COLLEGE GUIDE TO CAMPUS WIDE COMPOSTING

FOR EDUCATIONAL AND FUNCTIONAL COLLEGE COMPOSTING PROGRAMS

INTRODUCTION

ASUCD PROJECT COMPOST

This guide was written and compiled by ASUCD Project Compost, a student ran, student funded campus composting program at the University of California, Davis. The purpose of this guide is to provide an outline of options, resources, and ideas that can be used in order to integrate composting at any level, whether educational or institutional, into the college/university life.

HISTORY

Project Compost was started from an internship with the campus-recycling program (R4 Recycling) in Fall of 1999. The internship was outlined by the intern and shaped by the R4 project director. The recycling program was able to divert newspaper, bottles, cans, scrap wood, and even scrap metal, but when it came to food waste and agricultural waste their was mo available infrastructure for diversion. UC Davis as an agricultural institution, which schools 25,000 + and houses a copious number of animal barns, it produced large amounts of organic materials that were entering the campus landfill. Through the internship waste sorts were completed at the cafeterias on campus and research was compiled on the amount agricultural and landscape biomass produced yearly. Composting systems were researched that would best divert these materials. Based on an ongoing project that was being conducted by an organic Student Farm on campus with food waste composting, a trial project was set up with one Sodexho-Marriott cafeteria to collect their pre-consumer vegetable scraps on a daily basis using old recycling bins and a borrowed vehicle from the recycling program. At the same time a resolution was passed through the student senate stating their support (moral, not financial) for a campus wide composting program. Winter 2001 brought about an opportunity to make this trial project a reality, money surfaced in student government, when Project Recycle (a student ran recycling program) was taken over by the university recycling program (R4).

With some heavy lobbying to the student government and a subsequent bill, Project Compost became a reality. Fall 2001-2002 kicked off Project Compost official drive to spread the glory of compost throughout the university.

PROJECT COMPOST OVERVIEW

Project Compost is currently composed of 4 paid students, 3 volunteers, and 4 interns. We currently pickup 800 pounds of pre-consumer food matter, greenhouse matter, and research fruit matter each day in a modified Taylor-Dunn Electric Vehicle. The materials are collected in 5 gallon buckets and then emptied in old 35 and 65-gallon TOTER RECYCLING BINS, which are located inside or adjacent to the source. These bins are loaded via the loading dock or our homemade ramp. The bins are transported to the on-campus Student Farms and emptied by hand onto a bed of used animal straw, spread, and then covered with more used animal

Our modified EV w/Toter Bins

straw. The pile is approximately 10ft wide, 60 ft long, and reaches a height of 4 ft over the 10-week period. At this point a compost turner turns the pile 5 times in 15 days in order to reach temperatures of 131 Fahrenheit for pathogen reductions. Moisture levels are adjusted using tarps and a simple sprinkler system.

Project Compost also runs a variety of educational activities throughout the year. We have pamphlet boxes throughout our campus, which display our guide to home composting. We run free workshops on-campus, table at local concerts, and make presentations to interested student groups. We are currently working with the city to join efforts on a University-City composting program.

COMPOSTING GUIDE

I. IDENTIFICATION of WASTE SOURCE

The first step to designing any type of composting system is the identification of the waste stream you wish to divert. The three possible sources for production of organic matter are:

1)Cafeterias and food production areas on campus
2)Landscape/Grounds waste
3)Agricultural/ Animal waste

The following outlines each possible waste source and the means to contact and setup waste audits for collection of information on the waste source.

1) Cafeterias and food production areas. It is important first to find out how many cafeterias there are on campus, who they are ran by (the college or an outside corporation), and how may people each cafeteria serves. The possible sources of waste from the cafeterias are pre-consumer and post-consumer food waste (nitrogen source), as well as non-recyclable waxed cardboard (carbon source).

