ESRA - Acetamiprid

Coillte Forest Department:	CF Operations
Category:	Establishment
Subject:	Environmental and Social Risk Assessment (ESRA) - Acetamiprid (ACP)
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Background

The FSC®[1] issued a revised FSC Pesticides Policy in May 2019 [FSC-POL-30-001 V3-0 EN *FSC Pesticides Policy*]. This updated policy requires Coillte to complete a comparative environment and social risk assessment (ESRA), as part of integrated pest management, to identify the lowest risk option to control a pest, weed or disease, the conditions for its use and the generic mitigation and monitoring measures to minimise the risks.

ESRAs are intended to inform site operational plans, site specific risks and adoption of appropriate mitigation measures (FSC-POL-30-001 V3-0 EN, 4.12.6).

FSC has classified acetamiprid as a Restricted Highly Hazardous Pesticide (HHP). It is included in the hazard group Acute Toxicity under criterion 2 (Acute toxicity to mammals and birds), indicator 2.1, threshold (b) on the basis that it has an acute toxicity to mammals and birds LD50< 200mg/kg body weight.

This ESRA covers standard forestry uses of acetamiprid for protection of seedlings from weevil damage.

Scope

This ESRA covers standard forestry uses of acetamiprid for protection of seedlings from weevil damage.

The essential controls on acetamiprid usage are summarised below as part of the ESRA.

[1] FSC® Licence Code: FSC-C005714

ESRA - Acetamiprid

Environmental and social risk assessment

Pesticide: Acetamiprid

Purpose of use: Protection of seedlings from weevil damage

This ESRA is based on the listing of acetamiprid as a Highly Hazardous Pesticide as acutely toxic by ingestion, and as such it gives significant weight to mitigating risks to human health, primarily through the pathway of direct worker exposure. In practical reality, however, the highest risk is to aquatic life, and the ESRA gives greatest weight to mitigating this risk. Other potential impacts are also considered, but the proposed mitigation strategies and indicators are proportionate to the perceived lower level of risk.

The ESRA applies to:

- Acetamiprid and not to individual formulations, which may present other hazards.
- Standard forestry uses of acetamiprid, i.e. those covered by the certificates of competence mentioned in the ESRA. It does not apply to non-standard uses, which may require additional safeguards.
- The application of acetamiprid, but also to mixing, storage and waste disposal, all of which are covered by the best practice guidance cited in the proposed mitigation strategies and indicators.

The ESRA includes references to:

- FSC Pesticides Policy [2019]
- FSC Lists of highly hazardous pesticides - FSC-POL-30-001a EN [2019]
- FSC Irish Forest Stewardship Standard (IFSS) [2012]
- Forest Service - DAFM, Irish National Forest Standard [2000]
- Forest Service - DAFM, Forestry and Biodiversity Guidelines [2000]
- Forest Service - DAFM, Code of Best Forest Practice [2000]
- Forest Service - DAFM Standards for Felling & Reforestation [2019]
- Safety, Health and Welfare at Work Act [2005]
- Safety, Health and Welfare at Work (General Application) Regulations [2007 and amendments 2010, 2012, 2016(1), 2016(20 and 2016(3)]
- Safety, Health and Welfare At Work (Chemical Agents) Regulations, 2001 and the Safety, Health and Welfare at Work (Chemical Agents) (Amendment) Regulations [2015]
- Chemical Agents Code of Practice [2024]
- Coillte - SOP-030 Pesticides [2022]
- Forest Research note *Interim guidance on the integrated management of Hylobius abietis in UK forestry*.

Revision #	Revision	Revision By
1	**May 2021**	Establishment Process Group
2	**May 2022**	Establishment Process Group
3	**May 2023**	Establishment Process Group
4	**May 2024**	Establishment Process Group
5	**May 2025**	Establishment Process Group

Controls

The following are the essential controls identified in this ESRA. They include new controls (**ACP.x**), but also existing controls in FSC Irish Forest Stewardship Standard. Further site controls will be included in the Activity Site Pack as appropriate, adapting them where necessary to site-specific risks (FSC-POL-30-001 V3-0 EN clause 4.12.6).

