**NPK Fertiliser - What the NPK means in Fertiliser**

**Three Main Elements of Fertiliser – NPK** Most fertilisers will contain three elements essential for growth, Nitrogen (N) Phosphorus (P) and Potassium (K). These elements help plants grow in different ways and an understanding of this will help you when choosing the correct fertiliser for a plant or for a stage in the development of a plant.

Often when you buy a packaged commercial fertiliser you will see an analysis of the NPK content. An equally balanced fertiliser may be described as 5:5:5 - 5% Nitrogen, 5% Phosphorus and 5% Potassium. You may also see Potassium described as Potash.

**Nitrogen - the N in NPK** Nitrogen is used by the plant to produce leafy growth and formation of stems and branches. Plants most in need of nitrogen include grasses and leafy vegetables such as cabbage and spinach.

Plants in the bean family, legumes, have nodules on their roots where bacteria live that fix nitrogen from the air for use by the plant. They provide their own nitrogen fertiliser this way.

**Shortage of Nitrogen in Plants – Symptoms** You can tell if your plants need nitrogen when their growth is stunted with weak stems and often they will have yellowed or discoloured leaves.

**Application of Nitrogen** Nitrogenous fertilisers are quickly washed out of the soil by rain and need to be renewed annually.

**Phosphorus - the P in NPK** Phosphorus is essential for seed germination and root development. It is needed particularly by young plants forming their root systems and by fruit and seed crops. Root vegetables such as carrots, swedes and turnips obviously need plentiful phosphorus to develop well.

**Shortage of Phosphorus in Plants – Symptoms** Without ample phosphorus you will see stunted growth, probably a purple tinge to leaves and low fruit yields.

**Application of Phosphorus** Phosphates remain in the soil for two or three years after application so the amount in a general fertilizer is probably enough. Add just before planting or top dress during growth periods.

**Potassium - the K in NPK** Potassium has the chemical symbol K from its Latin name kalium. It promotes flower and fruit production and is vital for maintaining growth and helping plants resist disease. It is used in the process of building starches and sugars so is needed in vegetables and fruits. Carrots, parsnips, potatoes, tomatoes and apples all need plenty of potassium to grow well.

**Shortage of Potassium in Plants – Symptoms** Plants that are short of potassium will have low resistance to disease, scorching of leaves and poor fruit yield. Tomatoes will really show the effects of a shortage of potassium

**Application of Potassium** Potash usually lasts for two or three years in the soil but for vegetable production (tomatoes, potatoes especially) additional will be required. This can be applied as a liquid feed either commercial or made from comfrey for tomatoes or a specially prepared fertiliser, high in potassium for potatoes.

[**http://www.allotment.org.uk/gardening/fertiliser/npk**](http://www.allotment.org.uk/gardening/fertiliser/npk)