

Grow More – Sea Grow – Feeding Schedules

Notes applicable to entire grow:

1. This schedule is part of the “How I Grow” document. (*coming soon*) See it for more details.
2. All amounts are *per gallon*; fed *every* watering. *Grams* (if dry fertilizer) or *milliliters* (if liquid).
3. If a formula calls for Potassium Sulfate, you can *occasionally* substitute with Down-To-Earth: *Langbeinite* (sul-po-mag) or a silica product. See the “How I Grow” document for more details. (*Coming soon*).
4. Every gallon (after seedling) receives a pinch of ordinary (granulated) sugar. This helps feed the soil microbes. But, don’t overdo it. More is not better. (A pinch is 1/16th tsp, or a third of a milliliter.).
5. I do not pH the nutrient solution.
6. PPMs are shown as P₂O₅ & K₂O, and elemental P & K which should be closer to actual mixed strength.
7. I mix enough for 10% runoff. (Runoff is useful to wash away excess/unused salts.).
8. I monitor runoff PPMs (TDS). If they reach 1800-2000 (typically in flower) I reduce the strength of the nutrients, and/or mix a larger volume for more runoff (a “mini flush”). Lockout/deficiency (and acid soil) appears around 2400ppm.

This schedule was created using the *Product Mixer spreadsheet*. It can be found in the [Google Drive - Product Mixer folder](#).

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Version: 2017Aug16. The latest version of this schedule can be found on [Google Drive - Schedules folder](#).

SEEDLING	Grow More Sea Grow All Purpose 16-16-16	Botanicare Rhizo 1.15-0.5-1.15	Botanicare Liquid Karma 0.1-0.1-0.5	NPK Ratio	PPM
1/8 Strength (days 5-7)	0.2	1	1	1.2 - 1 - 1.3	37 / 29
1/4 Strength (days 8-11)	0.5	1.5	1.5	1.1 - 1 - 1.2	83 / 65
1/2 Strength (days 12-14)	1	2	3	1.1 - 1 - 1.2	158 / 123

Notes for seedling phase:

1. The soil has light nutrients, sufficient for the first 10 days. Instead of waiting to feed full strength, I find that adding weak nutrients sooner helps.
2. I start feeding when the first set of fan leaves are 1/4 to 1/2” long. (Actual serrated fan leaves, not the first round cotyledon leaves). Usually this happens 5-7 days after the seedling breaks ground. Because seedlings don’t use much water, I might not need to water during each of the three day ranges. (I.e., I may not give *all* three strengths. I just water when it’s appropriate, and give the strength for the seedling’s age.).
3. Because the soil has some nutrients, the NPK ratio of this formula isn’t important.

VEG & TRANSITION	Grow More Sea Grow All Purpose 16-16-16	Fertilome Hi-Yield Blood meal 12-0-0	Pennington Alaska Fish emulsion 5-1-1	Down To Earth Bat Guano 9-3-1	Alpha Chem Potassium Sulfate 0-0-50	Botanicare Liquid Karma 0.1-0.1-0.5	NPK Ratio	PPM
Basic	1.8				0.4	5.0	1 - 1 - 1.8	326 / 259
Alt #1	1.6	0.9			0.3	5.0	1.4 - 1 - 1.7	309 / 251
Alt #2	1.6		4.0		0.4	5.0	1.5 - 1 - 1.7	370 / 302
Alt #3	1.1			3.0	0.5	5.0	1.7 - 1 - 1.8	351 / 289

Notes for veg & transition phase:

1. I default to using the "Basic" formula. Occasionally I use one of the alternate formulas to boost N and give the soil microbes more organic bennies. I rotate through the alternates to create variety in the soil. I just try to read the plants. It seems like they benefit from some additional N (and organic food for the soil) every 5-10 days.
2. I continue using Botanicare: *Rhizo Blast* for a week or two into veg. It has such low nutrient content that it doesn't affect the NPK ratio.
3. Use "Basic" in Transition (when 12/12 lighting begins). If N deficiency occurs, use one of the high-N formulas. (Don't exit transition too soon or N deficiency may occur.).

