Forever Green

Addressing critical equipment gaps

A one-time infrastructure investment would greatly accelerate progress toward Forever Green's goals: new crops that improve the environment, benefit farmers' bottom lines, and spur new investment in rural Minnesota.

The Forever Green Initiative's progress to date has been enabled by scientific equipment and infrastructure built up at the University of Minnesota over decades of public investment. While these resources are extensive and world-class, there are also critical gaps in the tools needed for our cutting-edge research in genomics, breeding, agronomics, natural resource sciences, and food science.

Addressing these gaps through a one-time appropriation for equipment and infrastructure would greatly accelerate progress toward the goals of the Forever Green Initiative: new crops and cropping systems that improve the environment, benefit farmers' bottom lines, and spur new investment in rural Minnesota.

State investment plays a critical role, as traditional funding mechanisms are notoriously difficult to leverage for new research equipment of the scale needed for agricultural and food science research.

Prioritizing equipment needs

The Forever Green Initiative research teams have developed a list (available upon request) of equipment and infrastructure needs that totals more than $20M. A one-time appropriation of $10M would begin addressing these needs. Funds would be disbursed through a peer-reviewed process run by the university's College of Food, Agricultural, and Natural Resource Sciences, ensuring that we make the most strategic possible investments to advance the mission of the Forever Green Initiative.

The equipment purchased with this one-time funding will have a long service life and help maintain CFANS' position as a world-leading research institution.

The impact of strategic investments

Strategic investments in equipment and infrastructure would:

Enable new scientific discoveries that advance FGI's mission

The right piece of equipment can open up entirely new lines of research that lead to critical insights.

Speed up current efforts for more rapid progress

The ability to process samples more quickly and accurately will speed up the pace of discovery.

Make public dollars go further

New infrastructure and equipment would enable researchers to make better use of the research funds that the Legislature supplies.

Enhance opportunities for leveraging non-state funds

New capabilities will allow researchers to compete for new and larger sources of funds, including federal grants and philanthropic funds.

Examples: Potential equipment investments and their impact

Field Equipment

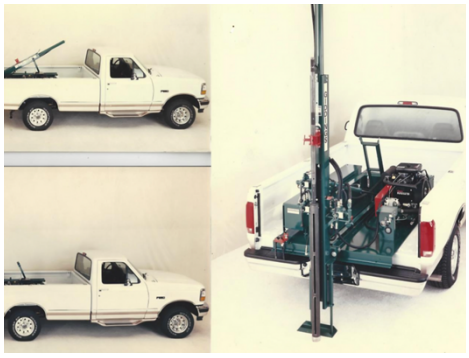
Upgraded planting and harvesting equipment that can be used to plant a wide variety of Forever Green crops with precision and flexibility, ensuring that field experiments succeed and produce the best data possible.

Cost: Individual pieces of equipment range from $50,000-$350,000; needs vary widely

Field Equipment

A soil probe truck that can sample to 1.5 meters deep, which will enable research on the long-term impacts of Forever Green crops on soil carbon sequestration, soil health, and rooting depth.

Cost: Est. $140,000



Food Science Equipment

A multiangle light scattering (MALS) detector for identifying a wide range of molecules, which would enable more in-depth and accurate food science research on Forever Green crops, accelerating progress toward functional food ingredients.

Cost: Est. $150,000

Lab Equipment

Advanced plant growth chambers that will enable research on climate-smart crop varieties and speed up the breeding process by allowing for multiple breeding cycles per year.

Cost: Est. $2,000,000 (40 chambers at $50,000 apiece)

Contact:
Mitch Hunter, Associate Director
mhunter@umn.edu

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