

### *Best Management Practices*

Best Management Practices (BMP) for vegetable gardening is a checklist to encourage increased crop yield and decreased labor input while also considering the environmental impact(s). BMPs vary site to site; therefore it's important to recognize how a grower can implement some or all of the practices into the management of vegetable production.

BMP considerations for vegetable production include: soil management and conservation, water management and irrigation, pest management (disease, insects and weeds), pesticide use and storage, nutrient management, organic and inorganic waste management, and energy use and conservation (University of Massachusetts at Amherst: [www.umass.edu](http://www.umass.edu)).

Soil is a complex structure that impacts inputs of water, nutrients, plant selection and care, and the environment. Identifying soil's structure and type, nutrients, pH, and drainage plays a large role in incorporating BMP into a vegetable production plan. If soil is not adequate for particular plants, plant health will decline and susceptibility of disease and insect pressure increases, which in turn impacts water management, pesticide use and increased energy input.

Soil contamination can be problematic on several levels. Risks from soil contamination include plants absorbing contaminants through the soil; groundwater becoming contaminated as it interacts with and flows beneath the soil; and bioaccumulation, occurring when livestock or humans ingest contaminants from vegetation growing in compromised soil.

While each of these issues is important, the primary concern for most urban gardeners relating to soil contamination is human health. Significant health risks resulting from exposure to a wide range of soil contaminants have been observed and documented. Some examples of these contaminants include heavy metals, pesticides, and polychlorinated biphenyls (PCBs), which are a general class of organic compounds and persistent environmental pollutants.

The Jefferson County Cooperative Extension Service can perform general soil testing to determine the soil pH and fertility which is done at the University of Kentucky. If heavy metals are considered, the University of Massachusetts (UMASS) is used. The Cooperative Extension Service does not test for metals or other contaminants using EPA testing criteria. The approach is to give a general idea of levels of metals of concern (primarily lead) and then decide whether to abandon the site, plant directly into the soil using specific guidelines in place to minimize direct contact and plant uptake, or simply use raised beds. This approach allows the project to continue to move forward without the cost of sampling slowing the process.

## ***Deciding which vegetable to plant and when***

What do tomatoes, lettuce, corn, beets, winter wheat and beans all have in common? All can be planted in the garden, but differ in the season in which they produce (see tables on next page). Understanding when plants are in season is important when planning a garden.

Once a crop season has ended, it's important to clean debris and improve soil. As gardening seasons come to an end, clean spent plants, including roots. This reduces an over-wintering site for pests and diseases that are able to survive winters and again become problematic the following season. Planting cover crops can retain the soil, prevent mineral leaching, reduce compaction and competitively shade out weeds. A lush top growth, termed "green manure," adds organic matter when tilled into the garden soil. And the roots of the cover are much more valuable than top growth as they offer both organic matter and structural granulation as the roots grow through the soil, improving aeration and drainage.

Improving soil quality has a positive effect on plant production. For more information, please contact your Jefferson County extension office. Happy gardening!

For more information on home vegetable gardening, visit: <http://www.ca.uky.edu/agc/pubs/id/id128/id128.pdf>

### **Crops for the Spring Garden**

<b>Vegetable</b>	<b>Seeds</b>	<b>Trans-plants</b>	<b>Days to Maturity<sup>1</sup></b>
Beets	X		55-60
Bibb lettuce	X	X	60-80
Broccoli		X	40-90
Brussels sprouts		X	80-90
Cabbage		X	60-100
Carrots	X		60-80
Cauliflower		X	50-100
Celery		X	100-130
Chinese cabbage	X	X	43-75
Collards	X		75-90
Endive	X	X	60-90
Kale	X	X	50-60
Kohlrabi	X		50-70
Leaf lettuce	X	X	40-50
Mustard greens	X		35-60
Onions <sup>2</sup>	X	X	40-120
Peas	X		60-80
Potatoes <sup>3</sup>			90-140
Radishes	X		20-30
Spinach	X		40-70
Swiss chard	X	X	55-60
Turnips	X		40-60
Turnip greens	X		30-50

<sup>1</sup> Days given are for the early to late varieties.

