

Sonoma County HOME COMPOST EDUCATION AND PESTICIDE USE REDUCTION EDUCATION PROGRAM REPORT 2008-09

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This is a report of activities for the second year (July 1, 2008 to June 30, 2009) of the renewed three-year contract from July 1, 2007 to June 30, 2010.

Results Summary

A total of 20,095 people were reached through 380 events, community gatherings, workshops, farmers' markets, library series talks, and the resource desks. Several thousand more were reached via our website that provides educational information on home composting and pesticide use reduction strategies. Based on these efforts, an estimated 1,911 tons of organic materials (kitchen scraps and yard waste) were diverted from the landfill this last year.

Program Goals and Contracted Tasks

To reduce organic landfill inputs by teaching home composting through volunteer Master Gardeners (MG) at public events, schools, community gatherings, resource desks, and workshops.

- Provide home composting and pesticide use reduction education (PURE) information via direct contact with 5,000-10,000 county residents at selected major public events such as the Sonoma County Fair, Harvest Fair, Home and Garden Show, Cloverdale Citrus Fair, Sonoma County Jail Industries Nursery bi-annual plant sale, Master Gardener's Bloomin' Backyards garden tour, etc. where large numbers of people are gathered (25 event days/year).
- Create an educational demonstration garden at the Sonoma County Fair.
- Provide home composting and PURE information via direct contact with county residents at eight farmers' markets (Healdsburg, Sebastopol, Oakmont, Sonoma, Santa Rosa, Occidental, Cotati and Petaluma), and Master Gardener Library Series presentations at 8 libraries (Cloverdale, Petaluma, Rohnert Park, Sonoma, Healdsburg, Windsor, Sebastopol, and Santa Rosa) for a minimum of 200 farmers' market and Library Series days.
- Distribute 10,000 educational brochures on home composting and PURE including UC Consumer Pest Cards, at the events listed above.
- Conduct 20 school classroom presentations, leaving the class with worm composting materials for students and teachers to practice school waste diversion and to effect behavioral change in students.
- Provide a resource desk and phone line to answer composting questions 5 days per week and 4-6 hours per day.
- Collect names of home composters to conduct a survey in 2010 on composting habits and information on their sources of composting information.
- Conduct a postcard survey in 2010, using names of contacts gathered at workshops.
- Estimate landfill diversion based on survey data from 1994-97, 2003-04, and 2007-08.

Background

Since 1993, the University of California Cooperative Extension (UCCE) has provided compost education for county residents with funding from the Sonoma County Waste Management Agency (SCWMA).

In the last fifteen years, the program has reached 255,820 residents with composting brochures, bin distribution programs, educational booths at large public events, library talks, farmers' market information tables, workshops, and by providing a resource desk for call-in/drop-in questions in Santa Rosa and Sonoma. Each year large numbers of people have been reached by concentrating efforts at

educational booths at well-attended public events.

Since its inception, the program has reached 7,400 residents through compost workshops and clinics. These are in-depth instructional seminars where the participants spend considerable time (1-2 hours) learning about composting and in some cases, making a compost pile. Over the years we have gradually shifted away from conducting long workshops due to declining attendance. Now our efforts focus on events and activities where large numbers of people gather.

In 1994-1997, three surveys were conducted documenting home composting by trained workshop and educational event participants, which provided the benchmark for tonnage diversion up until 2002. According to those surveys we estimated that almost 70% of workshop contacts began or increased composting and reduced their input into the waste stream by 19.5 gallons per household per month.

In 2003-04, a short post card survey was sent to people who received information about home composting from the Master Gardener Program. This survey was designed to gather information about the effectiveness of information dissemination on home composting from mini-demos and event booths. Most of these contacts are much shorter than contacts made at workshops and do not usually include hands-on compost pile construction. This audience of people is not necessarily motivated to attend a long workshop specifically on compost pile construction. Many more contacts are made with this methodology, but the length and detail of the contacts is diminished. From those responses we estimated that about one-quarter (23.2%) of those, who had received information on composting, started or increased their composting. Those respondents indicated that on average they were composting almost 1 gallon (0.92 gallons) of kitchen waste and almost 4 gallons (3.68 gallons) of yard waste per month. Additionally, almost one-third (29.7%) of the survey respondents indicated that on average they were diverting 13.8 gallons per month of organic materials into the curbside pick up containers.

