

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 Dissolved Sodium level of the water.

Irrigation water that is high in Sodium can have a significant impact on the Exchangeable Sodium Percentage (ESP) of the soil. Over time, this can lead to reduced moisture infiltration, poor drainage and a tendency for the soil to form a hard surface crust. Together, these changes can have serious consequences for the long-term sustainability of the farming system.

From the level of Sodium in the test results (together with the quantity of Ca+Mg), use the diagram opposite to check whether the water fits within either the S1, S2, S3 or S4 area.

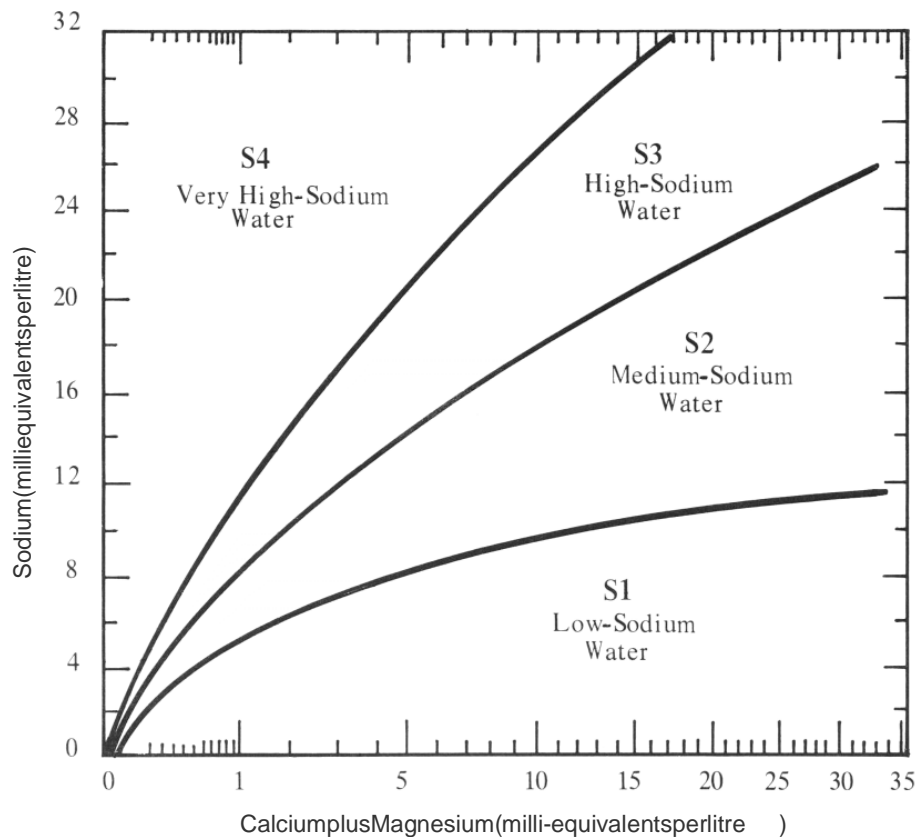
The descriptions of each category (below) can then give an indication of how the water may affect Sodium levels in the soil.

Low sodium water – S1 water can be used for irrigation of almost all soils, with little danger of developing a problem. However, sodium sensitive crops such as stone fruit and avocados, may accumulate sodium in the leaves.

Moderate Sodium Water – S2 water may present a moderate sodium problem in some clay soils. This water can be used on coarse-textured (sandy) or permeable organic soils.

High sodium water – S3 water can produce sodium problems in most soils and will require special management, good drainage, high leaching, and addition of organic matter.

Very high-sodium water – S4 water is generally unsatisfactory for use in regular irrigation.



More information:

Water Fact Sheet #1 – Using Farm Water.

Water Fact Sheet #2a – Water for Irrigation (Total dissolved salts).

Quality Aspects of Farm Water Supplies. Government Printers Melbourne.

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