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Appendix VIII

Regenagri Water Sampling and Analysis requirements

Version 1.0

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Appendix II – Regenagri Water Sampling and Analysis requirements

Version 1.0

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Log of Updates

Version	Update	Update date	Effective date
Version 1.0	Initial release; no updates – moved to Appendix	March 2026	The date of release

Introduction

Regenagri Standard – Farms is an international certification scheme owned by Regenagri CIC (hereinafter referred to in this document as "Regenagri").

This Appendix defines the operational methodology for the water sampling and analysis required by Section 7.3. of Regenagri Standard – Farms. It applies to certified organisations performing their own sampling and to CBs performing or witnessing sampling during on-site audits.

Water sampling and analysis are used to verify potential impacts of agricultural activities on water quality and water ecosystem health in areas influenced by certified agricultural operations.

Water sampling requirements apply only where relevant water bodies are present and agricultural activities pose a potential risk to water quality.

How to read and use this document

All provisions using the verbal form "shall" are mandatory requirements for certification and continued certification under the Regenagri Farm certification scheme.

Provisions using "should" are recommendations intended to support effective implementation and performance against the Continuous Improvement (CI) framework.

Provisions using "may" indicate permission, and "can" indicate possibility or capability.

Related documents:

1. Regenagri Glossary (normative)
2. Regenagri Standard – Farms (normative)
3. Regenagri Auditing and Certification requirements (normative to CBs)
4. Regenagri Scoring Matrix (normative)
5. Regenagri Implementation Guidance (informative)

All current versions of documents are available at https://regenagri.org/.

1. Scope

This appendix applies to:

- Certified organisations, meeting the applicability criteria in Section 7.3. of Regenagri Standard – Farms and who are responsible for conducting or arranging water sampling where required; and
- Certification Bodies (CBs) responsible for verifying the sampling methodology, representativeness of sampling locations and validity of laboratory results.

This appendix does not define environmental performance requirements. These are defined in Section 7.3. of Regenagri Standard – Farms.

2. Water sampling methodology

2.1. Equipment

2.1.1. To conduct water sampling effectively, the following equipment is required:

- Water Sampling Bottles: Use sterilised glass or plastic bottles; specific types may be required for different analyses (e.g., amber glass bottles for light-sensitive compounds).
- Dipper or Sampler Pole: For collecting surface water manually.
- Van Dorn or Niskin Bottles: For collecting water at specific depths in lakes or reservoirs.
- GPS Device: For recording exact locations of sampling points – can be done using a smartphone.
- Coolers and Ice Packs: For sample preservation during transport.

2.2. Person(s) responsible

2.2.1. The water can be sampled by:

- A trained CB during an on-site audit;
- The owner/an employee of the agricultural production site, before or after an on-site audit has taken place; or
- A third-party service provider specialised in water testing.

2.2.2. If a member of the Regenagri program wishes to use results from records created before their work with Regenagri, these results will need to be provided by an accredited lab and will be verified during the audit.

2.3. Procedure

2.3.1. Water analysis for on-site audits should commence at the first Regenagri audit only for high-risk projects/farms and recur every three years.

2.4. Identification of water bodies

2.4.1. Identify various types of water bodies such as rivers, streams, lakes, ponds, and groundwater adjacent/near to the farming areas.

2.4.2. Prioritise areas that are likely to be influenced by agricultural activities, including those downstream or adjacent to farms, animal feedlots, and crop fields.

2.5. Sampling points

2.5.1. Always select sampling points both upstream and downstream of the agricultural area to distinguish between background levels and the impacts of farm runoff. Include points where runoff directly enters the water body, such as drainage ditches, stormwater outlets, and direct runoff paths from fields.

2.5.2. Ensure sampling from various environments within the same water body to capture spatial variability—e.g., near the bank and in the centre of a river.

2.6. Sampling period

2.6.1. Sample during different seasons to account for variations in farm activity, such as planting, harvesting, and application of fertilisers and pesticides.

2.6.2. Consider increased sampling frequency during and after significant rainfall or snowmelt events, as these can lead to elevated runoff and spikes in contaminant levels.

2.7. Sampling Depth and Volume

2.7.1. For bodies like lakes and ponds, take samples from both surface waters and at varying depths to account for stratification in water chemistry.

2.7.2. Collect enough volume to conduct all required analyses, considering some tests may require pre-concentration or multiple attempts for accurate quantification.

2.8. Sampling methodology

2.8.1. Use for immediate analysis or when constituents are stable. Secure samples representative of the condition of the water body at a specific time and location.

2.8.2. Collect random samples from different areas and make a composite sample that averages out temporal variations.

2.8.3. Water samples shall be secured in suitable containers and labelled with the sampling information.

2.8.4. A sample collection form shall be completed.

2.8.5. Additional sets of water samples shall be retained.

2.8.6. The water samples shall be retained at the organisation's site, until further instruction by the CB.

2.9. Transportation and storage conditions

2.9.1. Store samples at 4°C immediately after collection to prevent chemical and biological changes.

2.9.2. Add appropriate preservatives if samples cannot be analysed within holding times; for example, acids for metals or biocides for microbial inhibitors.

2.9.3. Ensure samples are transported to the laboratory under recommended conditions as soon as possible to prevent degradation.

2.9.4. Maintain detailed sampling records including date, time, exact location, water body description, weather conditions, and any observations that might affect the results (e.g., visible pollution sources, agricultural activity nearby).

2.9.5. Record GPS coordinates of each sampling site to ensure consistency in future sampling and to aid in data analysis and mapping.

2.10. Mandatory analytical parameters

2.10.1. Laboratory analysis of water samples shall include, at minimum, the parameters defined in Section 7.3. of Regenagri Standard – Farms such as antibiotics, industrial waste residues, heavy metals, pesticide residues, phosphate and nitrate.

2.10.2. Additional parameters identified by the risk assessment under Section 2.1. of Regenagri Standard - Farms shall also be analysed where applicable.

3. Laboratory requirements for water analysis

3.1. Water analyses used for Regenagri certification shall be conducted by laboratories accredited in accordance with ISO/IEC 17025 – General requirements for the competence of testing and calibration laboratories.

3.2. The laboratory accreditation scope shall include the specific water quality parameters analysed, such as:

- Nutrients (nitrogen, phosphorus);
- Suspended solids;
- Pesticides;
- Heavy metals;
- Microbiological indicators; and
- Other relevant water quality parameters.

3.3. Water sampling and analysis shall follow recognised international standards where applicable, including:

- ISO 5667 series – Water quality – Sampling;
- Standard Methods for the Examination of Water and Wastewater;
- WHO water quality guidelines; and
- Relevant national or regional standards.

3.4. Where ISO/IEC 17025 accredited laboratories are not available, the Certification Body may accept laboratories demonstrating:

- Documented technical competence;
- Participation in proficiency testing or inter-laboratory comparisons; and
- Validated analytical methods.

3.5. The CB shall document justification for such cases.

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