			
12. Riet- en wilgenteelt						**12. Reed and osier crops**				
			Snijteen	droge en natte teelt	#Crop group 1/2				Osier	dry and wet crops
			Riet		#Crop group 1/2				Reed	
13. Afvalhopen						**13. Refuse heaps**				
14. Voorraadbescherming opgeslagen producten						**14. Stored products**				
	14.1 Eetbare producten in opslag		met uitzondering van plant- en uitgangsmateriaal		In case of exposure to the environment: tier 1		14.1 Edible products	except plant- and propagation material		
	14.2 Niet-eetbare producten in opslag		met uitzondering van plant- en uitgangsmateriaal		In case of exposure to the environment: tier 1		14.2 Non-edible products	except plant- and propagation material		
	14.3 Lege voorraadruimten		bestrijding van plant pathogenen		In case of exposure to the		14.3 Empty storage facilities	Control of plant pathogens		

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	Crop group	Sector	Crop (sub) group	Crops/Objects	Remarks
				environment: tier 1				
15. Ontsmettingsmiddelen					**15. Disinfectants**			
		land- en tuinbouwapparatuur en gereedschap en materialen	mits de bestrijding van plantpathogenen wordt geclaimd, anders biocide	In case of exposure to the environment: tier 1			Agricultural and horticultural equipment, tools and materials	On condition that plant pathogens are claimed, otherwise biocide

* crops that apprer on multiple occations in the list.

[1] ornamentals unspecified: please note that the inclusion of the group 'Ornamental plants (unspecified)' is because many proposed GAPs do not indicate the type of ornamental plant that the PPP will be used. In these cases, the risk assessment must encompass all types of ornamental plant and therefore worst-case parameters need to be selected. Further specification of relevant scenarios may be possible. Please check EFSA (2023), appendix E.

[2] Grass crops/Grassland: these seem to be the same therefore either one of those scenarios can be used.

[3]Direct exposrue on hard surfaces is probably unrealistic, however in such cases a valid off-field (TAI) assessment is relevant for both birds and mammals. However this scenario (for birds) does not exsist yet. This may be changed in future.

[4]This assumes very young trees and bushes, before they will carry fruit (usually first 3 years).

Niet-professioneel gebruik /Amateur use

Note: for authorization in the Netherlands please check the evaluation manual ecotoxicology for non-professional uses (national elements)

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	B&M scenario	Crop (sub) group	Crops/Objects	Remarks
16. In en om het huis binnen de privé-sfeer							
	16.1 Moestuin (eetbare gewassen in open lucht en/of kas)			Tier 1[1]	16.1 Vegetable garden (edible crops protected or open field)		
	16.2 Sierbeplanting (planten in de vollegrond)			Ornamental plants (unspecified)[2]	16.2 Ornamental garden plants (field crops)		
			Planten in de vollegrond in open lucht en/of kas Niet eetbare gewassen	Ornamental plants (unspecified)[2]			Non-edible field grown plants (protected or open field)

Sector	Gewas (sub) groep	Gewassen / objecten	Opmerkingen	B&M scenario	Crop (sub) group	Crops/Objects	Remarks
	16.3 Kamerplanten			-	16.3 Houseplants		
			Planten in huis	-			Plants in house
	16.4 Kuipplanten			Ornamental plants (unspecified)[2]	16.4 Patio plants		
			Planten niet in de vollegrond in open lucht en/of kas	Ornamental plants (unspecified)[2]			Plants not grown in the open field and/or greenhouse
	16.5 Gazons			Amenity grassland	16.5 Lawn		
	16.6 Weilanden			Grassland	16.6 Permanent pasture		
	16.7 Open verhardingen (grind, schelpen etc.)			Bare fallow	16.7 Permeable surfaces (gravel, shells etc)		
	16.8 Halfopen verhardingen (tegels, straatstenen, etc).			Bare fallow	16.8 Half open surfaces (paving stones, paving bricks etc)		
	16.9 Dichte verhardingen (beton, etc.)			Bare fallow	16.9 Hard surfaces (concrete, etc)		
	16.10 Onverharde terreinen			Bare fallow	16.10 Unpaved area		

[1] This can be furhter refined depending on which edible crops. See scenarios for professional uses.

[2] ornamentals unspecified: please note that the inclusion of the group 'Ornamental plants (unspecified)' is because many proposed GAPs do not indicate the type of ornamental plant that the PPP will be used. In these cases, the risk assessment must encompass all types of ornamental plant and therefore worst-case parameters need to be selected. Further specification of relevant scenarios may be possible. Please check EFSA (2023), appendix E.