

ACE FARM POULTRY WASTE COMPOSTING



ACE Farm, in Monroe (Orange County) was founded in 1917 and specializes in growing egg-laying chickens. It is a family owned and operated enterprise that annually produces 130,000 laying hens are capable of laying 39 million eggs per year. These chickens also produce over 3,000 yards of manure per year that must be constantly managed. The objective of this New York State Energy Research and Development Authority (NYSERDA) project was to compost 3,000 yards of chicken manure in an economic and environmentally friendly manner.

A steel-framed, fabric-covered building was constructed for composting that houses two rows of 50% chicken manure and 50% leaves, approximately 290' x 12' x 4' high. This allows ACE Farm to compost 500 yards in each row, for a total of 1,000 yards per batch. Early in the compost process the rows are turned with a Scat Compost Turner, up to four times a week, then reduced to twice a week towards the end of the 10-to 12-week cycle. The compost is then stacked to cure for at least 3 months. After the curing the compost is screened then sold either as compost or mixed with soil as topsoil. The final product has a high-nutrient content and a ph of approximately 8.

The project has advantages beyond the projected annual energy savings of 137,240 kWh from minimizing the use of ventilation fans. These include:

- Making compost inside a structure provides a high-quality, dry product for resale.
- Turning inside a structure is much quicker and easier than composting outside.
- The Scat Compost Turner aerates, mixes and breaks up the compost, helping to achieve temperatures of 140 degrees for six to eight weeks.

The building and the Scat Turner allow compost to be made in any weather and to control the moisture of the compost and runoff much better than on an outside pad. It also reduces labor and brings a better price because it is drier and easier to work with. The best market appears to be for topsoil, but ACE is still considering erosion control as a secondary market. In Spring 2003, ACE Farm, in conjunction with the soil conservation service, will blow a compost and seed mixture on a roadside embankment to demonstrate soil stabilization of the slope.

“I’m delighted with our project. It’s helped us greatly with our manure management and may possibly create a significant new revenue stream for us”

–Tyler Etzel
ACE Farm



Innovations in Agriculture