· Pre-consumer food waste is food waste from the kitchen preparation of the food. The waste stream is often composed of vegetable/fruit cuttings, eggs shells, and coffee grounds. Leftover dishes such as rice, pastas, and breads can also be considered pre-consumer if they have not yet been served.
For a cafeteria serving 1800 meals a day, 150-200lbs per day is a reasonable amount for a cafeteria to produce.

· Post-consumer food waste is food waste after the consumer has finished his or her meal. For a cafeteria, which uses reusable dinnerware, the waste stream is often composed uneaten meals, including meat and dairy products, and grain based dishes (paper waste is minimal). For a cafeteria, which serves 1800 meals a day, 400 lbs of food waste is a reasonable amount for the cafeteria to produce. This waste can be source separated by the dishwashing staff. A cafeteria, which serves items on disposable products will have to deal with increased weight because these products, if paper based will absorb

moisture. These products can be switched out with biodegradable dinnerware products in order to compost them (contact Earthshell or Biocorps for products.)
· Waxed cardboard boxes also serve as an item with an organic content, which cannot be recycled, but can be composted. This item is best used as a bulking agent in in-vessel composting systems.
2) Landscape and grounds waste cover a large area of organic matter. Whether you attend a rural or urban college, trees, shrubs, and lawns are present in one form or another. Some examples of landscape wastes include fallen leaves, grass clippings, herbaceous prunnings, and chipped woody matter. Another source of organic matter is wood shavings or even old wood pallets, which are often landfilled. Questions to pose may include:
Are the fallen leaves left as a mulch or are they raked up throughout fall? If they are raked up, where do they go? Is the lawn grass left in place after it is cut (termed grasscycling) or bagged and taken to the landfill? Do tree trimmings and woody branch removal get chipped and used as a mulch or are they hauled off to the landfill? Concerning your campus landscape contact your grounds or facility department to pose these questions. Other important questions to ask should be concerning the landscape. For example: How many acres of the campus are landscapes, how many trees are throughout the campus, how many square feet of lawn is on the campus? How much does the university spend on landfilling these items?

3) Agricultural and animal waste are often large sources of organic matter at certain campuses. Agricultural waste may include baled straw (rotten), bedding, unused harvests for research purposes (tomato yield research, fruit harvest research), agricultural processing plants (grape pumice, cotton gin trash, rice hulls, etc…), or greenhouse matter. Contact your agricultural related department for more info. Animal waste comes in 2 forms: manure and bedding. The consistency of these items vary greatly depending on the animal they serve. Typical animal barns include chickens, cows, pigs, and horses. Cow manure is very wet and runny, while horse manure is often very dry and composed of cellulose-based products. Bedding usually includes straw and wood shavings. Manure is generally high in nitrogen, while bedding is often high in carbon. Some colleges do animal research, so that may be a source of bedding or manure. Contact your animal research department or animal waste management department for more information.

Straw bedding from the horse barn

II. CAMPUS RESOURCES

There are a plethora of resources at your fingertips throughout the college campus. Internships are the first step to starting your journey for organic matter recycling. Departments on campus that may sponsor an internship include: **the campus recycling program, environmental resource science department, independent study, agricultural related departments, and the local city waste removal department (public works).**

INTERNSHIP OUTLINE

Internships allow a student to get credit, transcript notation, or even a paid position to research an area of interest, while working closely with a professor, faculty advisor, or staff. At ASUCD Project Compost we offer over 5 internships ranging from worm bin maintenance to biodiesel. In order to

format a successful internship a strong relationship must be developed in these 3 areas: Source, sinks, and economics of the organic material.

