

US EPA ARCHIVE DOCUMENT



Del Mar Fairgrounds Del Mar, California

75% Recovery of Food Discards



In 1996 Del Mar Fairgrounds, a 375-acre site, diverted 38 tons, or approximately 75% of its food discards from landfill. The fairgrounds achieved this through a comprehensive waste reduction program which includes: off-site composting of food from its annual 20-day fair (1996 attendance 1,018,659); vermicomposting of food from its Satellite Wagering Facility; and sending used cooking oil to a rendering company.

Program Description

Del Mar Fairgrounds' efforts to get to "zero waste or darn close" were partially spurred by a 1989 California Waste Management Law requiring 50% diversion of solid waste from landfills. Most of the fairgrounds' compostables come from vendors at the annual fair who are contractually required to participate in the waste reduction program. This includes using paper products instead of polystyrene and recycling cardboard and beverage containers. Fairgrounds staff may fine vendors for non-compliance.

For **off-site composting**, Del Mar staff provide food vendors with unlined, covered 90-gallon plastic carts to collect food discards. Staff daily haul the containers on flat-bed trucks to Solana Recyclers, a local composting company with whom the fairgrounds has had a long-term relationship. Solana designates a spot next to a partially completed windrow where Del Mar staff unload compostables. Solana staff then cover new material with partially completed compost. This acts as a biofilter to keep odor to a minimum. Solana operates four sites on three farms; finished compost is used as fertilizer on

the fields. Solana can also accept paper products, so paper contamination is not a problem. Fairgrounds staff pull other contaminants out of the food discard containers; occasionally Solana staff need to remove some additional contaminants.

At the Satellite Wagering Facility, patrons gather to bet on horse races which they watch on satellite television. From mid-September through mid-July, approximately 2,500 people per day, six days a week attend. Attendance can be as high as 5,000 for the Kentucky Derby and other big races.

Since 1997, fruit and vegetable scraps from the facility's kitchen have been **vermicomposted** on the racetrack's infield farm. Vermicomposting is done by *eisneola*

Contact:

Concessions Coordinator
Del Mar Fairgrounds
22nd District Agricultural Association
Concessions Department
P.O. Box 2668
Del Mar, CA 92014
(619) 792-4218 fax: (619) 792-4236

Compost Program Manager
Solana Recyclers
137 N. El Camino Real
Encinitas, CA 92024
(760) 436-7986





Organic tomatoes being grown using compost from Del Mar Fairgrounds.

fetida worms in a wood framed box, which sits directly on the ground. Once collected from the waging facility,

which can provide an almost year-round supply of worm food, scraps sit for a few days in a container.

Staff then feed this partially decomposed food to the worms.

Fairgrounds staff feed and water the worms once a day. A water dripline for use during dry periods runs through the box. The box is covered with cardboard and a shade cloth. The finished worm compost, or castings, is used as fertilizer on the fairgrounds. From January through August 1997, over 3 tons of food discards were vermicomposted.

Cooking oil is collected for **rendering**. Darling International, a rendering company, provides covered barrels for the oil and collects them from the grounds, at no cost, as needed. Vendor participation in this effort is also contractually required.

In total in 1996, the fairgrounds recycled, including composted, 5,294 tons of materials; it sent 929 tons of trash to the landfill.

Costs/Benefits

The fairgrounds did not buy any new equipment for the off-site composting program and had no start-up costs.

Start-up costs for vermicomposting were under \$500, including the cost of 25 pounds of worms and collection containers. Soon fairgrounds staff will need to build an additional worm box.

Year-round recycling, including composting, for the fairgrounds and waging facility cost about \$70,000 in labor, excluding labor for horse races. Transportation costs \$540 per year. The fairgrounds currently pays \$40-47 per ton for tipping trash, although costs have been as high as \$70 per ton. Compost site tipping fees are \$17 per

ton. In 1996, total composting costs, including labor and transportation, were approximately \$24 per ton.

In 1996 the fairgrounds saved over \$232,900 in landfill costs through its waste reduction program. It earned over \$15,000 in revenue through aluminum, glass, and cardboard recycling.

Del Mar staff have the satisfaction of running an environmentally responsible fair.

Tips for Replication

- Mandate participation by all vendors and staff.
- Develop good working relationships with an established company.

Program Summary, 1996

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| Sector | Fairgrounds |
| Attendance 1996 | 1,759,659 Fair and Satellite Waging Facility (estimated) |
| Start date | 1992 |
| Dedicated Employees* | 2 plus 2 half-time employees during the fair |
| Method | Off-site windrow composting; on-site vermicomposting; rendering |
| Materials collected | Pre-consumer discards, paper plates, cups, napkins, paper towels; vegetable and fruit scraps; cooking oil |
| Part of comprehensive waste reduction program? | Yes |
| Total waste generated (TPY) | 6,223 tons: 5,294 tons recycled, including composted; 929 tons landfilled |
| Food discards generated (TPY) | 51 tons (estimated) |
| RESULTS: | |
| Food discards recovered (TPY) | 38 tons |
| Food discards recovered (%) | 75% (estimated) |
| Total waste recovered (%) | 85% |
| COSTS: | |
| Average composting costs (hauling and tipping fees) | \$24 per ton |
| Average avoided landfill tipping fee | \$40-47 per ton |
| Net savings | \$17-23 per ton |

* A dedicated employee is one whose primary responsibility is working with the food discard program. TPY = tons per year