In 2007 we conducted another postcard survey of people attending mini demos and information booths. According to that survey, 19.7% of the people receiving compost information from the Master Gardener Program started or increased composting. They also indicated that they were composting 17.9 gallons of kitchen scraps and yard waste per month. Current diversion estimates are based on this survey work.

The Compost Education Program is operated primarily by volunteers. The budget reflects maintenance of current educational efforts. There are four unique aspects to this project:

1. Master Gardener (MG) volunteers are under the direction of the University of California Cooperative Extension (UCCE) and connected to UC-based research expertise.
2. Non-biased documentation of the results of educational efforts is conducted periodically in order to re-evaluate and update methodologies of the program. Landfill diversion estimates are based on statistically valid indicators of behavioral change collected from survey data.
3. Master Gardeners have a broad-based network of community projects and a reputation for providing practical science based information.
4. The volunteer nature of the program provides multiple in-person contacts for homeowners at a substantially lower cost than private contracting.

A part-time MG coordinator (25%) and a core group of about 10 trained volunteers, under the direction of UCCE Horticulture Advisor, Paul Vossen, carried out the Home Compost Education Program this last year.

OBJECTIVES ACHIEVED IN 2008-09

Events, Community Gatherings, and Workshops

The Master Gardeners had booths at five large public events, community gatherings, and workshops (28 event days) in the county and provided information to 12,974 people. They distributed thousands of brochures and demonstrated home composting with display bins, compost piles, and worm boxes. The events, dates, and number of contacts are listed in Table 1. The demonstration garden at the Sonoma County Fair displayed a home compost system and provided home composting brochures to many contacts. Large audiences were attracted to the garden and received information on composting as in past years.



Table 1. Master Gardener Program Home Composting Education at Large Events, Community Gatherings, and Workshops

EVENT	DATE	# OF CONTACTS
Sonoma Co. Fair booth & demo garden	7-22 to 8-4 (14 days)	7,052
Sonoma County Harvest Fair	10-4 to 10-5 (2 days)	1,866
Cloverdale Citrus Fair	2-13 to 2-16 (4 days)	100
Spring Home & Garden Show	3-20 to 3-22 (3 days)	3,556
S.R. Medical Alliance Garden Tour	5-15 to 5-16 (2 days)	100
So. County Jail Industries Nursery Sales	9-6, 10-4, 3-14 (3 days)	300
TOTAL	28 Event Days	12,974

Other Educational Events

The Master Gardeners presented information on composting at 380 small-scale events throughout the year. They distributed brochures, made short presentations on home composting and worm composting, and answered questions about starting a home compost pile for 5,313 people (4,513 at farmers' markets, small fairs, garden clubs, tours, and 800 at library series classes). The event dates and contact numbers are listed in Tables 2 and 3. The farmers' markets have information tables where Master Gardeners provide guidance on plant culture, pest control and composting. The library series events focus on a specific gardening topic and include information and handouts on home composting and pesticide use reduction. Some of the library series talks specifically focus on composting or worm composting.

Table 2. Master Gardener Home Composting Education Program Contacts at Farmers Markets, Small Fairs, Garden Clubs, and Community Gardens

EVENT	DATE	# PEOPLE CONTACTED
5 Cotati Farmers' Mkts.	1 st Thursday (monthly) 5 mos.	150
21 Healdsburg Farmers' Mkts.	May through September	220
30 Sebastopol Farmers' Mkts.	May through November	526
83 Sonoma Farmers' Mkts.	April - Oct. & Fridays all year	572
21 Santa Rosa Farmers' Mkts.	May through September	777
26 Petaluma Farmers' Mkts.	May through October	100
21 Occidental Farmers' Mkts.	May through September	520
Humane Society Garden	40 weeks – all year	688
Various Garden Club Talks	All year	450
Harvest For The Hungry	February – November	425
Sonoma Garden Park	All year	485
TOTAL CONTACTS		4,513

Table 3. Master Gardener Home Composting Program Contacts at Library Series Talks

LIBRARY SERIES	# PEOPLE CONTACTED
Cloverdale Library Series	50
Healdsburg Library Series	168
Petaluma Library Series	172
Rincon Valley Library Series	84
Rohnert Park Library Series	83
Sebastopol Library Series	25
Sonoma Library Series	100
Windsor Library Series	143
TOTAL LIBRARY SERIES CONTACTS	800