1) The Source of the organic materials must be identified as explained in the previous section. Most numbers can easily be identified regarding quantities of waste produced, except for food service sector. In order to get a good idea of the food service waste stream it is important to setup a simple waste audit that can represent a variety of the food service providers. Contact and meet with the managers of each food service provider and explain the scope of your project. Request a waste sort for the food provider to better understand their waste stream. Remember to let them know that is an academic based project and have them refer to your faculty advisor for any further info.
THE WASTE AUDIT can be performed by selecting 2 days from the week that best represent the food providers production. Request that all materials be left outside of the dumpster for that entire day. Usually a 24-hour period works well from dinner preparation to dinner preparation. Have the bags of waste be placed on either side of the dumpster depending on their source- pre or post- consumer waste. Collect the bagged items and place them on a table of ground tarp and sort the items into 3 categories: compost (paper products, food waste), recyclable (plastics, tin, and aluminums) and trash. Repeat this process for a second day, average the number and list source of errors. Once you know the number of meals served from this location on the average, you can extrapolate and use your collected data to estimate the waste stream for other similar campus providers

2) The Sink of the organic materials are where these materials currently end up. For example let us assume that the food waste ends up in the landfill. You must be careful with assumptions, leftover foods may be donated to a local food bank. Landscape waste may be hauled of to the local landfill, or it may be chipped and spread as a mulch. Manures may be spread on agricultural fields (often in high amounts polluting ground water) or maybe stored in a lagoon. Used bedding often finds its way to mushroom growers, but it may end up in the landfill. Fully understanding your waste stream is essential. Diverting these wastes may free money up for a composting operation.

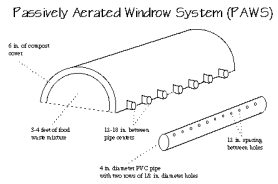
3) The Economics of the waste stream is often (and unfortunately) the defining factor in funding a project. There is no real way though to put a dollar value on the educational and tidal wave effect of bringing a compost project to your school. The first step in your economic research is to contact the sink of the products, often the landfill.
Ask two important questions:
Price per ton/cubic yard for disposal? Tipping fee for the service of the dumpster and the collection of the waste?
These numbers are critical! For an Ag School like UC Davis price per ton is $20 for the university and $36 for the city with a tipping fee of $6.32 per cubic yard for disposal. An urban school in the outskirts of Boston, Los Angeles, or New York City is looking at a disposal rate a $100-$150 per ton, making composting strictly an economically viable means of waste management. Remember disposal fee is the cost to place the waste in the landfill and tipping fee is the price to transport the waste (often in cubic yards).

III. TYPE OF COMPOSTING SYSTEMS

The system you choose depends primarily on campus location (Urban, Suburban, Rural) and existing available resources. For example you are not going to be doing outdoor windrow composting on a campus like San Francisco State University or Columbia University in New York, while in-vessel

composting would seem illogical at a more rurally located agricultural school. This section will discuss the four types of composting systems in detail with references to universities, which use each one of these systems. These systems are as follows: Static Windrow, Aerated Windrow, In-vessel, and Vermi-composting.

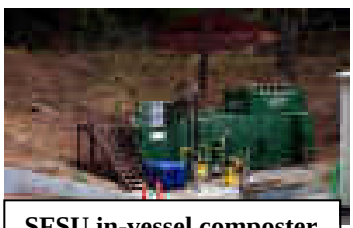
•*STATIC WINDROW* is a form of windrow composting whereby the compost pile is not turned. Compostable materials are either pre-mixed or layered into large formed piles with the dimensions of the pile being between 5-10 feet wide and 3-6 feet tall. Many times the pile is lined with 4inch+ PVC pipe to allow for aeration of the pile. There are many variations on this system from a simple pile to forced aeration through piping and convection chimneys. The system is good for projects with a low budget, lots of space, and limited or no tractor access. A pad or well drained space is needed as well as a way to water the pile and a tarp to cover. Space defines limitations. Peak temperatures may be harder to reach throughout the pile, therefore making it hard to meet certain state composting regulations. Complete composting may take 6 months or more. Middlebury College in Vermont is a good example of a college, which uses a variation of this system. For more information please follow check out their web site at http://www.middlebury.edu/%7Erecycle/compreport.html