Exposure Elements	Minimum list of values	Description of why/why not a risk	Mitigation strategies defined to minimize risk	Controls
			Overview From the descriptions of risk, it is clear that the principal issues are worker safety/welfare and the potential for the contamination of water. Mitigation strategies are focused on these key risks, but also address the other, lesser risks identified: the potential impacts on non-target insect species, the potential for the contamination of wild foods, and effects on public access.	**ACP.1** Operations conform to the 2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015). **ACP.2** Operators hold NPTC **PA1/0216-10** Level 2 in the Principles of Safe Handling and Application of Pesticides PA6 **PA6/0216-54** City & Guilds Award in Safe Application of Pesticides Using Pedestrian Hand Held Equipment or

			General strategies While this ESRA comes at a point in the IPM process where it has already been decided that the use of acetamiprid is necessary, most of the risks described can be mitigated to some degree by minimising the volume used, in terms of the number of seedlings treated, the volume applied to each seedling, and the frequency of application. For this reason, the Coillte EMS Pesticide SOP requirement to minimise pesticide use is a key general mitigation strategy. This is monitored via stump hacking records and chemical usage records which are returned by operators. Mitigation of risks to worker safety and water, as well as risks such as poorly targeted applications affecting non-target insect species, can be achieved largely through conformance to operator training PA1/0216-10 and PA6/0216-54 which addresses the following issues:	LANTRA Level 2 Award in Safe use of pesticides Qualification **Quartz code – 3006 and** Level 2 Award in Safe application of Pesticides using Hand Held Equipment Qualification **Quartz code – 3024** **ACP.3** There is an appropriate Risk assessment In place. **ACP.4** Operators comply with the requirements and relevant recommendations of the product label and the extension of authorisation for a minor use of a plant protection product.

			• Certificates of competence, • Personal protective equipment (PPE) and hygiene requirements, • The applicator, • Emergency procedures, • Planning to spray, • Preparing to spray, • Spraying, • After spraying, and • Weather conditions. All risks are mitigated to some degree by appropriate operator training, as evidenced by certificates of competence. All operators working with acetamiprid should hold the National Proficiency Tests Council (NPTC) certificates 0216-10 (Foundation module) and 0216-15 (Hand-held applicators) or LANTRA equivalents. All risks are also mitigated to some degree by complying with the product label and, in	**ACP.5** Records of acetamiprid usage are maintained, including trade name, active ingredient, quantity of active ingredient used, period of use, number and frequency of applications, location and area of use, and reason for use. These records are kept for a minimum of five years. **ACP.6** There is awareness of research into chemical and non-chemical alternatives to acetamiprid carried out by the Hylobius Industry Research Programme or other agencies. **ACP.7** Coillte provides financial and in kind contributions to research

			the case of forestry usage of acetamiprid, the extension of authorisation for a minor use of a plant protection product.	into chemical and non-chemical alternatives to acetamiprid carried out by Forest Research, the Hylobius Industry Research Programme and Teagasc.
Environmental	Soil (erosion, degradation, biota, carbon storage)	Standard forestry usage of acetamiprid is **not** considered to have any significant impacts. There may be positive effects from promoting prompt reestablishment of tree cover.	N/A	N/A
	Water (ground water, surface waters, water supplies)	Acetamiprid is known to be **harmful to aquatic life with long lasting effects** (CLP H412). The greatest risk of harm comes from	Water protection. Is addressed in Section 13,14 and Section 15 in **Standards for Felling and Reforestation**. While a wide range of measures, including careful transport and storage, are important in protecting water resources, the principal	**ACP.8** *Operations are obliged to adhere to **Standards for Felling & Reforestation**, most particularly in regard to requirements and*

		mixing and filling undiluted products.	measure to protect surface waters and water supplies is to identify them and to respect appropriate buffer zones around them, as per Section 14.: Check the precise location of any domestic water supply, rivers, streams, ditches or ponds. Plan to leave a suitable buffer strip (see product label) to avoid contamination Acetamiprid product labels do not specify buffer widths, but various minimum distances between operations and surface water etc. are set out in the ***Standards for Felling & Reforestation***. And S.I.155/2012 The application of pesticides on the Coillte estate is detailed in SOP - 030 Pesticides and covers the purchasing, handling, transportation, storage and use in the field. Risks can be reduced by going beyond these minimum requirements and observing the recommended buffer widths in Table 14.1 Water setbacks in the ***Standards for Felling & Reforestation***. Special care is required when mixing, filling and diluting pesticide concentrates ready	*guidelines in relation to buffer zones around watercourses, waterbodies and abstraction points. Subject only to ACP.9, there is no usage, mixing or filling of acetamiprid within 10 m of an EPA Stream or relevant watercourse.* *Note should be made of S.I. 155/2012, which prescribes setback distances for different types of water abstraction points;* ***Water Source*** ***Distance*** *Abstraction point of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 100m3 or more of water per day or* *200m*