EARLY FLOWER	Grow More Sea Grow All Purpose 16-16-16	Grow More Sea Grow Flower & Bloom 4-26-26	Pennington Alaska Morbloom 0-10-10	Alpha Chem Potassium Sulfate 0-0-50	Botanicare Liquid Karma 0.1-0.1-0.5	NPK Ratio	PPM
#1 (SG)	1.6	0.3		0.2	5.0	1 - 1.2 - 1.7	311 / 240
#1 (MB)	1.7		0.6	0.2	5.0	1 - 1.2 - 1.7	311 / 240
#2 (SG)	1.5	0.5		0.1	5.0	1 - 1.4 - 1.7	312 / 236
#2 (MB)	1.6		1.0	0.1	5.0	1 - 1.4 - 1.7	303 / 228

Notes for early flower

1. You can use Sea Grow or Morbloom. Morbloom comes from fish. I default to the Sea Grow formulas, and occasionally use the Morbloom formulas (for variety feeding the soil microbes).
2. I may define "early flower" to be later than most people. Using #1 too soon could cause N deficiency. Treat using one of the high-N formulas from "Veg."
3. Don't use #2 until shortly before "mid flower." Using it too soon could cause N deficiency.

MID FLOWER	Grow More Sea Grow All Purpose 16-16-16	Grow More Sea Grow Flower & Bloom 4-26-26	Pennington Alaska Morbloom 0-10-10	Botanicare Liquid Karma 0.1-0.1-0.5	NPK Ratio	PPM
#1 (SG)	1.5	0.8		5.0	1-1.6-1.7	343 / 254
#1 (MB)	1.6		1.5	5.0	1-1.6-1.7	313 / 231
#2 (SG)	1.4	0.9		5.0	1-1.8-1.8	345 / 254
#2 (MB)	1.5		1.7	5.0	1-1.8-1.8	311 / 227

Notes for mid flower:

1. Entering "mid flower" too soon may cause N deficiency. Treat using one of the high-N formulas from "Veg."
2. Don't use #2 until shortly before "late flower." Using it too soon could cause N deficiency.

LATE FLOWER	Grow More Sea Grow All Purpose 16-16-16	Grow More Sea Grow Flower & Bloom 4-26-26	Pennington Alaska Morbloom 0-10-10	Down To Earth Bat Guano 0-7-0	Down To Earth Fish Bone Meal 3-16-0	Botanicare Liquid Karma 0.1-0.1-0.5	NPK Ratio	PPM
#1 (SG)	1.1	0.6		1.1		5.0	1 - 2 - 1.7	326 / 248
#1 (MB)	1.3		1.2	1.2		5.0	1 - 2 - 1.7	331 / 252
#1 slow (SG)	1.1	0.7			0.6	5.0	1 - 2 - 1.7	324 / 239
#1 slow (MB)	1.3		1.4		0.7	5.0	1 - 2 - 1.7	328 / 240

Notes for late flower:

1. I consider the last 14 days "late flower." Using these low-N formulas too soon may cause N-def. Treat with one of the earlier (lower-P) formulas.
2. Two or three times during this phase I add 5ml/gal Pennington *Alaska Kelp* (0.3-0-0.6). It doesn't change the NPK ratio enough to warrant separate formulas. (It only adds 26ppm.). I do this because I believe the auxins (growth hormones) in the kelp cause the buds to swell and harden. I haven't conclusively proven this. But, it seems to me this happens.
3. The last 1-2 feedings, I might feed half strength. Just to let the plant consume what's in the soil.

BLOOM BOOSTER	Grow More Sea Grow All Purpose 16-16-16	Grow More Sea Grow Flower & Bloom 4-26-26	Pennington Alaska Morbloom 0-10-10	Grow More Hawaiian Bud & Bloom 5-50-17	Down To Earth Bat Guano 0-7-0	Botanicare Liquid Karma 0.1-0.1-0.5	NPK Ratio	PPM
Mild PK (SG)	1.0	0.5		0.5		5.0	1 - 2.6 - 1.9	322 / 222
Mild PK (MB)	1.0		1.0	0.5		5.0	1 - 2.6 - 1.9	312 / 214
Strong PK (SG)	0.9	0.4		0.7		5.0	1 - 3 - 2	330 / 223
Strong PK (MB)	1.0		0.8	0.7		5.0	1 - 3 - 2	325 / 218
Organic Mild PK (SG)	0.8	0.5			2.0	5.0	1 - 2.6 - 1.9	326 / 253
Organic Mild PK (MB)	0.9		1.0		1.9	5.0	1 - 2.6 - 1.9	310 / 239
Organic Strong PK (SG)	0.7	0.5			2.4	5.0	1 - 3 - 2	337 / 263
Organic Strong PK (MB)	0.8		1.0		2.3	5.0	1 - 3 - 2	321 / 250

Notes for bloom booster:

1. I don't know if "Bloom Boosters" work. When I use these higher PK formulas, I do it twice in the last 10-14 days.