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Understanding N-P-K in Fertilizers

From "Fertilizing Flowers and Fruits" By Will Knowles, Creek Side Gardens

Well Balanced, general purpose fertilizers contain a blend of all the nutrients that plants need to grow. That's why additional fertilization is so important in our garden. The numbers on the fertilizer package reflect the level of the 3 most important nutrients that need to be supplied: Nitrogen, Phosphorus, and Potassium, or N-P-K.

When to use N-P-K during the season

Initially, plants focus on producing stems and leaves in the early stage of growth. Later, they focus on producing flowers and fruits. As that happens, the nutrient requirements for the plant change and adjustments can be made. Generally, as plants begin to grow flowers and fruits, their need for nitrogen decreases and their need for phosphorus and potassium increases. Begin the season with a fertilizer that has a higher N value, but as the plants produce flowers and fruit, switch to a fertilizer with a reduced N value but increased P and K values. These fertilizers are generally called Blossom boosters or fruit and flower formulation.

	Nitrogen (N)	Phosphorus (P)	Potassium (K)
How plant is affected	N affects vegetative growth and general plant health	P affects roots, which then translates into flowers and fruits	K affects photosynthesis as well as food storage
Best use	For encouraging growth of new shoots, buds, and leaves	For encouraging bloom and seed setting	For general plant health, chlorophyll formation, disease resistance
Fertilizers heavy in nutrient	Blood meal, Feather meal, Fish Fertilizers	Rock phosphate, Bone meal, Seabird guano, Fishmeal	Langbeinite, Sul-Po-Mag, Palm bunch ash
Deficiency signs	Yellowing of older leaves, slowing of growth, premature defoliation	Dull green to yellowing leaves, purplish stems. Lack of blooms on an otherwise healthy plant	Hard to ID. Generally sickly with small fruit. Yellowing from older leaves upwards, sickly blooms
Excess signs	Weak, long, spindly growth, dark green foliage	Yellowing between the leaf veins, bleaching of the tissue	Stunted growth, chlorosis