



# JBL

[www.JBL.de](http://www.JBL.de)

## Plant care

The **JBL 7 Step** concept for perfect aquarium plants

**Extra:**

**Problem solving**

Why don't my plants grow?

1.

2.

***Start***

3.

4.

***Start plus***

5.

6.

***Professional***

7.

***Relaunch***

[www.JBL.de](http://www.JBL.de)



1.  
2.  
3.

Start

# Start Basic care for all aquarium plants

Start plus

## 1. The basis for plant roots

(from JBL AquaBasis plus or JBL Florapol)

- Only a slightly acidic ground environment allows plants to access nutrients.
- A constant and balanced supply of nutrients provided by clay which releases nutrients when required and absorbs excess nutrients.



## 2. Basic fertiliser in liquid form which can be absorbed by leaves (JBL Ferropol)

- Only in a chelated form are minerals and trace elements protected against oxidation in water and are easily available to plants.
- Careful monitoring using the JBL Fe Test avoids the risk of giving too little or too much fertiliser.



## 3. Daily fertiliser doses (with JBL Ferropol 24)

- Delicate trace elements cannot be provided as a long-term supply, but have to be provided daily for the plants.

## JBL ProFlora Start

The ProFlora Start bucket contains the first 3 steps for the successful start of a plant aquarium.



For 50-80 liters: Art. No. 20217 00  
2,5 l (ca. 3 kg) JBL AquaBasis plus  
100 ml JBL Ferropol  
10 ml Ferropol 24

For 100-200 liters: Art. No. 20218 00  
5 l (ca. 6 kg) JBL AquaBasis plus  
100 ml JBL Ferropol  
10 ml Ferropol 24

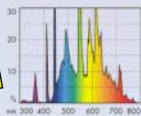
# ProFlora Start

#### 4. Full-spectrum tubes simulate natural sunlight

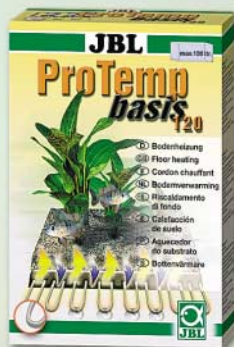
(JBL SOLAR Tropic & Natur)

- Only full-spectrum tubes enable the plants to grow vigorously, without algae problems getting out of hand.
- We strongly advise changing the tubes every year, as tubes lose 50% of their power within one year.

**Test result "Optimal"**  
For JBL SOLAR in "Aquaristik", the specialist magazine issue No. 162



Spectrum of the JBL SOLAR Tropic Tube



#### 5. Warm feet for the plants (with JBL ProTempBasis)

- Gentle warming of the substrate by a ground cable looped on the floor of the aquarium provides vital water circulation in the floor.
- This gives plants "warm feet" and ensures a current of nutrients flowing over the roots, preventing any decay processes in the ground substrate.

## 6. Providing the main nutrient, carbondioxide (CO<sub>2</sub>)

(through JBL CO<sub>2</sub>-fertiliser systems)

- Just as man needs oxygen, so plants need carbondioxide!
- Plants can only flourish with sufficient levels of CO<sub>2</sub>.



CO<sub>2</sub>

After one year the substrate  
is replenished.

## 7. Repeat fertilising (replenishing) of the substrate fertiliser

(with JBL the 7 Balls or large economy pack JBL the 7 + 13 Balls)

- Decreasing clay levels in the substrate should be counteracted each year by replenishing the fertiliser.
- Plants with strong root systems need an extra portion of clay in the root area.



**Extra:**

## Why don't my plants grow?

### Check the iron content of the water:

Lack of iron leads to light green, yellowy, glassy or pale leaves (chlorosis).

**Recommended level:** 0.05-0.2 mg/l iron.

**Caution:** Not every type of iron is suitable!

**Remedy:** add iron with JBL Ferropol,  
JBL Ferrotabs and JBL The 7 Balls.



### Lack of manganese:

Insufficient levels of manganese due to unsuitable fertiliser leads to yellow leaves, in which only the leaf nerves remain green and stand out (Christmas tree disease).

**Remedy:** in addition to iron, JBL Ferropol also has sufficient manganese.



### Insufficient light:

Insufficient light leads to unhealthy growth in many plants. They etiolate (develop long stems with large gaps between the leaves), drop the lower leaves or wilt. Naturally healthy plant growth is only possible if the light is right (JBL SOLAR tubes).



### Lack of CO<sub>2</sub>:

When CO<sub>2</sub> levels are low, plants and algae take bound CO<sub>2</sub> from the carbonate hardness, which is destroyed by this process and decreases (= biogenic decalcification).

**Remedy:** addition of CO<sub>2</sub>.



**Extra:**

## Why don't my plants grow?

### **Cryptocoryne rot:**

Often caused by changes in care routine.

**Remedy:** keep to a consistent care routine.



### **Nitrate levels (NO<sub>3</sub>):**

Nitrate levels above 50 mg/l cause stunted growth in a lot of plants, despite the fact that low concentrations of nitrate act as a nutrient. May also lead to cryptocoryne rot.

**Remedy:** Partial change of water and JBL BioNitratEX. Good consumers of nitrates are, for example, Cabomba, Hygrophila and Limnophila species.



### **Active carbon as a filter material:**

Active carbon not only removes medication and water discoloration, but also minerals, trace elements and vitamins!

**Remedy:** only use active carbon when really necessary.



### **Plant-eating fish and snails:**

Carefully check the stock of fish for plant-eating species, as people are often not aware that certain species of fish e.g. spiny catfish (Ancistrus) and some types of snails also eat plants.



**Extra:**

## Why don't my plants grow?

### Extreme and strongly varying water values:

Extreme temperatures ( $<18$  or  $>29$  °C) and extreme pH levels ( $<6.5$  or  $>8.0$ ) as well as hardness levels ( $CH < 4^{\circ}$  GCH or  $CH > 10^{\circ}$  GCH).

**Remedy:** see the JBL water analysis chart or the JBL online laboratory at: [www.JBL.de](http://www.JBL.de)



### Use of algae preparations:

"Hard" algae preparations in particular restrict plant growth considerably and can even lead to plants dying off. After all, plants are closely related to algae.

**Remedy:** change to the JBL algae preparation, JBL Algol.



### Emersed (above water) or submersed (underwater) types of plants?

Some familiar aquarium plants are not underwater plants at all, but are marsh plants which can survive underwater for a certain length of time - but not in the long-term! Many plants are cultivated emersely (with only the roots in water) and loose the leaves which grow above the water when adapting to submersed (underwater) growing conditions.

**Remedy:** only buy true underwater plants and be patient.



### Check space and planting requirements:

Long-stemmed plants are often planted incorrectly. The lead should be removed before the plants are planted **individually** and with sufficient space between them.



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Your **JBL** retailer

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