

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 Use (CCME 1999) (values are in ug/L unless otherwise stated)

Parameter	Limit (in mg/L unless otherwise noted)
Aluminum	5000
Arsenic	25
Bacteria	Very young animals are much more susceptible to problems from bacterial contamination than mature animals. For specific advice, consult your veterinarian.
Beryllium	100
Blue-green algae	Avoid heavy growth
Boron	5000
Bromoxynil	11
Cadmium	80
Chromium VI	50
Cobalt	1000
Copper	500 ug/L for sheep; 1000 ug/L for cattle; 5000 ug/L for swine and poultry.

Dicamba	122
Diclofop-methyl	9
Fluoride (in mg/L)	1 - 2 (1.0 mg/L if feed contains fluoride)
Glyphosate	280
Lead	100
Lindane	4
Mercury	3
Molybdenum	500
Nickel	1000
Nitrate + Nitrite (in mg/L)	100
Phenol	2
Phenoxy herbicides (2,4-D)	100
Picloram	190
Selenium	50
Sulphate (in mg/L)	1000
Total Dissolved Solids (in mg/L)	3000
Triallate	230
Trifluralin	45
Uranium	200
Vanadium	100
Zinc	50,000

In such situations where the quality of water available for livestock watering does not meet the objectives livestock, producers are advised to contact their local veterinarian for advice.

CONTACT

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