

# REDUCING PESTICIDES

it's perfectly natural.



## ORGANIC FERTILIZERS –WHAT TO USE WITH WHICH PLANTS

Each plant has a uniquely balanced mix of nutrients that will maximize its potential if these nutrients are available at the optimal levels and at the opportune moments in the plant's development. Achieving such perfection is rarely practical or even possible. Instead, this fact sheet will provide some general advice on the types of organic fertilizers that are best suited to various types of plants.

Good soil preparation is also critical to optimal plant growth. Organic fertilizers will provide plants with the biggest boost if you have added organic matter to the soil to achieve a humus-rich loamy soil and ensured that the soil pH is appropriate (between 6 and 7 for most plants).

### Vegetables

Most vegetables are heavy feeders and will benefit from annual organic fertilization and soil amendment. In the spring, you should apply 2 – 3" of compost and/or aged manure to the top of the soil – either before planting or just after seeds have germinated. This will provide a combination fertilizer, mulch and soil amendment. If you have the heavy clay soil that is typical in many parts of Toronto digging in a layer of compost and/or manure in the fall after the vegetable harvest will help improve next year's crop as well.

At planting time, the addition of bone meal to the planting holes will encourage good root development and strong plant development by boosting the phosphorus content of the soil.

Through the growing season, you may wish to use a liquid organic fertilizer (such as a fish emulsion or kelp extract fertilizer, diluted according to directions) or an organic all-purpose slow release fertilizer as a side-dressing to encourage strong plant growth. The liquid organic fertilizers can also be used as a foliar spray, best applied on a calm, cloudy, cool day. This mid-season fertilization is most useful when the plants are blooming and setting fruit or, for leaf vegetables, every 2 – 3 weeks. This ongoing supplemental fertilizing is particularly important for container-grown vegetables.

For tomatoes and peppers, in particular, side-dressing the plants with bone-meal when they are flowering and setting fruit should reduce the risk of blossom-end rot by increasing the calcium levels in the soil. The use of an Epsom salt foliar spray (1 tablespoon per gallon of water) at the same time will boost the magnesium levels and improve the plants' ability to use the calcium in the soil.



This fact sheet has been prepared by the Toronto Master Gardeners



For leafy vegetables, a side-dressing of bloodmeal partway through the growing season will encourage ongoing good leaf development. Be sure to water in well to avoid leaf and/or root burn from the nitrogen content of the bloodmeal.

### **Annual Flowers**

Most annual flowers will benefit from an organic fertilization regime similar to that described above for vegetables. The addition of bonemeal to the planting holes is particularly useful to encourage strong flowering. Be sure not to add too much of the nitrogen-rich sources of organic matter since these encourage leaf rather than flower development.

The regular (bi-weekly) use of a liquid organic fertilizer, such as a fish emulsion or kelp extract fertilizer, for container-grown annuals especially, is important to maintain nutrient levels through the entire growing season. Annuals respond particularly well to the use of foliar spray versions of the organic liquid fertilizers. There are some annual flowers, such as salvias, that grow best in soils with low fertility. Supplementary fertilization should not be used for these plants.

### **Perennial Flowers**

With perennials, the initial preparation of the planting area is critically important. Organic soil amendments and fertilizers (including bone meal to encourage strong root development) should be used when preparing all new perennial beds and in all planting holes for perennials going into existing beds.

The area around existing perennials should be top-dressed each spring (and preferably also each fall) with compost and/or aged manure. Side-dressing with kelp meal in the spring will provide a good source of micro-nutrients. Be sure that you don't cover the actual crown of the plants when you are adding the organic matter.

Roses are particularly heavy feeders and, as a result, will benefit from a high phosphorus organic fertilizer (e.g. bone meal) to encourage flower production both in the early spring and when they are blooming. A number of growers have also found that an Epsom salt foliar spray (1 tablespoon/gallon of water/foot of shrub height) applied just after the leaves open in the spring and again at flowering time encourages new cane growth and darker foliage.

Peonies will also benefit from a side-dressing of a phosphorus-rich organic fertilizer after blooming.

### **Conclusion**

The judicious use of organic fertilizers, in combination with good soil preparation, will carry your plants a long way towards providing you with a beautiful and rewarding healthy garden.