			for application. In forestry, pesticides are usually mixed on or near to the treatment site, so it is extremely important to choose the mixing area carefully, make sure it is outside aquatic buffer zones, and take precautions to avoid contaminating the wider environment. IFSS 6.7.3 requires that plans and equipment must be in place to deal with accidental spillages of chemicals	*serving 500 or more persons,* *Abstraction point of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m3 or more of water per day or serving 50 —500 persons,* *100m* *Abstraction point of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 1-10m3 of water per day or serving 10-50 persons,* *25m*

				Abstraction point of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 1m3 or less of water per day or serving 10 or less persons, 5m **ACP.9** *Impacts on water quality are routinely monitored by the EPA and co-operation is provided in the provision of chemical usage figures* *Where possible Coillte will collect own data in response to significant incidents (e.g. spillage of pesticide or dumping of full pesticide containers) where contamination of water supplies or environmental damage is likely to have*

				occurred, in order that any damage can be assessed, and mitigated and/or repaired. *See also IFSS 6.6.5.5 and 6.7.3*
	Atmosphere (air quality, greenhouse gasses)	Standard forestry usage of acetamiprid is **not** considered to have any significant impacts.	N/A	N/A
	Non-target species (vegetation, wildlife, bees and other pollinators, pets)	There are **potential impacts on non-target insect species**. While as with any insecticide there are theoretical potential impacts on bees if they were to ingest it, acetamiprid is thought to present a lower risk than other neonicotinoids, and because application is to non-	Risks to non-target species are best mitigated by carefully targeted application, which helps to minimise the volume applied to each seedling and to avoid spraying surrounding vegetation. This requires both appropriate equipment and appropriate technique as detailed in SOP - 030 Pesticides	**ACP.10** Applications are targeted to avoid run-off into the soil or contact with non-target plants. *Guidance note: Applications should conform to the Forest Research note* Interim guidance on the integrated management of *Hylobius*

		flowering plants, this minimises the risk of exposure of bees to the chemical. Standard forestry usage of acetamiprid is **not** considered to have any significant impacts on insectivorous birds or mammals given its low potential for bioaccumulation.		*abietis* in UK forestry*, which recommends that 'The spray should be carefully directed to cover the entire circumference of [the] lower half of the stem, allowing the solution to flow down the stem and onto the root collar. In addition the foliage should be treated, as this allows the systemic insecticide to be absorbed and then translocated around the plant. Run-off into the soil, or drift to surrounding soil or vegetation, should be minimised through the use of low spraying pressures (around 1 bar) and suitable nozzles, such as an adjustable cone nozzle.'*
	Non-timber forest products (as FSC-STD-01-001 V5-2	Standard forestry usage of acetamiprid is **not** considered to have any significant impacts, on the	N/A	N/A

	FSC Principles and Criteria, criterion 5.1)	basis that it presents no specific risk to honey bees and therefore honey production.		
	High Conservation Values (particularly HCV 1&3)	As noted previously, there are **potential impacts on non-target insect species (HCV 1 & 3**). Standard forestry usage of acetamiprid is **not** considered to have any significant impacts on HCV 3	In extremis, poorly thought out or careless applications of acetamiprid have the potential to cause significant damage to HCV 1 or HCV 3 sites, but this risk is considered to be adequately addressed by the strength of IFSS requirements including 6.1.1 to 6.1.4, 6.2.1 to 6.2.4. For HCV 1 & 3 in particular, refer to 9.1.1 to 9.1.3L	**ACP.11** See *also 6.1.1 to 6.1.4, 6.2.1 to 6.2.4 and 9.1.1 to 9.1.3L*
	Landscape (aesthetics, cumulative impacts)	Standard forestry usage of acetamiprid is **not** considered to have any significant impacts. There may be positive effects from promoting prompt reestablishment of tree cover.	N/A	N/A