•***MECHANICALLY AERATED WINDROW*** is a system whereby compostable materials are layered into elongated piles or rows, which are then periodically mechanically turned. Access to either a front loader tractor or a compost turner attachment are necessary for larger projects. Piles are usually 8-10ft at the base of the pile and 4 feet high. In the state of California it is required that mechanically aerated piles be turned 5 times in 15 days to insure that the each part of the pile reaches temperatures of 131 degrees farernheit or greater for pathogen reduction. Piles can go from raw materials to finished compost in less than two months with proper turning schedule. Once again an area with good drainage or a pad is needed for this form of composting, space is the limiting factor. Requirements are similar to the static pile except a tractor of some sort is needed. Here at UCD we compost about 15 tons of food waste every 3 months with an equal volume of used horse bedding, the finished pile is 15 feet long and 10 feet wide, not much space needed, but we have 2 to 3 piles going at one time in different stages as well as a large pile of amendment stored. You can get more info on Project Compost at UCD at www.projectcompost.ucdavis.edu. Cornell Univeristy in Ithaca, New York has an amazing website as well as a large scale composting project, please check out their work at http://www.cfe.cornell.edu/compost/.


Project Compost turns the pile.

•*IN-VESSEL COMPOSTING* is a system by which compostable material is enclosed in a drum, silo, agitated bay or some other structure where environmental conditions are closely monitored and controlled. The contents are usually turned mechanically within the enclosed structure. These systems are great for urban schools, where space if very limited, and odor may be an issue. The system often needs a small concrete bad and an electrical outlet. Since the system is enclosed bulking agents such as wood chips and cardboard boxes (often waxed-non-recyclable) can be used as carbon source to compost the wet food waste. Companies that make these type of systems include: Earth tub at www.gmt-organics.com used at both Rice University and University of South Carolina-Columbia, The WrightEnvironmental In-Vessel Composter


SFSU in-vessel composter

http://www.oceta.on.ca/profiles/wright/wright.html at San Francisco State University, the CIWMB has a great resource page with many more in-vessel systems ahttp://www.ciwmb.ca.gov/FoodWaste/Compost/InVessel2.htm.

•*VERMI-COMPOSTING* is the use of red worms to recycle food scraps and other organic items into a valuable soil amendment, known as castings or vermi-compost. A red worm can eat up to its body weight per day in food waste passing the nitrogen rich materials through its gut. The exiting materials out of the exterior end is collected as a nitrogen-rich compost. 1 pound of red worms is approximately 1000 red worms and therefore 1 pound of worms can process 7 pounds of food waste per week. Large shallow boxes are constructed that are completely enclosed, the boxes are lined with a thick layer of a carbaceous bedding (often straw or shredded newspaper), and the worms and food waste is placed on top of these materials and covered. Worms are top feeders so they move up in the box leaving their compost or casting behind to be harvested. Worms need a dark, moist environment with temperatures between 55-77 degrees farhenheit for maximum reproduction and food processing. Depending upon the amount of organics one is dealing with all that is needed is an area that drains well, lumber, and red worms. Bins are easy to construct harvesting varies with system use. A 6ftx 3ft bin can handle about 40 pounds of food waste per week. Bins can be buit both in and outdoor areas, sprinkler systems and thermal insulation may be needed to keep temperature moderate year round. In bulk redworms cost $15 per pound, but they reproduce at high a rate under ideal conditions. UC Berkeley composts a large amount of its food waste using worms, check them out: http://www.ocf.berkeley.edu/~compost.

UCB "Berkeley Worms" facility

IV. SITE

So where are you going to be bringing all this compost? This section will briefly overview the different site options with a biased towards windrow composting and may be both applicable to in-vessel and vermi-composting. The options that seem viable fall within these five categories: decentralized small units, constructed concrete pad, landfill, abandon parking lot, agricultural site, external unit.

•*DECENTRALIZED UNITS* involve localization of the organic matter waste stream. Examples are large worm boxes or three bin system placed around student housing or in the back of dining facilities. This may also involve the use of Earth tubs or small in-vessel composters at each indvidual site. Humboldt State University (http://www.humboldt.edu/~recycle/**)** and UC Santa Cruz (http://www2.ucsc.edu/eight/facilities/waste/composting.html) have expanded on programs stemming from their decentarlized composting units. These units are more for educational purposes, they are very limiting in terms of processing large quantities of materials.

