

Healthy Soil & clean water =
Healthy Crops & Pasture =
Healthy Livestock & People



Water quality:

- ▶ Salts
- ▶ Sodium
- ▶ Hardness

Two important components of water quality (where suitability for irrigation is concerned) are salinity and Sodium levels. This Fact Sheet focuses on the Total Soluble Salt (salinity) level of the water.

To assess the general suitability for irrigation use the result for Total Soluble Salt to look up the quality class in the table (right).

Water Fact Sheet #3 can then be used to match the outcome with an appropriate crop variety.

You should also read Water Fact Sheet #2 as this will give you a guide about the dissolved Sodium level and its likely affect on the soil.

The classes of Water according to content of Total Soluble Salts

Class	Salinity Range (ppm)	Description	Notes
Class 1: Low salinity	Less than 175 ppm	This water can be used with most crops on most soils, and all methods of application. There is little likelihood that a salinity problem will develop. No special leaching procedures are required, except on extremely low permeability soils.	
Class 2: Medium salinity	175 to 500 ppm	This water can be used with a moderate amount of leaching. It is suitable for plants with medium salt tolerance, usually without special practices for salinity control. Sprinkler irrigation with the more saline waters in this class may cause leaf scorch on sensitive crops, especially on hot days and low application rates.	
Class 3: High salinity	500 to 1500 ppm	This water cannot be used on soils with restricted drainage. Even with adequate drainage, special management for salinity control may be required, and the salt tolerance of the plants to be irrigated must be considered.	
Class 4: Very high salinity	1500 to 3500 ppm		This water is not suitable for irrigation unless soils are permeable, drainage is adequate and water is applied in excess to provide considerable leaching. Salt-tolerant crops should be selected.
Class 5: Extreme salinity	Above 3500 ppm		This water may be used only on permeable, well-drained soils under good management (especially in relation to leaching) and for salt-tolerant crops only. It may be suitable for emergency use.

More information:

Water Fact Sheet #1 – Using Farm Water.

Water Fact Sheet #2b – Water for Irrigation (Dissolved Sodium).

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If you have any other questions, please contact us on (03) 9701 6007, or email: services@swep.com.au