

Fertilizers and Water Applied to a Mock Site in 2019

Site 1

Cultivation Area (sq ft): 95,000

Canopy Area (sq ft): 94,000

Planting Method: In ground

Plant Type: Flowering

Number of Crops: 1

January

- Site closed – no nitrogen applied

February

- Site closed – no nitrogen applied

March

- Site closed – no nitrogen applied

April

- 2200 lbs of Fox Farm Ocean Forest Potting Soil
- 900 lbs manure

May

- 375 lbs of Peter's Professional dry fertilizer
- 900 lbs manure
- 141,000 gallons of water

June

- 375 lbs of Peter's Professional dry fertilizer
- 500 lbs compost
- 143,000 gallons of water

July

- 375 lbs of Peter's Professional dry fertilizer
- 500 lbs compost
- 70 gallons of Tiger Bloom Plant Food
- 147,000 gallons of water

August

- 375 lbs of Peter's Professional dry fertilizer
- 70 gallons of Tiger Bloom Plant Food
- 147,000 gallons of water

September

- 375 lbs of Peter's Professional dry fertilizer
- 70 gallons of Tiger Bloom Plant Food
- 145,000 gallons of water

October

- 375 lbs of Peter's Professional dry fertilizer
- 140,000 gallons of water

November

- Final harvest and winterization – no nitrogen applied

December

- Site closed – no nitrogen applied

Site 2

Cultivation Area (sq ft): 45,000

Canopy Area (sq ft): 42,000

Planting Method: In ground

Plant Type: Flowering

Number of Crops: 1

January

- Site closed – no nitrogen applied

February

- Site closed – no nitrogen applied

March

- Site closed – no nitrogen applied

April

- 1000 lbs of Fox Farm Ocean Forest Potting Soil
- 450 lbs manure

May

- 150 lbs of Peter's Professional dry fertilizer
- 450 lbs manure
- 64,000 gallons of water

June

- 150 lbs of Peter's Professional dry fertilizer
- 225 lbs compost
- 65,000 gallons of water

July

- 150 lbs of Peter's Professional dry fertilizer
- 225 lbs compost
- 30 gallons of Tiger Bloom Plant Food
- 67,000 gallons of water

August

- 150 lbs of Peter's Professional dry fertilizer
- 30 gallons of Tiger Bloom Plant Food
- 67,000 gallons of water

September

- 150 lbs of Peter's Professional dry fertilizer
- 30 gallons of Tiger Bloom Plant Food
- 66,000 gallons of water

October

- 150 lbs of Peter's Professional dry fertilizer
- 64,000 gallons of water

November

- Final harvest and winterization – no nitrogen applied

December

- Site closed – no nitrogen applied

Nitrogen Percentage of Fertilizers Used on Mock Site in 2019

Bulk Materials	% Nitrogen
Fox Farm Ocean Forest Potting Soil	3.00%
Manure	5.00%
Compost	2.00%

Dry Fertilizer	% Nitrogen
Peter's Professional	5%

Liquid Fertilizer	Nitrogen
% Nitrogen on product label	2%
Density (lbs/gallon)	9.5

Irrigation Water	NO ₃ (mg/L)
Concentration on 5/1/2019	2.5

Formulas Used to Calculate Pounds of Nitrogen Applied

Bulk Materials

$\% \text{ Nitrogen} / 100 \times \text{bulk material weight applied (lbs)} = \text{Nitrogen applied (lbs)}$

Dry Fertilizers

$\% \text{ Nitrogen} / 100 \times \text{fertilizer weight applied (lbs)} = \text{Nitrogen applied (lbs)}$

Liquid Fertilizers

$\% \text{ Nitrogen} / 100 \times \text{fertilizer density (lbs/gal)} \times \text{volume of fertilizer applied (gal)} = \text{Nitrogen applied (lbs)}$

Liquid Fertilizer Density

$\text{weight of product (lbs)} / \text{volume of product (gal)} = \text{Density (lbs/gal)}$

Nitrogen Applied through Irrigation Water when Concentration is Provided as NO₃ (mg/L)

$\text{NO}_3 \text{ Concentration (mg/L)} \times \text{Volume of Water Applied (gal)} \times 0.62 / 325851 = \text{Nitrogen applied (lbs)}$

Nitrogen Applied through Irrigation Water when Concentration is Provided as NO₃-N, N, or Total N (mg/L)

$\text{N Concentration (mg/L)} \times \text{Volume of Water Applied (gal)} \times 2.72 / 325851 = \text{Nitrogen applied (lbs)}$

Annual Reporting Workshop Demonstration: Calculating Nitrogen Applied

Site 1:

Nitrogen Applied (lbs)						
Month	Bulk	Dry	Liquid	Conc. Nitrogen	Concentration Unit (mg/L)	Volume of Irrigation Water Applied (gal)
January						
February						
March						
April	111					
May	45	18.75		2.5	NO3	141,000
June	10	18.75		2.5	NO3	143,000
July	10	18.75	13.3	2.5	NO3	147,000
August		18.75	13.3	2.5	NO3	147,000
September		18.75	13.3	2.5	NO3	145,000
October		18.75		2.5	NO3	140,000
November						
December						
Subtotal	176	112.5	39.9			863,000

Site 2:

Nitrogen Applied (lbs)						
Month	Bulk	Dry	Liquid	Conc. Nitrogen	Concentration Unit (mg/L)	Volume of Irrigation Water Applied (gal)
January						
February						
March						
April	52.5					
May	22.5	7.5		2.5	NO3	64,000
June	4.5	7.5		2.5	NO3	65,000
July	4.5	7.5	5.7	2.5	NO3	67,000
August		7.5	5.7	2.5	NO3	67,000
September		7.5	5.7	2.5	NO3	66,000
October		7.5		2.5	NO3	64,000
November						
December						
Subtotal	84	45	17.1			393,000