

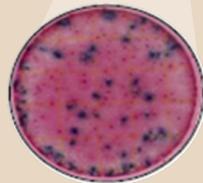
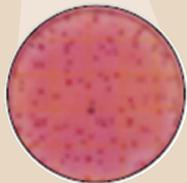
# Developing Quality Livestock Water for Midwest Ranges

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## What a difference a fence makes!



Bacteria sample from a fenced pond



Bacteria sample from unfenced pond



When excess nutrients accumulate in ponds, blue green algae (Cyanobacteria) may form. It can cause death in cattle, pets and wildlife.



## Establishing farm ponds

Water development, mostly through farm pond establishment, increases range productivity through improved grazing distribution. However, allowing cattle free access to ponds **speeds sedimentation**, and fouling of water through defecation and urination **increases bacteria, nitrogen and phosphorus levels**.

## Dangers of contamination

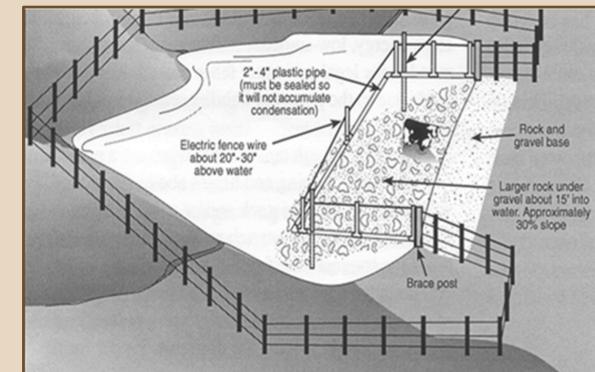
Consuming water containing high levels of contaminants can diminish livestock production. Cattle drink less of the contaminated water, leading to **reduced feed intake** and **increased vulnerability to heat stress**.

## Solving the Problems

To avoid these potential problems, limit cattle access by fencing the pond. Installing this barrier reduces:

- ✓ sedimentation
- ✓ nutrient levels
- ✓ growth of blue green algae (cyanobacteria)
- ✓ coliform bacteria (E. coli)

## Building a fenced pond access ramp



6:1 **slope** or flatter

10 feet **wide** with an extra 1 foot/10 head  
Ex. 15 ft for 50 hd

Non-slip surface or crushed rock **materials**

## Fencing Options



## Range cattle prefer water sources in this order:

1. Tank water from well or spring
2. Tank water from pond
3. Pond
4. Pool in stream
5. Flowing stream

## A Canadian livestock study showed:

- Calves from cows on spring/well water gained 9 percent more than if on pond water
- Heifers drinking pond water from a tank gained 20 percent more than those drinking directly from the pond
- Cattle on better water spent more time grazing than other cattle
- Cattle avoided water with .005 percent manure

Tanks downslope from fenced ponds require a 6 foot elevation difference for gravity flow



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