

## Greenhouse soil Tomatoes in China



Tomato (Green House, Quantitative), Shaanxi China

**Crop cycle:** 120 Days

**Yield goal:** 5.00 ton/mu

**Plot:** China

**Plot size:** 1 mu

### Establishment

#### Nutrient supply for crop

Stage	Days	Macronutrients(kg/mu)			Secondary Nutrients (kg/mu)			Micronutrients (gram/mu)					
		N_Total	P2O5	K2O	CaO	MgO	SO4	Fe	Mn	Zn	Cu	Mo	B
Establishment	10	5.00	2.00	8.00	2.00	1.50	16.27	56.27	28.00	9.33	7.00	4.67	13.33

#### Fertilizers per stage

##### Fertilizers application (mu/day)



Haifa SOP Potassium Sulphate  
1.57 kg



Haifa MAP - Mono Ammonium Phosphate  
328 gram



Ammonium Sulphate  
1.06 kg



Haifa Cal GG Calcium Nitrate  
395 gram



Haifa Mag Cal 12.9-0-0+7+11  
1.36 kg



Haifa Micro Combi  
78 gram



Borax - Disodium Tetraborate Decahydrate  
12 gram

### Nutrigation system



Volume: **1000 liter**  
Content: **Phosphorus**  
Injection volume per day: **14.86 l/day**  
Fertilizer concentration: **20 %**  
Tanks per stage: **tanks**



Volume: **1000 liter**  
Content: **Calcium**  
Injection volume per day: **9.18 l/day**  
Fertilizer concentration: **20 %**  
Tanks per stage: **tanks**

Haifa SOP Potassium Sulphate **105.53 kg**

Haifa MAP - Mono Ammonium Phosphate **22.06 kg**

Ammonium Sulphate **71.63 kg**

Borax - Disodium Tetraborate Decahydrate **790 gram**

Haifa Cal GG Calcium Nitrate **42.98 kg**








Haifa Mag Cal 12.9-0-0+7+11 **148.55 kg**

Haifa Micro Combi **8.47 kg**

#### Stock solution nutrients content:

Tanks	Macronutrients (gram/liter)			Secondary Nutrients (gram/liter)			Micronutrients (mg/liter)					
	N_Total	P2O5	K2O	CaO	MgO	SO4	Fe	Mn	Zn	Cu	Mo	B
Phosphorus   Tank 1	17.69	13.45	53.82	-	-	109.44	-	-	-	-	-	90
Calcium   Tank 2	25.82	-	-	21.79	16.34	-	610	310	100	80	50	-

#### Fertilizers amounts for growth stage (per plot)

						
Haifa SOP Potassium Sulphate	Haifa MAP - Mono Ammonium Phosphate	Ammonium Sulphate	Haifa Cal GG Calcium Nitrate	Haifa Mag Cal 12.9-0-0+7+11	Haifa Micro Combi	Borax - Disodium Tetraborate Decahydrate
<b>15.69 kg</b>	<b>3.28 kg</b>	<b>10.65 kg</b>	<b>3.95 kg</b>	<b>13.64 kg</b>	<b>778 gram</b>	<b>117 gram</b>

Amount

## Vegetative growth

### Nutrient supply for crop

Stage	Days	Macronutrients(kg/mu)			Secondary Nutrients (kg/mu)			Micronutrients (gram/mu)					
		N_Total	P2O5	K2O	CaO	MgO	SO4	Fe	Mn	Zn	Cu	Mo	B
Vegetative growth	25	9.00	3.00	11.00	3.00	2.00	29.20	41.96	20.80	6.93	5.20	3.47	10.00

### Fertilizers per stage

#### Fertilizers application (mu/day)



Haifa SOP Potassium Sulphate  
863 gram



Haifa MAP - Mono Ammonium Phosphate  
197 gram



Ammonium Sulphate  
963 gram



Haifa Cal GG Calcium Nitrate  
261 gram



Haifa Mag Cal 12.9-0-0+7+11  
727 gram



Haifa Micro Combi  
23 gram



Borax - Disodium Tetraborate Decahydrate  
4 gram

### Nutrigation system



Volume: **1000 liter**  
Content: **Phosphorus**  
Injection volume per day: **10.13 l/day**  
Fertilizer concentration: **20 %**  
Tanks per stage: **tanks**



Volume: **1000 liter**  
Content: **Calcium**  
Injection volume per day: **5.06 l/day**  
Fertilizer concentration: **20 %**  
Tanks per stage: **tanks**