•*CONSTRUCTED CONCRETE PAD* for the lost grade asphalt will cost $5 per square yard. A blacktop will allow your program to compost year round, even in the wet months for tractor access for the windrow turning. A conrete pad or blacktop is usually necessary for an in-vessel system. 15x20 square yard pad would be fine for the windrow composting of 1000lbs of food waste per day using straw as the bulking agent.

•*THE LANDFILL* is a very interesting option for a composting site. The materials are already being brought to the site, so tipping and disposal fees would remain the same. UC Davis used to compost its manure and bedding years back at the landfill, but funding was cut for the project. Landfills are often far removed for the collection site, which may pose a problem if the project is student run

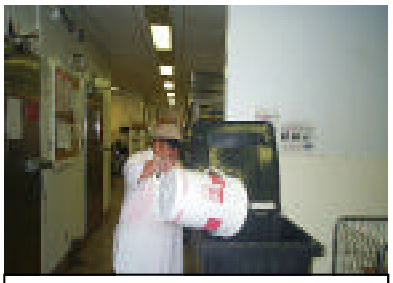
•*THE ABANDON LOT* is an option that is quite promising since there are no pad construction fees. Often there are old parking lots, silos, or other abandon paved areas located on the outskirts of a college campus, it is worth a try.
•*AGRICULTURAL SITE* works for campuses boarded by agriculture or even small farms. Humboldt State (http://www.humboldt.edu/~recycle/**)** brings it food waste to a small CSA farm run by college students on the outskirts of town. A partnership can often be created with a local farmer to setup some type of composting program, they often have the land, the equipment, and the need for organic inputs. Local mushroom farmers maybe interested in animal bedding and local pig farmers maybe interested in the veggie scraps for their pigs.
•*THE EXTERNAL UNIT* is in reference to the private county company, which may compost food or yard scraps for entire counties or local industry. Check out Sunset Scavengers in San Francisco (http://www.epa.gov/epaoswer/non-hw/reduce/food/food8.pdf) and Nor Cal Waste (http://www.norcalwaste.com/).

V. COLLECTION OPTIONS

In order to get the food waste to the composting site a collections system must be set up in the kitchen, which is clean, efficient, and easy to pickup. This portion will take you through the indoor kitchen collection process, the compost transportation, and the compost building.

KITCHEN COLLECTION

Kitchen collections exists solely on education and ease. The first step is take a stroll throughout the kitchen and check out the sources of organic matter (veggie and fruit peelings). Talk to the workers as well as the kitchen manager and don't be afraid to look through the trash. Major sources of organic matter are the prep areas, where most of the vegetable chopping occurs. Another source is the dish room where the leftovers return for their final departure to the landfill. This is where pastas, grains, and beans can be diverted to the compost bin, as well as salad bar-type items and breads. Another source of organic matter is coffee grounds.



Emptying of a 5 gallon bucket

BINS are essential to any collection system. Bins are dependant upon available resources, kitchen size, kitchen layout, pickup frequency, and organic matter produced. Check out companies such as Rubbermaid and Toter for a variety of bin options. For reference a full 65 gallon bin of food waste weighs in the range of 175-250 pounds.
•AVAILABLE RESOURCES- What is available on your campus for free or for minimal charge? Check with your recycling department for surplus bins or dilapidated/unused bins. Follow this same process with your city or county. Bins can range from 20 gallon Rubbermaid can on wheels, to 65 gallon TOTER recycling bins, onto a 2 yard waste disposal bin. Check your state's integrated waste management board, the Department of Conservation, and the WWF "Campus Ecology" for small grants.
•KITCHEN- How large is the kitchen you are collecting from? Is there lots of open walking space between areas or is it cramped? A kitchen with open spaces allows for the placement of the collection bin within the kitchen. A cramped kitchen will force the bin to be placed outside near the trash disposal system, which will take more work to get the kitchen staff accustomed to emptying their veggie

collection units outside. The layout of the kitchen will also dictate where in the kitchen the bin is placed and its accompanying signage.

