

Calculating nitrogen pounds applied per acre from Pond Drop: Run/Rise Method

1. Measure length and width of pond at capacity
Measure run and rise of slope
2. Turn off all other inflows and outflows to the pond.
3. Place a measuring pole in the pond as far out as possible. Record the starting level on the pole, measured in inches below maximum capacity.
4. Turn on pump, recording the exact starting time
5. At the end of the irrigation, turn off the pump, and record the exact ending time and the exact total vertical drop.

Pond length at capacity _____ Pond width at capacity _____

Run _____ Rise _____ $\text{run} \div \text{rise} =$ _____

_____ inches below full at start

_____ inches drop

_____ mg/L or ppm nitrogen (ammonium form, organic form or both, from the lab report)

_____ acres irrigated

_____ mg/L N x 0.226 = _____ lbs N per acre inch

_____ run/rise x 2 = _____ = run/rise*2

_____ inches drop $\div 2 =$ _____ = $\frac{1}{2}$ drop

_____ inches below full + _____ $\frac{1}{2}$ drop = _____ = depth@ $\frac{1}{2}$ drop

_____ run/rise*2 x _____ depth@ $\frac{1}{2}$ drop $\div 12$ in. per ft = _____ = side decrease

_____ length at capacity - _____ side decrease = _____ = new length

_____ width at capacity - _____ side decrease = _____ = new width

(_____ new length x _____ new width) $\div 43560 =$ _____ = pond area at midpoint drop

_____ inches drop x _____ pond area at midpoint = _____ acre-inches applied

_____ acre inches applied x _____ lbs per acre inch = _____ total lbs N

_____ total lbs N applied \div _____ acres irrigated = _____ lbs N per acre