Haifa SOP Potassium Sulphate **85.18 kg**

Haifa MAP - Mono Ammonium Phosphate **19.42 kg**

Ammonium Sulphate **95.05 kg**

Borax - Disodium Tetraborate Decahydrate **348 gram**

Haifa Cal GG Calcium Nitrate **51.57 kg**

Haifa Mag Cal 12.9-0-0+7+11 **143.86 kg**

Haifa Micro Combi **4.57 kg**

#### Stock solution nutrients content:

Tanks	Macronutrients (gram/liter)			Secondary Nutrients (gram/liter)			Micronutrients (mg/liter)					
	N_Total	P2O5	K2O	CaO	MgO	SO4	Fe	Mn	Zn	Cu	Mo	B
Phosphorus   Tank 1	22.29	11.85	43.44	-	-	115.33	-	-	-	-	-	40
Calcium   Tank 2	26.55	-	-	23.74	15.82	-	330	160	50	40	30	-

### Fertilizers amounts for growth stage (per plot)



Haifa SOP Potassium Sulphate

**21.57 kg**



Haifa MAP - Mono Ammonium Phosphate

**4.92 kg**



Ammonium Sulphate

**24.07 kg**



Haifa Cal GG Calcium Nitrate

**6.52 kg**



Haifa Mag Cal 12.9-0-0+7+11

**18.18 kg**



Haifa Micro Combi

**578 gram**



Borax - Disodium Tetraborate Decahydrate

**88 gram**

Amount

## Flowering to fruit set

### Nutrient supply for crop

Stage	Days	Macronutrients(kg/mu)			Secondary Nutrients (kg/mu)			Micronutrients (gram/mu)					
		N_Total	P2O5	K2O	CaO	MgO	SO4	Fe	Mn	Zn	Cu	Mo	B
Flowering to fruit set	35	8.00	3.50	17.00	2.00	3.00	31.08	42.15	20.80	6.93	5.20	3.47	2.40

### Fertilizers per stage

#### Fertilizers application (mu/day)



Haifa SOP Potassium Sulphate  
952 gram



Haifa MAP - Mono Ammonium Phosphate  
164 gram



Ammonium Sulphate  
509 gram



Haifa Cal GG Calcium Nitrate  
10 gram



Haifa Mag Cal 12.9-0-0+7+11  
779 gram



Haifa Micro Combi  
17 gram



Borax - Disodium Tetraborate Decahydrate  
1 gram

### Nutrigation system



Volume: **1000 liter**  
Content: **Phosphorus**  
Injection volume per day: **8.13 l/day**  
Fertilizer concentration: **20 %**  
Tanks per stage: **tanks**



Volume: **1000 liter**  
Content: **Calcium**  
Injection volume per day: **4.03 l/day**  
Fertilizer concentration: **20 %**  
Tanks per stage: **tanks**

Haifa SOP Potassium Sulphate **117.16 kg**

Haifa MAP - Mono Ammonium Phosphate **20.17 kg**

Ammonium Sulphate **62.60 kg**

Borax - Disodium Tetraborate Decahydrate **74 gram**

Haifa Cal GG Calcium Nitrate **2.43 kg**

Haifa Mag Cal 12.9-0-0+7+11 **193.47 kg**

Haifa Micro Combi **4.10 kg**

#### Stock solution nutrients content:

Tanks	Macronutrients (gram/liter)			Secondary Nutrients (gram/liter)			Micronutrients (mg/liter)					
	N_Total	P2O5	K2O	CaO	MgO	SO4	Fe	Mn	Zn	Cu	Mo	B
Phosphorus   Tank 1	15.57	12.30	59.75	-	-	109.24	-	-	-	-	-	10
Calcium   Tank 2	25.33	-	-	14.19	21.28	-	300	150	50	40	20	-

### Fertilizers amounts for growth stage (per plot)



Haifa SOP Potassium Sulphate

**33.33 kg**



Haifa MAP - Mono Ammonium Phosphate

**5.74 kg**



Ammonium Sulphate

**17.81 kg**



Haifa Cal GG Calcium Nitrate

**343 gram**



Haifa Mag Cal 12.9-0-0+7+11

**27.27 kg**



Haifa Micro Combi

**579 gram**



Borax - Disodium Tetraborate Decahydrate

**21 gram**

Amount

## Mature - harvest

### Nutrient supply for crop

Stage	Days	Macronutrients(kg/mu)			Secondary Nutrients (kg/mu)			Micronutrients (gram/mu)					
		N_Total	P2O5	K2O	CaO	MgO	SO4	Fe	Mn	Zn	Cu	Mo	B
Mature - harvest	50	10.00	4.50	15.00	3.00	2.50	34.53	63.65	31.60	10.53	7.90	5.27	15.00