•COLLECTION CONTAINER- In order for the kitchen staff to collect acceptable items it is important that is convenient. Some kitchens prefer to have 5 gallon buckets (often free because they are used for bulk item storage), in each preparation area. This buckets are then periodically emptied in a larger indoor or out door receptacle. Signage is important, as well as bin location (try to keep it in the view of preparation area).

•FREQUENCY/ORGANIC MATTER- This depends on how much compost is produced, how large your staff is, available bins, and climate. If storage space on the loading dock is limited, collection may need to be on a daily basis. If the collection bin is large and the kitchen is small, the bin can be picked up less frequently. The contents of the bin also determine frequency. Coffee grounds and breads do not liquefy in a putrscible soup, like cantelope rinds and lettuce after 3-4 days in a bin. If your climate is moderate year round, your bins may keep without fruit fly attraction or odor for 2-4 days. Climate extremes may force you to perform daily pickups to avoid odor or fruit fly issues.

TRANSPORTATION is a big issue. First you must figure how much space you need for your bins per run and how far you are transporting these materials. Vehicles range from pedal powered pick up bikes, to modified Taylor-Dunn Electric Vehicles, up to large diesel dump trucks. This is all dependant on quantity, money available, and distance traveled. Here at UC Davis we use 65 gallon Toters and pickup the bins in an extended bed Taylor Dunn EV which can hold 8 bins allowing us to transport over 1,000 lbs of food waste. The vehicle only travels 10mph though. The cost of this vehicle was about $9,000 and was paid for by the student body. A modified flat bed can reach upto $100,000, but it allows you to hydraulic dump, some even mix before dumping. Checkout the following webpages for images of a variety of Compost Mobiles:
www.ProjectCompost.ucdavis.edu **(Taylor Dunn), http://www.ocf.berkeley.edu/~compost/ (Dump Truck),**
http://www.cfe.cornell.edu/wmi/Compost/CaseStudies.html (dump truck). Also consider whether the pickup locations have loading docks. ASUCD Project Compost had to construct a portable aluminum (with the help of our friend Carlos) ramp in order to get the bins up on the vehicle at some locations.

PILE BUILDING is an art form assuming you are doing some type of windrow system. Some piles are built all at one time, while others are constructed on a daily basis using a layering technique. Some piles are food waste and animal bedding, and others may include manure. Two systems that will be described are the daily static pile and the all in one pile.

•DAILY- The daily pile is a static pile, which is constructed on a daily basis. A thick layer is placed directly on the ground alongside a road. The bidding is about 10ft and the length reaches about 50ft, but can be extended depending on volume produced. Each day 15ft portion of the pile is opened (dependant on amount of food waste) by scraping the surface layer of straw to the edges of the pile, thereby creating walls on each side of the pile and a basin in the center. The bins are dumped in this basin and spread throughout the exposed area. Bedding is then applied over the basin and the process starts over. This layering may rotate throughout the pile weekly or daily. After the pile reaches heights of 4-5 ft, it is turned mechanically either by a front loader or a turner. The pile can be mixed daily via a pitch fork to stratify the layers.

· ALL IN ONE- This involves feeding the food waste into a manure spreader along with the proper amount of bedding. The contents are mixed as they are spit of the shredder, a front loader then forms the piles. Some variations include storing the food waste in a large roll of containers and then building the pile all at once.

VI. PRESENTATION/FUNDING

Every project need some kind of funding, even if it is completely grass roots and run out of a college dorm room with an all volunteer staff. Funding comes with presentation, both orally and written. In some areas composting rather than landfilling, maybe a viable economic option (where landfill prices reach over the $100 per ton range.) Capital expenses are still present such as the transport vehicle, bins, site, compost/farm equipment. This section will be broken into University/College Funding, Outside Funding, and Food Service Funding.

