

Livestock Watering

SULFATE

Sulfate in water used for livestock should not exceed 1000 mg/L. Higher concentrations of sulfate can be tolerated, but loss in production should be anticipated. High levels of sulfate can cause diarrhea in young animals.

SALINITY (TOTAL DISSOLVED SOLIDS)

The concentration of total dissolved solids (TDS) in water used for livestock watering should not exceed 3000 mg/L. Water with higher TDS concentrations can be used but the type of livestock and their age must be considered. See the following table:



TDS, mg/L	Suitability for Livestock
<1000	Relatively low level of salinity; excellent for all classes of livestock
1000-3000	Satisfactory for all classes of livestock and poultry, but some loss in productivity should be anticipated; may cause temporary and mild diarrhea in livestock not accustomed to them or water droppings in poultry
3000-5000	Satisfactory for livestock, but may cause temporary diarrhea or be refused at first by animals not accustomed to them; poor waters for poultry, often causing watery feces, increased mortality and decreased growth, especially in turkeys
5000-7000	Can be used with reasonable safety for beef cattle, sheep, swine and horses; avoid use for pregnant or lactating animals and dairy cattle; not acceptable for poultry
7000-10000	Unfit for poultry and probably for swine; considerable risk in using for pregnant or lactating cows, horses or sheep, or for the young of these species; in general, use should be avoided, although older ruminants, horses, poultry and swine may subsist on them under certain conditions
<10000	Risks with these highly saline waters are so great that they cannot be recommended for use under any conditions

Surface Water Quality Objectives for Livestock Watering
(values are in mg/L unless otherwise stated)

Aluminum	5.0
Arsenic	0.5
Bacteria	In intensive and high density livestock operations only high quality water should be given to livestock. Very young animals are much more susceptible to problems from bacterial contamination than mature animals. For specific advice, consult your veterinarian.
Blue-green algae	Avoid waters with heavy growth of blue-green algae.
Beryllium	0.1
Boron	5.0
Cadmium	0.02
Chromium	1.0
Cobalt	1.0 (cattle) 5.0 (swine/poultry)
Copper	0.5 (sheep)
Fluoride	2.0
Lead	0.1
Mercury	0.003
Molybdenum	0.5
Nickel	1.0
Nitrate plus nitrite	100
Selenium	0.05
Sulphate	1000*
Total dissolved Solids	less than 1000*
Uranium	0.2
Vanadium	0.1

*See detailed information sheet regarding sulfate and total dissolved solids for livestock watering.

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