



COLLEGE OF AGRICULTURE
AND LIFE SCIENCES



Controlled Environment Agriculture Building
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The CEAC's Vision is:

to develop Controlled Environment Agriculture as an economically, environmentally and socially sustainable agricultural option.

Controlled Environment Agriculture (CEA) is defined as an integrated science- and engineering-based approach to provide specific environments for plant productivity while optimizing resources including water, energy, space, capital and labor.

the Mission of the CEAC is to:

Expand the science, technology, engineering and practical application of CEA while optimizing the use of water, energy, labor, land and other resources,

Extend the knowledge of CEA to students, growers, faculty, governments, international non-governmental organizations, financiers, and CEA's constituent industries,

Demonstrate that our research can resolve CEA plant production challenges such as harsh conditions, scarce resources, and societal concerns with educational applications of CEA technology,

Collaborate with University of Arizona departments and programs, and other national science, engineering and governmental organizations to promote and facilitate innovation and creative application of CEA technology,

Grow CEAC's program activities at the University of Arizona and its world-wide profile and determine success based on the metrics,

Build a prosperous future where CEA assists the agriculture community to produce food that is clean, safe, abundant and affordable.

The Objectives of the CEAC are to:

- **Educate**

Display/Exhibit the economic, social and/or environmental benefits in our research projects.

Demonstrate that CEA conserves resources, especially water and energy.

Develop curriculum and educational programs for all our constituents.

- **Create**

Create new technology to enhance productivity and improve resource use efficiency.

Create business opportunity utilizing CEA technology.

- **Demonstrate**

Demonstrate the viability of multi-cropping in CEA.

Demonstrate the innovative drought solutions that exist within CEA to the benefit of Arizona and other arid lands.

- **Develop Decision-Support**

Create/Adapt crop selection/production tools for small farmers, undeveloped regions, and highly specialized situations, to help grower operations.

Define the parameters of Simplified/Moderate/High technology CEA.

- **Promote Sustainability**

Establish environmentally sustainable best practices for production management including use of water, energy, labor, land, and capital.

Define the model for traditional farm conversion to CEA within suburban regions.

Develop active role for Arizona and arid lands drought solutions.

Help the world adopt CEA technology for feeding the hungry with concerns for security, resource quality and availability, and cultural constraints.

- **Enhance CEAC Profile**

Increase the profile of CEA and the CEAC program at The University of Arizona within the state and around the world based on metrics of success.

Become the principal information and education resource for CEA in the College of Agriculture & Life Sciences and in Arizona.

Increase knowledge in plant science, engineering and marketing, and facilitate effective applications to strengthen CEA worldwide.

- **Collaborate**

Increase CEA multi-disciplinary efforts/projects at The University of Arizona.

Collaborate with USDA, NASA, Syngenta, Raytheon, Sandia, and other science/engineering/governmental organizations to promote innovation and the creative application of CEA technology.

Continue efforts with governmental and private initiatives for economic development with small businesses.