Table 4. Master Gardener School Presentations	
SCHOOL	DATE
1 @ McKinley School	7-30
1 @ Piner High School	10-2
1 @ Biella School	10-6
1 @ Rincon Charter School	10-15
1 @ Brook Hill School	10-22
1 @ MacDowell Elem. School	10-27
1 @ San Miguel School	10-30
2 @ Spring Creek School	11-19
1 @ Castle Preschool	3-18
2 @ Monroe School	3-19
1 @ Mark West Charter School	3-24
2 @ Brush Creek Montessori	4-3
2 @ Dunham School	4-6
1 @ Prestwood Elementary	5-9
1 @ Spring Hill Montessori	5-15
19 Presentations at 15 Schools	

School Presentations

Master Gardeners made 19 school presentations in classrooms with an average of 25 - 30 students. During this last fiscal year 475 students (K-12) were contacted. The demonstrations were for the length of a normal class period. They were done to develop an environmental awareness and to encourage recycling of organic wastes from the classroom and school. Most presentations included the establishment of a worm box in the classroom. Fliers were sent home with students to encourage parents to compost and recycle. See Table 4 for a list of schools and presentation dates.



Educational Brochures

The Master Gardeners printed and distributed 10,000 copies of educational brochures about home composting at events, workshops, and schools presentations. Master Gardeners developed all of the educational brochures, except the Renee's Garden Guide, Worm Digest, and Composting Matters.

- *More Hints for Composting*
- *Composting Matters Activity Book*
- *Recycling Tips For Gardeners*
- *Abono Natural (Home Composting in Spanish)*
 - *Worm Composting*
 - *Renee's Garden Home Composting Guide*
- *Putting Worms To Work And Keeping Them Happy*

Resource Desks

The Master Gardeners maintain a phone answering service for gardening questions in both Santa Rosa five days per week and Sonoma three days per week. They also handle walk-in clientele and questions via email. Trained Master Gardeners answered questions related to home composting from 1,333 people and sent many of those people an appropriate handout on home composting.

The screenshot shows the website for the University of California Agriculture and Natural Resources (UCANR) Sonoma County Master Gardeners. The header includes the UCANR logo and the text "UNIVERSITY OF CALIFORNIA AGRICULTURE AND NATURAL RESOURCES" and "SONOMA COUNTY MASTER GARDENERS HELPING SONOMA GARDENERS". A navigation menu on the left lists various topics such as Home, Water-Wise Gardens, Top Plants for Sonoma, California Native Plants, Pest Management, Good Bugs/Bad Bugs, Plant/Vegetable Articles, Gardening Articles, Books/Sites, Master Gardener Publications, Calendar, Master Gardener Projects, Composting, Sudden Oak Death, Firesafe Demo Garden, Sonoma Garden Park, Jail Industries Demonstration Garden, County Fair Garden, Help Desk, Farmers' Markets, Library Series, County and Harvest Fairs, Bloomin' Backyards 2010, Harvest for the Hungry, Statewide MG Websites, UC Extension Sonoma, Become a Master Gardener, and VMSNewsletter. The main content area features a featured article titled "November in the Garden" with a sub-heading "Plant Natives Now!" and "Monthly Garden Tips". The article text includes contact information for plant problems and a link to "Locations and REQUIREMENTS". Below the article is a search bar and a "Ask a Master Gardener" section. The sidebar on the right contains a "Calendar" with events for November and December, a "Garden Reading" section with a book review, and a "Master Gardeners in Print" section with links to various articles.

Website (www.sonomamastergardeners.org)

The UCCE Sonoma County Master Gardener website offers many resources for the home gardener, including a variety of composting publications that can accessed at <http://groups.ucanr.org/sonomamg/Workshops/> :

- Composting Tips
- Composting – General
- Compost in a hurry
- Rapid Compost Method
- Worm Composting
- The Compost Pile

The website generated 81,295 visits during FY08-09, compared with 45,662 visits for FY07-08.

Conclusions & Recommendations

This past fiscal year, 2008-2009, was the second year of a renewed contract that ends June 30, 2010. The home composting program has been teaching backyard composting to homeowners, apartment dwellers, and school children for more than fifteen years. Each year we evaluate the program and make changes to meet the goal of reaching the largest number of people in the least time-consuming and most rewarding ways for the participants and the Master Gardener volunteer trainers. The group is committed to including composting and pesticide use reduction information as an essential part of gardening. Last year 10 Master Gardeners participated in the home compost educational effort as trainers and made 20,095 total contacts, not including contacts through our website:



- Major Events and Workshops 12,974
- Farmers Markets and Library Series 5,313
- School children 475
- Phone Desk, Santa Rosa and Sonoma 1,333
- **TOTAL 20,095**

- Website 81,295

Home composting education has become an integral part of the Master Gardener program and the volunteers are committed to it. A composting curriculum has been added to the core-training program for all new Master Gardeners, new trainers are added each year, effective publications and handouts have been developed, and there is timely coordination of activities. The Master Gardeners are proud of

the success of the home composting program. If the Sonoma County Waste Management Agency continues to fund the program for coordination support, it could continue indefinitely.

