The production of high nutrient density crops in controlled environments (such as greenhouses and plant factories) allows for high density, local, year-round food production. Mattson leads an NSF-funded project that seeks to better understand the benefits and constraints of urban CEA including: economics, natural resource use, carbon footprint, and nutrition. Mattson will discuss related research that seeks to optimize crop performance and energy/water use through strategic LED lighting and CO2 control research. Finally, Mattson will discuss efforts of the NSF project to define workforce development needs by the nascent urban CEA industry and a new USDA workforce development project to expand training opportunities in CEA for 2-year colleges and lifelong learners.