Calculating Liquid Fertilizer Application

I am confused. How do I calculate liquid fertilizer products for application at a rate of one pound of actual nitrogen per 1000 square feet?

It is very similar to calculating solid fertilizer. Start with the N-P-K ratio. How many pounds of product do you want to give you one pound of actual nitrogen/1000 square feet?

Fertilizer analysis: 14-4-10, representing N-P-K or Nitrogen-Phosphorous-Potassium

- 100 divided the N number
- 100 divided by 14 = 7.14 pounds
- You want 7.14 pounds of product/1000 square feet

But this is liquid. I haven’t got a scale to weigh the liquid. Now what?

Look at the label. Chances are it will tell you how many pounds are in a gallon of the liquid. You know how many pounds you want…you just have to back calculate to tell you how much of the liquid in the gallon you need to give you the pounds you want.

If we follow the example above, we see that from the label, there are 10.75 pounds of liquid in a gallon.

- Then,  
  - 10.75 pounds = 7.14 pounds (you want) 
  - 1 gallon = ? Gallons

Divide 7.14 by 10.75 = 0.66 gallons

0.66 gallons gives you the required 7.14 pounds of product to give you one pound of actual nitrogen/1000 square feet.

How do I accurately measure 0.66 gallons?

Look up how many ounces are in one gallon or check the ounces on a half gallon or gallon jug.

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  \frac{128 \text{ ounces}}{1 \text{ gallon}} = \frac{? \text{ Ounces}}{0.67 \text{ gallon}}
\]

128 Times 0.67 = 85.76 ounces
What if I have more than 1000 square feet to cover? I have to treat 12 acres.

Look up the number of square feet in one acre.
- 1 acre = 43,560 square feet
- Multiply 43,560 times 12 = 522,720 square feet
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\frac{0.67 \text{ gallons}}{1000 \text{ sq. ft.}} = \frac{? \text{ Gallons}}{522,720 \text{ sq ft}}
\]

0.67 times 522720, then divide by 1000
- ANSWER: 350.2 gallons