Too often, in the interest of increased efficiency, the home gardener insists on planting a vegetable checkerboard, where each crop is grown in the same place year after year. Block planting may be simpler in the short run, but in time it can bedevil your garden with a host of problems. Cabbages will shrink and go limp for no apparent reason, corn borers will threaten to overrun the corn patch, or your prize potatoes will be smothered with potato beetles.

In nature, things grow willy-nilly rather than in neat, geometrically placed rows. As a result, insect populations are faced with limited food supplies and can seldom get out of hand. And today, experts agree that diversity is the best defense against bugs and disease.

Through companion planting--combining specific plants so the beneficial qualities of one can be useful to another--you can keep the balance in your own backyard from tipping too far in one direction.

For example, an unusual quality of herbs is their ability to repel insects. Because vegetables are often plagued by bugs, herbs can be a welcome addition. Marigolds, popular because of their colorful flowers, may be especially effective. Planted among beans, they are said to discourage the Mexican bean beetle. Studies have also indicated that large plantings have a way of destroying the root systems of certain starch weeds. Nasturtiums may check aphids, striped cucumber beetles, and squash bugs, while tansy planted with cabbage might help reduce damage from cutworm and cabbageworm.

It will be some time, however, before the benefits of companion planting are scientifically established. So if your crops wilt under an intensive insect attack, chances are a chemical spray may be in order.