

Water Quality Overview

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OVERVIEW

- This factsheet introduces key aspects of water quality, monitoring, and management in plant production nurseries.
- Water quality refers to the physical, chemical, and biological characteristics of water used for irrigation.
- Good water quality is essential for plant growth, efficient nutrient uptake, and disease prevention.
- Regular water testing helps detect problems early and supports proactive water and nursery management.

KEY FACTORS

- The sources of water (e.g., surface, groundwater, municipal, or recycled) used for irrigation and any treatments can greatly influence water quality.
- Land use and activities upstream or nearby (e.g. agriculture, urban development) affect water via runoff, nutrients, sediments, or contaminants.
- Fertiliser and pesticide use, as well as farm layout and runoff management, impact water quality.
- Important water quality indicators include pH, electrical conductivity (salinity), nutrients (e.g. nitrogen, phosphorus), turbidity, and pathogens.
- Water quality changes with seasons, after rainfall, drought, or flooding, and as local and catchment land use and development change over time.

HIGHLIGHTS

- Water quality is critical for healthy, productive nursery plants.
- Poor water quality can reduce plant growth, increase disease risk, and damage equipment.
- Key factors include water source, environment, nursery practices, and specific water quality parameters.
- Regular testing and monitoring are essential for early detection and effective management.
- Management actions should be guided by test results and followed up with ongoing monitoring.

MANAGEMENT

- Understand the specific attributes of your water by testing for key parameters relevant to plant health and nursery operations (**Figure 1**).
- Consider and select management strategies based on water test results; these might include filtration, disinfection, nutrient management, or changes to irrigation practices or nursery layout.
- Monitor water quality to evaluate the success of management actions and to identify new issues.
- Use a combination of strategies for best results and keep good records of water quality conditions and management actions to enable adaptation.

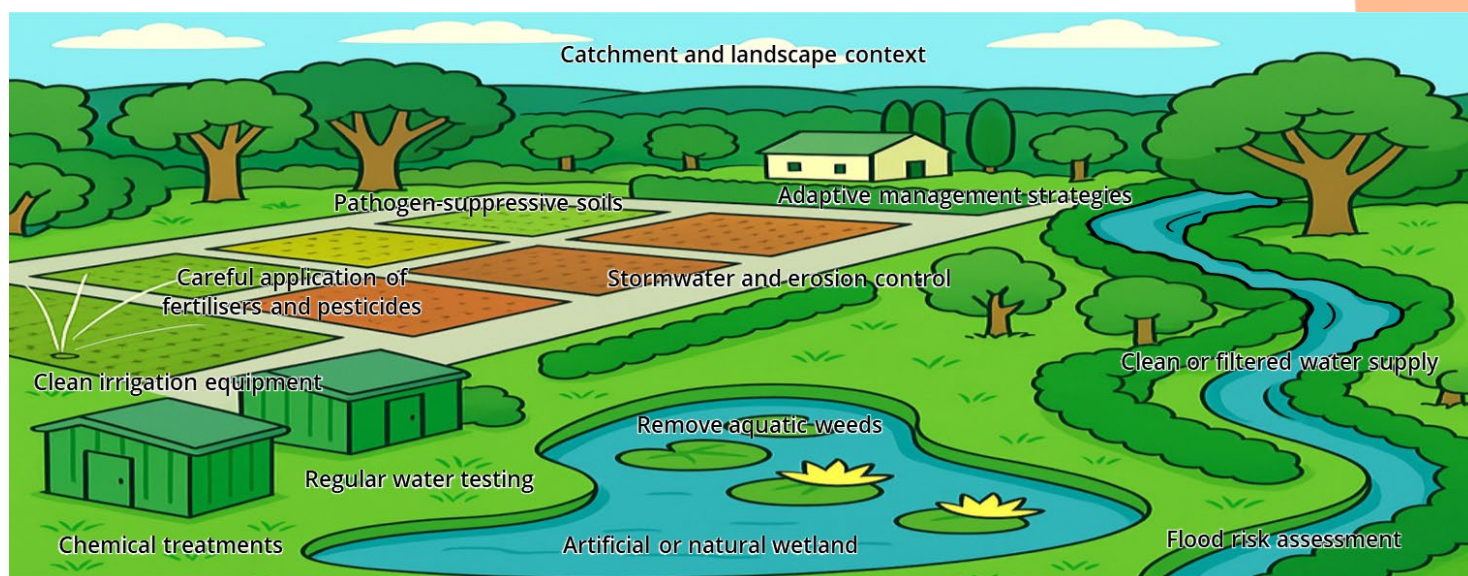


Figure 1. Examples of management considerations to maintain and improve water quality in a plant production nursery setting.