



Reef Geeks™ Culture Guide

Comprehensive Guide to Culturing Phytoplankton

Welcome to the Reef Geeks™ approach to phytoplankton culture.

This guide will walk you through a **simple, repeatable method** for growing healthy, stable phytoplankton using the **Reef Geeks™ Water Prep & Culture Series** and **Reef Geeks™ Phyto Factory XL**



Initial Setup

1 Sterilisation (Critical First Step)

Products: Reef Geeks™ CultureClean Pro, SteriMix Pro, Dechlor Pro

1. Wash the **Reef Geeks™ Phyto Factory XL** culture container thoroughly using warm water and mild detergent
2. Rinse well to remove all soap residue
3. Spray the container, lid, and any tools with **CultureClean Pro**
4. Allow a **minimum 1-minute contact time**, then air dry

✓ Proper sterilisation is essential to prevent contamination and culture crashes.

2 Aeration System Setup

1. Position the air pump **above the culture container** to prevent back siphoning
 - Alternatively, install a check valve for added safety
 2. Run airline tubing from the pump to the airflow control valve
 3. Insert the airline into the culture container
 4. Adjust airflow to provide **strong, continuous bubbling** (no violent splashing)
-

3 Adding Starter Culture

- Gently add **500 mL of Reef Geeks™ GreenCore Phyto** starter culture to the sterilised container
- Avoid splashing or shaking at this stage

4 Preparing Culture Water

Products: Reef Geeks™ SteriMix Pro, Dechlor Pro

1. Prepare fresh culture water using:
 - R.O. water
 - Marine salt mixed to **specific gravity 1.025**
 - In a separate sterilised container
 2. Sterilise the prepared water using **Reef Geeks™ SteriMix Pro**
 - 1 mL per 1 L
 - Allow **30–60 minutes contact time**
 3. Neutralise using **Reef Geeks™ Dechlor Pro**
 - **1 mL per 1 L water**
 - Mix well and wait **~1 minute**
 4. Fill the culture container to **approximately 2/3 full**
 5. Adjust aeration to maintain a strong, even flow
-

5 Nutrient Addition

Product: Reef Geeks™ PhytoGrow Pro

- Add **1.5 mL PhytoGrow Pro** per 1 L of culture volume
- Dose **once at culture start**
- Do not add additional nutrients during the initial growth phase

✓ **PhytoGrow Pro** provides balanced nutrients without overloading the culture.

6 Lighting & Temperature

- Position a fluorescent or LED grow light close to the culture container
 - Do not allow the light to touch the container
- Set a timer for:
 - **16 hours ON**
 - **8 hours OFF**
- Maintain temperature between **20–26°C**



Cultivation Phase

1 Observation

- The culture will begin **light green and translucent**
 - Over time it will become **darker and thicker**
 - Healthy cultures show steady colour deepening without foul smell
-

2 Maintenance (After Initial Growth)

After 7 days:

1. Add **1 mL PhytoGrow Pro** per **1 L** of total culture volume
 2. Top up the container with freshly prepared, sterilised, and dechlorinated culture water
 3. Fill to **~30 mm below the container rim**
 4. This will dilute the culture slightly
 5. Allow the culture to reconcentrate over the next **7–10 days**
-

3 Timing

- Cultures typically reach optimal density **7–10 days after dilution**
- Colour should be **dark green and opaque**

Harvest & Storage

1 Harvesting

1. Harvest **approximately 70%** of the dark green culture
 2. Retain **30%** in the culture container as a starter for the next batch
-

2 Ongoing Harvest Schedule

- Repeat harvesting weekly:
 - **70% harvested**
 - **30% retained**
 - **Start with a freshly sterilised container after 4 harvests**
 - Always sterilise tools and containers using **CultureClean Pro** before each harvest
-

3 Storage & Use





- Harvested phytoplankton is ready for:
 - Aquarium dosing
 - Coral feeding
 - Store harvested phyto in the refrigerator
 - Shake gently every few days to prevent settling
-

Additional Tips

- **Patience is key:** Growth starts slowly but accelerates rapidly
- **Watch the colour:** Dark green = healthy culture
- **Smell test:** Any foul or sulphur smell indicates contamination
- **When in doubt:** Start fresh using sterilised equipment and clean water
- **Start with a sterilised container after 4 harvests**

✓ Consistent sterilisation using the Reef Geeks™ workflow dramatically reduces crashes.

Reef Geeks™ Culture Workflow

 CultureClean Pro →  SteriMix Pro →  Dechlor Pro →  PhytoGrow Pro

Simple • Repeatable • Reef-safe