<sup>2</sup> Onions are also available in sets.

<sup>3</sup> Potatoes are available as seed pieces.

## Crops for the Summer Garden

Vegetable	Frost-resistant	Seeds	Transplants	Days to Maturity <sup>4</sup>
Beets	X	X		50-60
Cabbage	X		X	60-100
Carrots	X	X		60-80
Collards	X	X		75-90
Cucumbers		X	X	45-65
Eggplant			X	60-75
Endive	X	X	X	50-60
Green beans, bush		X		50-60
Green beans, pole		X		60-90
Irish potatoes <sup>5</sup>				90-140
Kale	X	X		50-60
Leaf lettuce	X	X		40-50
Lima beans, bush		X		65-80
Lima beans, pole		X		65-90
Muskmelons		X	X	75-90
New Zealand spinach		X		70-80
Okra		X		50-80
Onions <sup>6</sup>	X	X	X	40-120
Parsley	X	X		70-90
Parsnips	X	X		90-110
Peppers			X	65-75
Pumpkins		X		90-120
Radishes	X	X		20-30
Southern peas		X		60-70
Spinach	X	X		40-70
Summer squash		X		50-55
Sweet corn		X		60-100
Sweet potatoes <sup>7</sup>			X	120-140
Swiss chard	X	X		55-60
Tomatoes			X	60-90
Watermelons		X	X	70-90
Winter squash		X		80-120

<sup>4</sup> Days given are for the early to late varieties.

<sup>5</sup> Irish potatoes are available as seed pieces

<sup>6</sup> Onions are also available in sets.

<sup>7</sup> Sweet potatoes are available as rooted slips.

NOTE: Varieties which endure summer heat are available. Most of these crops can be seeded or transplanted during July and August and will develop quite well during midsummer's warm growing conditions, if you give them extra water and practice good insect pest control. As the crop develops, the cool, short days enable plants to accumulate sugar and flavor compounds providing the taste that makes so many fall-grown crops so good.

## Crops for the Fall Garden

Vegetable	Date of Planting	Seeds	Transplants	Days to Maturity <sup>8</sup>	Date of Harvest
Beets	Jul-mid-Aug	X		70-75	Oct
Bibb lettuce	Jul-Aug	X	X	50-60	Sept-Oct
Broccoli	Jul-Aug		X	60-80	Sept-Nov
Brussels sprouts	Jun-Jul		X	70-80	Oct-Nov
Cabbage	late Jun-early Aug		X	60-70	Sept-Nov
Carrots	Jul-Aug	X		80-90	Nov
Cauliflower	late Jun-early Aug		X	70-80	Sept-Nov
Chinese cabbage	Jul-Aug	X	X	50-70	Sept-Nov
Collards	Jul-Aug	X		80-90	Oct-Nov
Endive	Jul-Aug	X	X	70-80	Sept-Nov
Green beans, bush	Jul-mid-Aug	X		60-65	Sept
Kale	Jul-Aug	X	X	70-80	Sept-Nov
Kohlrabi	Jul-Aug	X		60-70	Sept-Nov
Leaf lettuce	Jul-Aug-Sept	X	X	40-60	Sept-Oct
Mustard greens	Jul-Aug	X		50-60	Sept-Oct
Parsnips	June	X		90-100	Nov
Potatoes	mid-June	X		90-100	Oct
Radishes	Sept	X		30-40	Oct
Rutabaga	Jul-mid-Aug	X		80-90	Oct-Nov
Snow peas	Aug	X		50-70	Oct
Spinach	Aug-Sept	X		50-60	Aug-Sept
Sweet corn	Jul	X		70-80	Sept
Turnips	Jul-Aug	X		50-60	Sept-Nov
Turnip greens	Jul-Aug	X		50-60	Sept-Nov

<sup>8</sup> Due to cool temperatures in the fall, a long time will be needed for certain crops to mature.