



FACT SHEET

DO YOU KNOW THE QUALITY OF YOUR LIVESTOCK WATER

Water quality guidelines recommended for livestock consumption have been developed by the National Water Quality Management Strategy and are based on the Australian Water Quality Guidelines for Fresh and Marine Waters, November 1992 (ANZECC).

The guidelines cover several water parameters that should be analysed to ensure your water is suitable for its intended use. At Vintessential, we have packaged the major parameters into a convenient and cost effective Irrigation Water Test Suite. This suite of tests will give you an overview of the quality of your water and identify any issues that may be affecting water quality.

The **Irrigation Water Test Suite is only \$99 (+GST)** and includes analysis of the following parameters:

pH

The acidity or alkalinity of water should be monitored to ensure it is within a certain range to limit stock digestion issues which can cause animals to reject water, depressing their appetite and reducing production.

Salinity & Electrical Conductivity

High levels of soluble salts in water can result in gastrointestinal symptoms and a reduction in weight gain and milk or egg production. Animals under stress, for example due to pregnancy, lactation or rapid growth are particularly susceptible and high levels may cause upset and in some cases death. However, stock can acclimatise to some extent to water of higher salinity when the level is adjusted over several weeks.

Calcium

High calcium concentrations may cause phosphorus deficiency by interfering with phosphorus absorption in the gastrointestinal tract and calcious formation in the body.

Magnesium

Levels of magnesium in water are closely linked to total dissolved solids and should be look at in conjunction with these results when determining the suitability of water for livestock consumption.

Iron

Iron is essential to animal life and has a low toxicity, being harmful to livestock only if ingested in large amounts. Iron-contaminated water does not contain enough iron to be toxic to livestock. Therefore no guidelines has been established for iron in drinking water for livestock as it poses very low health risk to animals.

Copper

Copper is an essential element in the animal diet and copper deficiency can result in morbidity and in some cases death. The toxic effects of copper depend largely on the type of livestock and the form of copper.





WATER QUALITY GUIDELINE VALUES

PARAMETER	VALUE	COMMENTS
pH	<5.5 6 – 8.5 >9.0	Acidosis and reduced feed intake may occur Recommended range May cause digestive upsets and diarrhoea, lower feed conversion and efficiency and reduced intake of water and feed.
Magnesium	<600mg/L	Upper limit unless salinity are >15000mg/L, then any level of magnesium is generally unsuitable for all stock.
Calcium	1000mg/L	Upper limits for stock if dietary phosphorus levels are adequate
Copper	<0.05mg/L <1.0mg/L <5.0mg/L *	Limit for sheep Limit for cattle Limit for pigs and poultry No limit set for horses as they have a high tolerance

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Livestock	Salinity mg/L		
	No adverse effects on animals expected	Animals may have initial reluctance to drink or there may be some scouring but stock should adapt without loss of production	Loss of production and a decline in animal condition and health would be expected. Stock may tolerate these levels for short periods if introduced gradually
Beef Cattle	0-4000	4000-5000	5000-10000
Dairy Cattle	0-2400	2400-4000	4000-7000
Sheep	0-4000	4000-10000	10000-13000
Horses	0-4000	4000-6000	6000-7000
Pigs	0-4000	4000-6000	6000-8000
Poultry	0-2000	2000-3000	3000-4000

NOTE: The values in the above table are taken from the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, developed by the Natural Resource Management Ministerial Council (NRMMC) and the Primary Industries Ministerial Council (PIMC).

They should not be used as a sole determination of the suitability of irrigation water. Other factors such as soil characteristics, climate, plant species and irrigation management must also be considered.

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