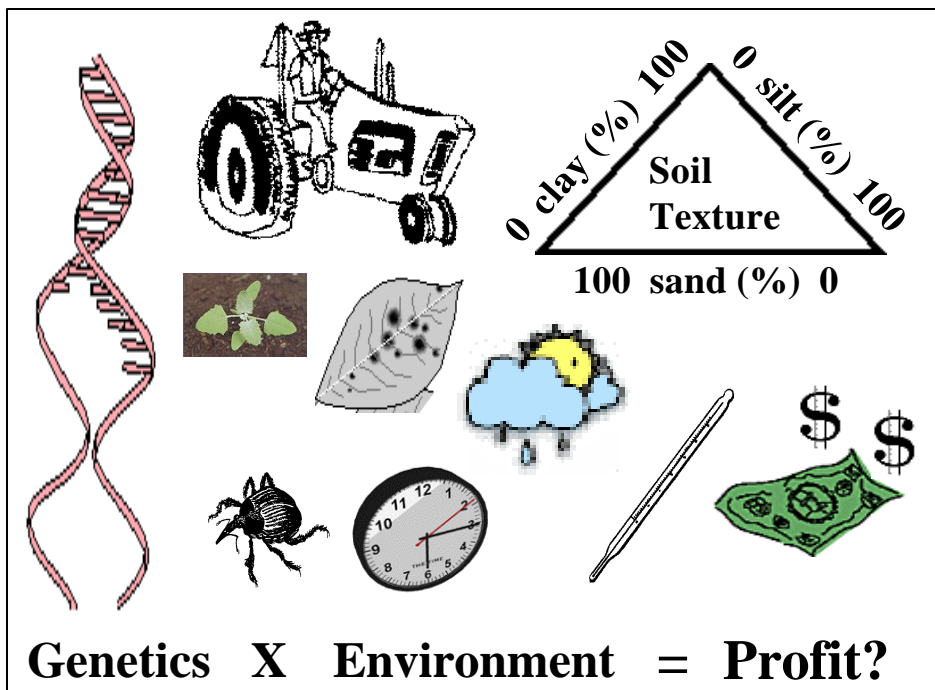


Variety Evaluation and Selection – Critical Steps in Profitable Vegetable Production

A grower's ability to manage the interaction between a variety and its growing environment is at the center of the farm's profit potential. It is also important to note that the initial stages in breeding vegetable varieties are often completed in areas with growing environments very different from where the commercial crop is grown. For example, many sweet corn varieties grown in the humid Midwest began as promising selections made by breeders operating in more arid regions. Since a genotype's performance is influenced by environmental factors, identifying and selecting genotypes adapted to local growing conditions are critical steps in profitable vegetable production.

Cooperative Extension and the University are important sources of research-based information. Results from studies completed by Extension professionals and others help growers reduce the high amount of risk associated with farming. Local variety trials, for example, help growers select varieties adapted to their production conditions. Variety trials also assist growers in taking advantage of emerging market opportunities. In the Extension Vegetable Lab, we regularly document the performance of numerous vegetable genotypes under varying environmental conditions. We hypothesize that varieties differ in their

tolerance to environmental factors such as temperature, soil type, and pest populations. We also contend that a grower's ability to select adapted varieties can be the difference between profit and loss. In cooperation with seed companies, Ohio vegetable industries, and other scientists, we study the performance of existing varieties and new experimental genotypes. Experiments often involve variation in planting date or location (with related changes in climate, pest



pressure, soil type, etc). We also evaluate raw- and end-product quality and examine the suitability of genotypes for different markets and production conditions (e.g., organic, conventional). Results from these evaluations are published in bulletins, newsletters, annual reports, and production guides. They are also presented during small group meetings, field days, workshops, and conferences. They are also available in slide sets and other pages found at this website.