PENN STATE

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Penn State's Center for Plasticulture Corporate Sponsor Program
Dr. Michael D. Orzolek - Director

The Penn State Center for Plasticulture was established in 1998, located at the Russell E. Larson Research Center, Horticulture Research Farm, Rock Springs, PA (approximately 10 miles west of main campus – University Park). Since than, the High Tunnel Research and Education Facility was developed on 3 acres and includes 35 high tunnels – 28 research high tunnels 17' x 36', 3 commercial size high tunnels 17' x 96', one 21' x 36' high tunnel and one 30' x 36' high tunnel on site. All high tunnels are Gothic style or A-frame with tall side design to help minimize snow accumulation during the winter months. These high tunnels are also "permanent" since the single layer of greenhouse grade 6 mil plastic film is left on the frames 12 months of the year. In addition, there is also a 17' x 48' storage high tunnel for materials and supplies, and two 14' x 20' high tunnels. One of these smaller high tunnels (14' x 20') was constructed to develop a home owner/home gardener educational and demonstration program on high tunnel construction and production potential.
We also have annually 5 to 10 acres of applied field research utilizing plasticulture technology including mulch film type and colors, drip irrigation components and design, and row cover types and colors (floating or supported with hoops). Crop production systems are being developed utilizing plasticulture technology – optimizing both crop marketable yields and quality.
We have pioneered an ag plastic disposal system with the design of a prototype machine that will densify all types of used agricultural plastics used in both plant and animal production. The densified plastic pellet is trademarked as "Plastofuel" (approximately 1.5" diameter round pellet) and is produced at a rate of 500 pounds per hour in the new Penn State prototype machine. Housed on site is a prototype heater from a South Korean company, GRTechnology, that uses plastic as it sole source of fuel. The Center for Plasticulture is currently in the process of redesigning the plastic fuel feeding system of the burner to incinerate the "Plastofuel" nuggets instead of the smaller pea size pellets that came from South Korea with the unit. The plastic burning unit we have at the Center for Plasticulture has a heating capacity of 400,000 BTU's.

Projects that have been conducted in the past or are currently being pursued include:
1) High tunnel design and construction for season extension/production of horticultural crops
2) Evaluation of high tunnel components, especially greenhouse film types for top and sides

3) Maximizing horticultural crop production through improved establishment techniques, plant nutrition, irrigation scheduling, pest management and optimizing the environmental conditions within the high tunnel
4) Evaluation of potential horticultural crops that can economically be grown in high tunnels
5) Improving germplasm that is adaptable for high tunnel production

The annual cost of maintaining the High Tunnel Research and Education Facility at Rock Springs is approximately $60,000. This includes salaries, supplies and some plant material. There has been a significant decrease in support dollars for this facility in the last 5 years from University, Federal and State sources. We have spent over $500,000 to date for the construction and maintenance of this facility at Rock Springs. Seriously consider making a 3 year pledge to the Center for Plasticulture – the largest high tunnel facility in the US.

In recognition for making a gift to the Center for Plasticulture, the Company's name will be placed on the Center for Plasticulture website under a Corporate Sponsors heading and a brief description of their products or services available beneath the Company name. In addition, a yearly report summarizing the research activities for the year and future plans for next year will be sent to each Corporate Sponsor. There will also be the potential for collaborative research with the Center for Plasticulture.

Suggested gift program:
A $2,000 to $5,000 gift per year for 3 years starting in 2007. Checks should be made out to the Pennsylvania State University and sent as a gift (accompanying brief letter) to Dr. Michael D. Orzolek, Department of Horticulture, 203 Tyson Building, The Pennsylvania State University, University Park, PA 16802.

Michael D. Orzolek, Director
PSU Center for Plasticulture