### Fertilizers per stage

#### Fertilizers application (mu/day)



Haifa SOP Potassium Sulphate  
588 gram



Haifa MAP - Mono Ammonium Phosphate  
148 gram



Ammonium Sulphate  
510 gram



Haifa Cal GG Calcium Nitrate  
106 gram



Haifa Mag Cal 12.9-0-0+7+11  
455 gram



Haifa Micro Combi  
18 gram



Borax - Disodium Tetraborate Decahydrate  
3 gram

### Nutrigation system



Volume: **1000 liter**  
Content: **Phosphorus**  
Injection volume per day: **6.24 l/day**  
Fertilizer concentration: **20 %**  
Tanks per stage: **tanks**



Volume: **1000 liter**  
Content: **Calcium**  
Injection volume per day: **2.89 l/day**  
Fertilizer concentration: **20 %**  
Tanks per stage: **tanks**

Haifa SOP Potassium Sulphate **94.21 kg**

Haifa MAP - Mono Ammonium Phosphate **23.63 kg**

Ammonium Sulphate **81.74 kg**

Borax - Disodium Tetraborate Decahydrate **423 gram**

Haifa Cal GG Calcium Nitrate **36.77 kg**

Haifa Mag Cal 12.9-0-0+7+11 **157.16 kg**

Haifa Micro Combi **6.07 kg**

#### Stock solution nutrients content:

Tanks	Macronutrients (gram/liter)			Secondary Nutrients (gram/liter)			Micronutrients (mg/liter)					
	N_Total	P2O5	K2O	CaO	MgO	SO4	Fe	Mn	Zn	Cu	Mo	B
Phosphorus   Tank 1	20.00	14.41	48.05	-	-	110.60	-	-	-	-	-	50
Calcium   Tank 2	25.97	-	-	20.75	17.29	-	440	220	70	50	40	-

### Fertilizers amounts for growth stage (per plot)



Haifa SOP Potassium Sulphate

**29.41 kg**



Haifa MAP - Mono Ammonium Phosphate

**7.38 kg**



Ammonium Sulphate

**25.52 kg**



Haifa Cal GG Calcium Nitrate

**5.32 kg**



Haifa Mag Cal 12.9-0-0+7+11

**22.73 kg**



Haifa Micro Combi

**877 gram**



Borax - Disodium Tetraborate Decahydrate








**133 gram**

Amount

### Total nutrient supply for season

Stage	Days	Macronutrients(kg/mu)			Secondary Nutrients (kg/mu)			Micronutrients (gram/mu)						Irrigation	
		N_Total	P2O5	K2O	CaO	MgO	SO4	Fe	Mn	Zn	Cu	Mo	B	Interval (Days)	Volume (m3/ha/day)
Establishment	10	5.00	2.00	8.00	2.00	1.50	16.27	56.27	28.00	9.33	7.00	4.67	13.33	1	1
Vegetative growth	25	9.00	3.00	11.00	3.00	2.00	29.20	41.96	20.80	6.93	5.20	3.47	10.00	1	1
Flowering to fruit set	35	8.00	3.50	17.00	2.00	3.00	31.08	42.15	20.80	6.93	5.20	3.47	2.40	1	1
Mature - harvest	50	10.00	4.50	15.00	3.00	2.50	34.53	63.65	31.60	10.53	7.90	5.27	15.00	1	1
<b>Total</b>	<b>120</b>	<b>32.00</b>	<b>13.00</b>	<b>51.00</b>	<b>10.00</b>	<b>9.00</b>	<b>111.08</b>	<b>204.03</b>	<b>101.20</b>	<b>33.72</b>	<b>25.30</b>	<b>16.88</b>	<b>40.73</b>		

### Total for season per plot

Stage	Establishment	Vegetative growth	Flowering to fruit set	Mature - harvest	Total
 Haifa SOP Potassium Sulphate	15.69 kg	21.57 kg	33.33 kg	29.41 kg	<b>100.00 kg</b>
 Haifa MAP - Mono Ammonium Phosphate	3.28 kg	4.92 kg	5.74 kg	7.38 kg	<b>21.31 kg</b>
 Ammonium Sulphate	10.65 kg	24.07 kg	17.81 kg	25.52 kg	<b>78.04 kg</b>
 Haifa Cal GG Calcium Nitrate	3.95 kg	6.52 kg	343 gram	5.32 kg	<b>16.12 kg</b>
 Haifa Mag Cal 12.9-0-0+7+11	13.64 kg	18.18 kg	27.27 kg	22.73 kg	<b>81.82 kg</b>
 Haifa Micro Combi	778 gram	578 gram	579 gram	877 gram	<b>2.81 kg</b>
 Borax - Disodium Tetraborate Decahydrate	117 gram	88 gram	21 gram	133 gram	<b>360 gram</b>