A concentration of efforts toward providing information at events where people are already present has greatly increased our numbers of contacts the last few years. Many of those contacts are made during short conversations at Master Gardener educational booths like the demonstration garden and booth at the Sonoma County Fair, farmers markets, garden tours, garden club talks, festivals, Harvest Fair, community gardens, and library series presentations. Compost talks and demonstrations are a continuation of similar efforts conducted last year where short workshop presentations are accompanied with handouts and a short message on home composting.

Future Considerations for the Project

Our recommendation is to continue the countywide Home Compost Education Program delivered through the University of California Cooperative Extension volunteer Master Gardeners. The program is flexible enough to include special efforts and new ideas for increasing the numbers of contacts or improving the volume of materials diverted from the waste stream. The focus should continue to be to provide short presentations and handout materials to county residents and encourage home composting and reduction of compostable materials and toxic substances entering the landfill, plus the side effect of increasing overall awareness of the waste stream.

In order to continue reaching large numbers of people, information booths will continue to be set up at appropriate events to inform people about home composting. It is more efficient to go where the people are rather than try to attract them to an event to teach them how to compost. We have determined that information delivered in short talks accompanied by handouts reaches the largest number of people and through our post card surveys about 1/5 of those reached start or increase their home composting.

We continue to teach a few traditional workshops that are stand-alone programs, which demonstrate home composting with hands on methodology. When only a few of these are done each year, if they are well publicized, and when they are held at easily accessible locations, they have been fairly well attended. There are a couple of Master Gardener compost trainers that are willing to continue to teach them if an audience can be generated. Other venues of information delivery such as school community gatherings have also been successful and will be explored more for presentations where adults and students interact and where Master Gardener volunteers can deliver a home composting workshop. One very successful educational event is the Bloomin' Backyards garden tour, which is offered every other year (next BB garden tour scheduled for June 2010).

Continuation of training sessions in school classrooms is recommended. Sending information materials home with school children should encourage parent participation and exposing children to composting at a young age is very positive for their awareness of the waste stream. This next year's budget will provide for printing of essential educational materials and operating supplies. The part-time program coordinator position is essential in providing the volunteer training, support, and supervision to conduct the program.

Tonnage Diversion Estimates

The home composting program had direct contact with 19,620 people in FY 2009-10 at five large events and workshops (28 days) and 380 smaller scale events such as: farmers' markets, tours, small fairs, and library presentations. The home compost education program also distributed 10,000 composting brochures through educational booths, the Master Gardener desk, and through school presentations (475 youth). Calculations for the tonnage diversion estimates are based on direct adult contacts only.

Our (University of California) survey in 2007 indicated that 19.7% of the people contacted started or increased home composting. On the average they reduced their landfill input of kitchen scraps and yard waste by 4.14 gallons per week (17.9 gallons per month - 215.3 gallons per year). According to past surveys 25% was kitchen waste and 75% was yard waste. Based on these figures the diversion increase for FY 2007-08 due to the addition of new home composters was:

- $19,620 \times 19.7\% = 3,865$ households beginning or increasing home composting
- **Kitchen scraps*** diverted = 4.5 gallons per month/household = 17,393 gallons per month = 50.44 tons per month = 605.3 tons per year = 1,034 cubic yards per year
- **Yard waste*** diverted = 13.4 gallons per month/household = 51,791.0gallons per month = 108.8 tons per month = 1,305.2 tons per year = 3,078.2 cubic yards per year
- **TOTAL DIVERTED = 1,910.5 tons per year = 4,112.2 yd³ per year**

** Weight and volume calculations for kitchen scraps are based on 70% moisture (5.8 lbs./gallon) (1,171 lbs./yd³). Weight and volume calculations for yard waste are based on 50% moisture (4.2 lbs./gallon) (848 lbs./yd³). Kitchen scraps represent about 25% and yard waste 75% of the compostable materials based on past survey data.*

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