UNIVERSITY/COLLEGE FUNDING is a nice way to fund a project. This funding can come from a research grant from a department in environmental sciences or agricultural sciences in order to do some preliminary research or a trail project. The campus recycling program may be able to provide some funds for a trial project or research. Other grants may be obtained from your Student Government or general grant proposals. The money is out there, just look!

OUTSIDE FUNDING falls into two categories, the public and private sector.

•PUBLIC- Grants are available at a local (city/county), state, and federal level. Check the out your city's webpage and see if any waste diversion grants or funds are available. Counties such as Alameda in Northern California shell out large amounts of grants to schools all over the bay area to purchase composting units. At a state level, your integrated waste management board should provide monies for this type of project, for California www.ciwmb.ca.gov. On a federal level the Department of Conservation (www.consrv.ca.gov/) offers a variety of grants.

•PRIVATE- The best place to search in this venue would be the Compost Council (www.compostingcouncil.org). They have a great list serve and a bountiful amount of compost info for North America. One grant possibility that is college specific is CAMPUS ECOLOGY, which is operated under the National Wildlife Federation (http://www.nwf.org/campusecology/). They offer small grants (about $2,000) for campus greening projects.

•CAFETERIA FUNDED- In some college setting compost can be profitable. This method would involve pulling information together on disposal fees, tipping fees, and any other trash related fee and compare it per ton or cubic yard. Composting also produces a byproduct *COMPOST*, which can be sold at 10-15 per cubic yard. There maybe some funds coming in also from the diversion or either landscape waste or animal bedding/manure if these items are not disposed of over fields. Bring all this together makes it is possible to run a profitable or minimally subsidized project. Remember there are still capital costs involved! As a review funding sources may come from the cafeteria or corporate office, an animal barn, or the landscape/grounds department.

•PURCHASERS- Compost can be sold to local organic farms or to the grounds/landscape department on your campus to be used as an organic fertilizer or mulch.

VII.EDUCATION/OUTREACH

The other half of a composting program is the educational/outreach venue. This involves presentation, workshops, and other outreach activities. Worm bins need to be built for students, workshops need to be done for the community, displays need to pop up throughout campus. Every campus composting

program has some venue of education or another- browse through the composting colleges section to see the variety of activities revolving around compost. Here some educational info for Project Compost at UC Davis:

•PAMPHLET - distribute throughout campus and city
•WORKSHOPS- free workshops at local farms, community gardens, parks, or housing co-ops. Advertise in school newspaper or through an alternative education class/ internship
•COMPOST HAPPENINGS- bring compost out during lunch and spread the glory of compost throughout campus
•TABLING- Table at the dorms, table at school functions, table at local concerts, table at lunch, just TABLE!

A "Compost Happening"

Check out the University of Florida for great composting tutorials http://compost.ifas.ufl.edu/-

VIII.COMPOTING COLLEGES

COLLEGE	WEBPAGE
UC Davis "Project Compost"	www.projectcompost.ucdavis.edu
UC Berkeley "Berkeley Worms"	www.ocf.berkeley.edu/~compost/
SFSU	www.sfsu.edu
Humboldt State University	www.humboldt.edu/~recycle/index.htm
Chico State University	www.csuchico.edu/as/recycle/program/composting.shtml
UC Santa Cruz	www2.ucsc.edu/eight/facilities/waste/composting.html
Rice University	www.ruf.rice.edu/~recycle/recycle/composting.html
Dartmouth College	www.dartmouth.edu/~esd/fall/compost.html
Ithaca University	www.ithaca.edu/remp/composting.htm
University of Waterloo	www.adm.uwaterloo.ca/infowast/composting.html
Texas A/M	aggie-horticulture.tamu.edu/holisticgarden/composting.htm
Cornell University	www.cfe.cornell.edu/compost/schools.html
North Carolina State	www.bae.ncsu.edu/people/faculty/sherman/
Oregon State University	http://oregonstate.edu/