



*Nitrogen deficiency*  
www.plantphys.net



*The four on the right show poor coloring. There is no gradual transition between the red and green color*  
www.agnet.org/library/article/pt2003021.html



*Phosphorus deficiency*  
www.plantphys.net



*Potassium deficiency*  
www.plantphys.net

## Application of Liquid Fertilisers

Liquid fertilisers have detailed instructions for application on the bottle label. Read these carefully and apply appropriately. There will usually be a dilution. For example, a dilution of 1:100 will mean apply 1 part of product to 100 parts of water. On other occasions, the dilutions may already have been done and you only need to measure and spray the liquid onto your plants.

## Application of Granular Fertilisers

More is not better when it comes to fertilisers because they can easily burn your plants. Be careful to adhere to the recommended rates. Always double check the application rate with your store's technical salesperson and remember that different soil types may require different quantities of fertiliser. If in doubt, using a smaller quantity more frequently is better than lots in one go. Make sure you sprinkle evenly and that there are no big clumps which could burn your plants roots.

## Nutrition Problems

### Nitrogen Deficiencies

Nitrogen is one of the basic elements that a plant cannot do without. It is the building block for proteins and is also used in chlorophyll – the green matter in plants where photosynthesis occurs.

A shortage of nitrogen shows up as a yellowing of lower leaves which progresses upwards whilst lower leaves die – if not treated. Plants grow slowly, new leaves are small, thin and may have purple veins.

Stems are hard and thick and eventually brown off and dry off. Flower buds turn yellow and drop, and the fruit is reduced in size and number and may be pale green (instead of dark green) before ripening.

### Nitrogen Excess

Excess of application is more common than deficiency. Your plants will rapidly grow into quite bushy plants with many bright, light green leaves. You won't get many flowers and consequently little fruit. Those fruit that are set are poor quality and soft, and very prone to diseases.

### Phosphorus deficiencies

Phosphorus is another basic element required by plants in large quantities. It is used at all growth stages, but particularly early in the plant's life. It is necessary for cell division, growth and root and shoot development.

Deficiencies usually occur early in the growing season when the soil is still cool. Phosphorus is abundant in many soils but may be unavailable to the plant when the soil is too cold, so it's best not to plant tomatoes too early in the season. Once soil temperatures rise, the problem usually corrects itself.

Symptoms show up as plants with very dark green leaves which may have an inter-veinal purple colouration on the backs of leaves. Stems are thin, hard and fibrous and the fruit is pale in colour. Plants are stunted and the fruit set is delayed and usually the yield will be poor. Symptoms usually show up in the old leaves first.

### Potassium deficiencies

Potassium is an element that is required in large amounts