

## MIDDLESEX COUNTY E.A.R.T.H. CENTER 2008

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### **Introduction**

The E.A.R.T.H. (Environment, Agriculture, Research, Teaching, and Health) Center is an Extension facility designed to address critical environmental and agricultural issues facing the county and state. The Center was established in June of 2005 with support from our County Board of Agriculture, Board of Chosen Freeholders, and Department Heads. This collaboration was essential to the design and development of this Center for teaching and research.

### **Environmental Projects and Programs**

The use of alternative energy to power buildings and equipment is one major initiative in Middlesex County. Solar panels were erected in 2007 at the E.A.R.T.H. Center, a 25 Kw system, to serve as an educational tool and power (approximately 40% of the electricity use) for the main building. There are hundreds of visitors each year that tour the facility which include discussion about solar panel construction and application to homes, farm operations and businesses. A few farmers are already using solar and biofuels to heat buildings and run equipment. Educational sessions have been scheduled to discuss alternative energy opportunities.

Middlesex County Cooperative Extension and the Division of Solid Waste collaborate on numerous educational sessions on Composting and Vermicomposting to recycle organic waste into a valuable organic amendment. A study of decomposition rates of leaf compost, greens, and combinations of these materials was conducted using The Earth Machine™ compost bin. Replicated treatments included bins in full sun and part-shade locations to compare decomposition rates. The completely composted materials will be used in a greenhouse germination study comparing seedling growth and susceptibility to damping-off organisms, with and without RootShield®.

The Center is working with the NJ Department of Agriculture on control of invasive species including purple loosestrife (*Lythrum salicaria*) and mile-a-minute weed (*Polygonum perfoliaum*). Biological controls, *Galerucella californiensis* and *Galerucella pusilla* (Leaf eating beetles) for purple loosestrife and *Rhinoncomimus latipes* (weevils) for mile-a-minute weed, are known to be very effective controls. A few thousand of each organism was released in approximately 1000 sq. ft. sites, and data will be collected in 2009 on presence of the insect, damage to plant, and spread of the invasive plants.

An EcoVentures program is a fun and educational program for youth (grades 5-7), focusing on ecology, conservation and the environment. There were 19 kids in 2007 and 28 kids in 2008 that completed the program held the last week of August. The pre- and post-survey results show a significant increase in knowledge based on topics throughout the week. Each kid was asked to create a Personal Plan of Action that included a long-

term (within 3 months) and short-term (immediate) environmental goal. Follow-up surveys 3-months following the program indicated almost 90% met their goals and influenced others to make changes.

### **Agricultural Programs**

There is on major emphasis promoting buy local and Jersey Fresh. EARTH Center events and tours promoted Jersey Fresh products, especially crops grown by local growers. As part of the event, visitors had the opportunity to taste Jersey Fresh produce including tomatoes, melons, and corn. An eleven question survey was completed by individuals that participated in the taste test. The survey evaluated purchasing habits and preference with regards to fruits and vegetables. Over 500 surveys were completed and overwhelmingly, people feel farm fresh produce tastes better and it is higher quality than store bought produce. Convenience for the customer and providing organically grown produce were important to the respondents.

Farm to the Table demonstrations were conducted at the EARTH Center. This was a collaborative effort with a local Soup Kitchen, Elijah's Promise, to promote healthy diets utilizing fruits and vegetables.