

Microclimates

Even within a single landscape there can be many slightly different weather patterns. These small pockets of variation in the amount of heat and water that are captured are called microclimates. Microclimates can be created by shade from a large rock or tree, steep slopes and changes in elevation. The gardener's challenge is to use the available microclimates, or create them, in their landscape to improve plant health and yield.



An herb spiral is one design that takes advantage of microclimates. The concept is to plant herbs in a spiral shaped raised bed. The center of the spiral is the highest point of the design. The soil at the top is drier and is a good location to grow herbs such as rosemary which tolerate full sun and require less water once established. Annuals, such as basil, can be grown lower in the spiral where the contours of the raised bed may provide some afternoon shade and the soil retains more water.

Microclimates can be created through intentional plant selection. Using plants to make a windbreak or planting trees to offer shade and lower temperatures beneath the canopy are examples of this practice. Microclimates can be created by incorporating greenhouses, cloches and hot beds. Rock mulch absorbs heat and consequently alters the temperature of the soil beneath. This can be beneficial or detrimental to growth depending on plant species.



Each plant selection has the opportunity to alter the climate within the landscape. Choosing wisely can increase the yield and reduce the intensity of the maintenance, and the occurrence of diseases and pests. Microclimates can help you start crops earlier and continue them later in the season. They can also help you grow crops that aren't typically suited for your zone. The key is identifying where the microclimates already exist in your landscape followed by

determining what microclimates should be established so you can grow what you want to grow.

Are you practicing permaculture techniques in your landscape? Email Cynthia at cdom@ksu.edu if you have a garden story you'd like to tell.

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