



PLANT HEALTH

Below is a list of plant health problems you may encounter, with suggestions on how to deal with them.

Pest Problems

- **Small black flies around the top of the growing media and roots**
These small black flies are sciarid flies, also known as fungus gnats. The larvae of these flies will eat and destroy the root zone you have worked so hard to encourage! Fungus Gnat Off should be used to kill the larvae, and Sticky Insect Traps will catch the adult flies.
- **Jumping Insects on the surface of the growing media or water**
These are called “springtails.” They are harmless and you do not need to take any action.
- **White/Yellow dots on the plant leaves**
These are caused by spider mites. Check the underside of the affected leaves using a microscope. Plant Vitality Plus should be used to thoroughly spray both the plants and the growing area.
- **Small worms/maggots on leaves**
These are the larvae of thrips. Plant Vitality Plus should be used to combat this pest.

Root Problems

- **Maggots around the roots**
If they have a black head and clear body, they are sciarid fly larvae which will eat and destroy your roots. You will often find these small black flies around the surface of the growing media or the base of your plant. Fungus Gnat Off should be used to kill the larvae and use some sticky insect traps to catch the adult flies.

Nutrient Solution Problems

- **Sludgy snot-like substance either in or on the surface of the nutrient solution**
This is normally enzymes and any beneficial bacteria causing the nutrient solution to proliferate. It can happen when bacteria-based nutrient additives are mixed or overused. This can also result from an algae problem.
- **EC/CF is decreasing**
This can be caused by low transpiration due to high humidity and moderate temperatures or it can be also caused by plants with high demand of

Plant and Leaf problems

- **The leaves of young plants are becoming pale green or yellow**
This is normally caused by under-feeding and you should increase your nutrient strength (EC) or commence feeding the plants.
- **The leaves are limp and wilting**
This is a tricky one because it can be caused by a number of things, including over- or under-feeding; however the most common cause is under-watering. Wilting can also occur if the temperature is too high (over 30°C) and/or the humidity is too low (below 40%).
- **Leaves are turning purple**
Purple leaves are most likely to be due to low temperatures. A less common cause would be over-feeding or a phosphorous deficiency.
- **The leaf tips appear burnt**
This is a classic sign of over-feeding. Reduce the nutrient strength.
- **The leaf tips are curling under**
This is the most common sign of over-feeding.
- **Leaves clawing downwards**
Roots may be water-logged during establishment so the lower the level of irrigation.
- **Leaves are dark green and brittle or leathery**
This is a symptom of over-feeding, and you should lower the strength of the nutrient solution (EC).
- **Silvery marks on leaves like those left by slugs**
These marks are often caused by plant-eating insects called thrips. Look for further signs of infestation by checking the underside of leaves for larvae. If you do have thrips you will need to spray your plants and growing area with Plant Vitality Plus or [Pyrethrum 5 EC](#).
- **Leaves are pale green with a very soft and velvety feel**
A sign of under-feeding. Water your plants and/or increase the nutrient strength (EC).
- **The leaves are going a pale green/yellow colour sometimes with necrosis on flowering plants**
This is usually a sign of over-feeding when plants are in the middle of the flowering period. You should lower the nutrient strength (EC).
- **Cloudy yellow spots between the leaf veins or necrotic spots**
This has most likely been caused by a magnesium (mg) deficiency if it present on the older more mature leaves just under the flowering tops.
- **Leaf veins are still green but my leaves are going yellow**
If this is on the mature leaves then it is a magnesium (mg) deficiency but if it is on the new

younger leaves it is an Iron (Fe) deficiency. An iron deficiency can be caused by the pH level of the nutrient solution being too high. Raspberries are very susceptible to Iron deficiencies.

- **Top leaves have very pale/burnt patches on them**
This may be due to your lights being too close to your plants, and the heat is damaging the leaf tissue. Excessive water loss may also be causing necrosis. Raise your lights higher above the plants.
- **Leaf Edges rolling up**
If the leaves start to look like tubes they may be trying to prevent water loss. This could be caused by the humidity being too low, wind burn caused by too much air movement, the temperature being too high, or the lights may be too close.
- **Red colour appearing on the leaf stems**
Some plant varieties will always have red stems, but it can be caused by a variety of issues. It is most commonly a stress response. It could have been caused by night and day temperatures being too far apart, or the plants not being hardened off properly. It can also be another sign of under-feeding.
- **Lots of white/yellow dots on the leaves**
This is caused by spider mites. Check the underside of the affected leaves. Plant Vitality Plus should be used to spray plants and grow room.
- **Rusty patches spreading up the plant**
This could be either a calcium deficiency or a sign of over-feeding.
- **Orange-brown rusty spots with dark outline on the older leaves**
This is a symptom of calcium deficiency. This can be caused by continued periods of high or low humidity and is very common in soil or coco.
- **Leaves are drying out, stems are woody and the leaf edges are burning.**
The above are symptoms of wind burn. Wind burn is caused by too much air movement around the plant. You should adjust any fans that are pointed directly towards your plants.
- **White powder/dots growing on the leaf surface**
This is powdery mildew which is a fungal infection. For this use Microbial or Bud Rot Stop and improve the growing environment.
- **The leaves around flowers are turning brown/yellow**
This is normally a symptom of botrytis/bud rot, or possibly from excessive transpiration from the heat of your grow light. If possible, gently see if you can spot grey mould inside the flowers. Remove any visibly infected flowers IMMEDIATELY and treat the rest of your plants with Microbial or Bud Rot Stop.
- **Furry grey mould/fuzz in flowers**
This is botrytis/bud rot. Treat with Bud Rot Stop/Microbial.

- **Small worms/maggots on leaves**

These are the larvae of thrips. Treat with Plant Vitality Plus.

- **Leaves have water droplets on the edges**

This happens by a process called Guttation. It is normally noticed when the lights have just come on. When humidity is high and the growing media is wet it causes water to leak out of the leaf edges (guttation). Water can also collect on the lower leaf if the leaves overlap each other.

- **Flowers are becoming loose and are not dense.**

Your plant is most likely stressed due to the heat.

- **Flowers are stretching out**

Your plants are probably suffering from too much heat and once you raise your lights they should improve. This can also be caused by the interruption of the dark period of your light cycle. Do not go into your room when your lights are off!

- **Plants are not flowering, have elongated stems and have stretched.**

A sign that the light cycle has been interrupted.

- **Plants are leggy and are really big!**

Some plants are unsuitable for growing indoors so ensure you have a suitable species/strain. If the plants are suitable it is quite common in summer for this to happen when temperatures are too high. It can be a sign of insufficient light but this very uncommon.

- **Plants stunted and leaves discoloured**

Possible pythium, an extremely harmful root disease! Treat with Pythoff or Stop Wilt Plant Tonic. Microbial can also be used as a preventative measure and to assist with the control of the disease.

For more information on Plant Health, Plant nutrient deficiencies and Pest Problems please visit on information page [found here](#).

If you have any plant health questions or for any other advice please feel free to call one of our stores today or visit www.3ch.co.uk