	Ecosystem services (water, soil, carbon sequestration, tourism)	As noted previously, there are **potential impacts on water**. Standard forestry usage of acetamiprid is **not** considered to have any significant impacts on soil, carbon sequestration or tourism.	See the strategies for water, above.	See the controls for water, above.
Social	High Conservation Values (especially HCV 5-6)	As noted previously, there are **potential impacts on water supplies.** Standard forestry usage of acetamiprid is **not** considered to have any significant impacts on cultural values (HCV 6).	See the strategies for water, especially in relation to water supplies, above. Appropriate communication and consultation as per IFSS 7.4.1 to 7.4.3L and 9.1.2, 9.1.3, 9.2.1 and 9.2.2 will be important to ensure that neighbours with private water supplies are suitably informed and able to discuss mitigation measures.	See the controls for water, above. *See also IFSS 7.4.1 to 7.4.3L.*

	Health (fertility, reproductive health, respiratory health, dermatologic, neurological and gastrointestinal problems, cancer and hormonal imbalance)	Acetamiprid is known to be **harmful if swallowed** (CLP H302). There is no obvious pathway for workers to ingest harmful quantities in normal use. There is no obvious pathway for members of the public to ingest harmful quantities unless they have direct access to stored chemical.	Worker safety and welfare are addressed primarily in the PPE and hygiene requirements of the certificates **PA1/0216-10** Level 2 in the Principles of Safe Handling and Application of Pesticides PA6 **PA6/0216-54** City & Guilds Award in Safe Application of Pesticides Using Pedestrian Hand Held Equipment or LANTRA Level 2 Award in Safe use of pesticides Qualification **Quartz code – 3006 and** Level 2 Award in Safe application of Pesticides using Hand Held Equipment Qualification **Quartz code** – **3024**	**ACP.12** Operators have and use adequate personal protective equipment PPE as follows: Chemical proof spray suit (EN465[1]) (wear at all stages of the chemical application process) Chemical proof Nitrile gloves (EN 374) (wear at all stages of the chemical application process) Face shield(Chem.) EN166 (While pouring Acetamiprid into sprayer and rinsing) Chemical proof steel-toe-capped wellingtons (EN345) (wear at all stages of the chemical application process).
	Welfare			

				ACP.13 Operator exposure to acetamiprid is monitored using pesticide application records and site checks of use of personal protective equipment. There is appropriate follow up action if personal protective equipment is not being used. **ACP.14** Operator health concerns are monitored using pesticide application records and site checks. There is appropriate follow up action if health concerns are identified. **ACP.15** Acetamiprid containers are stored safely and securely. See SOP - 030 Pesticides

	Food and water	*Note: This value is taken to refer to wild forest foods (rather than agricultural crops) and to drinking water.* Standard forestry usage of acetamiprid is unlikely to lead to any contamination of fruits etc., and even if it did occur, contact with residues immediately after treatment or consumption of foods is not known to be harmful. As noted previously, there are **potential impacts on water supplies**.	Risks to food are best mitigated by carefully targeted application; see the strategies for non-target species, above. The risk of members of the public picking fruit or fungi which have been recently contaminated with pesticides can be further mitigated through conformance with Coillte's EMS Pesticide SOP 5.3 Signage "Erect dated warning signs (as determined by risk assessment) prior to commencement of spraying. Remove warning signs once chemical is dry and there is no further risk of contamination to the public." . See also the strategies for water, above.	**ACP.16** Operations conform to Forest Service Code of Best Forest Practice. .
	Social infrastructure; (schools and hospitals,	Standard forestry usage of acetamiprid is **not**	N/A	N/A

	recreational infrastructure, infrastructure adjacent to the management unit)	considered to have any significant impacts.		
	Economic viability (agriculture, livestock, tourism)	Acetamiprid usage **may potentially have impacts on some water-based enterprises (such as fish farming), or on water supplies for enterprises (such as breweries or distilleries)**.	See the strategies for water, above.	See the controls for water, above.
	Rights (legal and customary)	Standard forestry usage of acetamiprid **may lead to actual or perceived restrictions on rights of access**. Acetamiprid usage **may potentially have impacts on rights to uncontaminated water**.	Some restrictions to public access, are desirable in order to minimise other risks. However, where such restrictions are imposed, they should be kept to the minimum extent and duration necessary to achieve their aims. In addition to actual restrictions on public access, some forest users may feel excluded because of their uncertainties about operations or their concerns about safety. This risk is best mitigated through appropriate stakeholder engagement. See also the strategies for water, above.	**ACP.17** Where it is desirable to restrict public access to minimise health and safety risks, such restrictions are kept to the minimum extent and duration necessary to achieve their aims. See also the controls for water, above.

	Others	No other risks have been identified.	N/A	N/A