

# PLANT SCIENCE GREENHOUSE COMPLEX

## EXPANSION & RENOVATION

**Michigan State University (MSU)** is requesting \$20 million in capital outlay funding, with a \$15 million contribution from the State of Michigan, for renovation and addition of plant science greenhouses to modernize and expand this capital asset that supports research, teaching and learning.

MSU is a global leader in plant sciences, supporting agriculture in Michigan and across the globe. Investment in this core research and teaching resource supports continued efforts in the plant sciences and provide the tools necessary to address a grand challenge facing the world - to safely and securely feed a world population expected to exceed 9 billion by 2050.

Excellent research in the plant sciences requires the best infrastructure possible. In recent years, MSU has made major investments with the construction of the Molecular Plant Sciences Building and expansion of its growth chamber facilities. While these investments have greatly enhanced our position, parallel investments in our greenhouse facilities remain.

Lack of sufficient greenhouse capacity overall and of greenhouses and other environmentally controlled environments with specialized research capacity hampers faculty searches, delays progress on funded grant proposals and limits extramural funding for plant science research at MSU.

Current capacity also is not sufficient to facilitate the ongoing switch from model plant systems (suitable for small growth chambers) to agronomic crops that require greenhouses.

New state-of-the-art greenhouse space would reduce the pressure on our growth chamber resources. The campus growth chamber users committee recently estimated that additional greenhouse space would immediately release 25-30 percent of the chamber space back to its highest and best use.

The current infrastructure and capacity of the greenhouses limit the university's ability to meet the needs of the Michigan agricultural community, conduct critical research, and provide high-quality plant science teaching facilities.

Approximately two-thirds of the greenhouse facilities were built between 1955 and 1978 and require reinvestment. Furthermore, greenhouse space with necessary capabilities to facilitate research on resilience in agronomic crops and precisely control multiple environmental variables is not currently available on campus.

Renovation and expansion of the Plant Science Greenhouse Complex is critical to MSU maintaining its status as a world leader in plant science research. The status quo is not conducive with short and long-term plans for increased excellence in this important signature research program at MSU.

With state-of-the-art plant science research facilities, MSU has an opportunity to build upon high interest and unique opportunities to have a major impact on feeding the world in the 21st century and beyond with current codes and provisions for accessibility.



MSU is an affirmative-action, equal-opportunity employer.