

Fertilizing System From 55 Gallon Barrel with Pump

Introduction

We have over 100 peonies and 100 roses in our garden and I am a big proponent of using fish emulsion before the budding and during the early growing stages. As a child in the 1960s, I saw how roots would clamor to the base of the Bandini fish emulsion left sitting on the ground – it was a root's [manna](#) from heaven. I have been using 2 gallon water cans and mixing the fish emulsion and then carrying the cans and sprinkling about a quart per plant and it took me hours to complete just one feeding for 100 plants. As a result, I would only fertilize two or three times per season. We planted about 100 roses last Spring, so now I have double the number of plants to feed. **I needed a faster solution.** Thanks to the Santa Clarita Valley Rose Society, *infra*, I acquired and tested this method which should save me several 10s of hours this year in feeding our roses and peonies. I wanted further statistics to make sure that what I thought the system could achieve, did achieve. So I have taken the time to provide the statistics here so that others contemplating a time saving way to apply fertilizer will have some basis to work from. With the extra time, I can then feed more and really develop the root systems.

Cost: \$153.99 as of January, 2019

Estimated Hours saved per year: 20 (conservative)

Equipment

Pump: Master Plumber® Submersible utility Pump, ¼ HP, 1800 GPH model # 540094 – 2 year warranty, purchased 1/25/2019 at Salem, OR, Wilco Farm Store #540094 ¼ HP Utility Pump MP \$109.00 Note: Manufactured for True Value, Chicago, Ill.



Illustration 1: Mater Plumber Submersible Utility Pump 1/4 HP

55 Gallon Barrel: Wilco #9179004 Poly Barrel 55gal Screwtop \$44.99 40" high, 24" diameter, dry weight 15 lbs.



Illustration 2: 55Gal. Poly Drum w/pump, water breaker & Throw test stick

Hose: 75' 3/4" inside diameter (Ace Hardware (not recommended, prefer Gilmour and 3/4" is hard to find, may have to order from Gilmour direct))

Nozzle/Water Breaker: Dramm-like water breaker ([Mid-City Nursery](#), American Canyon, CA (707) 642-4167) estimated ~\$6. Pictured in Illustration 2 on top of the 2x4.

Tests

1. **Throw test.** Nozzle is rested on a 2x4 measuring 30" with the edge of the nozzle flat against the end of the 2x4 so as to tilt slightly upward. The spray was onto a stone walkway that has 8" stones, so the starting and end points of the throw were noted.
2. **Fill test.** With a nozzle on the end, filling up a 5 gallon pail until water goes over the rim.
3. **Water pressure test:** water pressure gauge. Note gauge results were at the hose bib for the City water, whereas the gauge was at the end of the 75' hose for the pump test.

Results

City of Salem water connection:

Throw test: covers 7-12 units of 8" tile, so 56" – 96" throw

Fill test: 41 seconds to fill a 5 gallon pail

Water pressure test: 60 lbs pressure

Pump in Barrel:

Throw test: covered 7-10 units of 8" tile, so 56" - 80" throw

Fill test: 53 seconds to fill a 5 gallon pail

Water pressure test: 15 lbs pressure

Conclusion. This is a much faster alternative that can distribute 55 gallons of fertilizer in about 15 minutes with the same ease as if watering with a garden hose.

Inspired by the Santa Clarita Valley Rose Society's web page on efficiently water with nutrients, e.g. fish emulsion and water soluble fertilizers at <http://scvrs.homestead.com/MethodsOfFertilizing.html>

Author: By Kitty Belendez, Master Rosarian. See video therein.

Fish Emulsion

Pacific Gro Oceanic Hydrolysate 2-2-0.3 with 10% Biochar. Purchased Coppercreek Mercantile, Keizer, OR, 1/25/2019 at \$38.99 per 2.5 gallons in quantity of 4 (2 cases). Pacific Gro - (not available in California). Cost per gallon: \$15.60/gallon. Note: I have not tested using this fish emulsion with this system, it may be that a fine screen net will have to be placed around the pump. I had some muddy water I used for the above testing and found that bits of little rock & stuff started to block the water breaker.



Illustration 3: Fish Emulsion, 2.5 Gal w/shipping container

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