The career Horticulture Department at Santa Barbara City College has two unique outdoor classroom demonstration gardens used to teach the skills and art forms related to landscaping and professional horticulture. The SBCC Lifescape and Chumash Point Ethnobotanical Preserve provide a wide array of natural and domesticated habitats used to teach environmental horticulture.

The College has a heavy duty diesel chipper/shredder that recycles much of the green debris that once went to the landfill. Outside professional services also deliver shipped loads to the campus. Nearly all organic materials have worked well. Most monocot debris, spiny materials and allergy toxic material (i.e. poison oak) is not chipped.

**MULCHING**

An extensive mulching program is used campus wide to topdress exposed soil surfaces. The benefits of mulching are: 1) weed control and prevention, 2) soil moisture retention, 3) erosion reduction, 4) improved soil structure development, 5) improved essential nutrient availability, 6) increased biodiversification and bioactivity, etc.

Mulching programs at the Lifescape since 1983 has converted an original subsoil horizon to be transformed into a top quality horticulture loam horizon. It is estimated that 15 feet or more of coarse, medium and fine textured mulch material has been applied as a topdressing to allow the originally poor structured subsoil to naturally become a 4 foot deep loam teeming with abundant micro- and macro- soil flora and fauna. The soil complex now works in tandem with the plant materials and the inorganic facets of the soil ecology.

Mulch is a highly natural way to compost. Mulch is the organic duff that becomes humus. Humus is the fuel for organic bio-vitality. Humus becomes organic colloidal particles that acts as a buffer between the root cells that absorb soil moisture and the intake of essential ion nutrients. These nutrients are transported to the green cells within the plant chlorophyll to photosynthesize the inorganic atoms and turn them into plant starches, carbohydrates and plant sugars (the parts of a plant).

A soil is a renewable resource. If a soil does not become recharged with its organic ingredient base, it will eventually become bankrupt, lose its structure and dwindle into a cement-like formation and turn into a hostile environment. A wasted soil stresses-out the living symbiotic agents that buffer and cushion the organic and inorganic links that sustain a healthy natural soil system.

Sustainable horticulture realizes that it is best to “grow your soil” to reach its viable potential, before you raise your crops or plants. You can’t grow a $100 plant in a 10¢ hole.

**COMPOSTING**

discussion (see backside)
COMPOSTING SYSTEMS

At SBCC MULCH-COMPOSTING is the most extensive method used to create compost. It is the easiest and most natural way to make humus. Plant residue is merely placed onto the soil surface, no turning of the organic material is necessary. Soil organisms breakdown the organic matter top-dressing through natural processes of soil chemistry and biology…this method of composting involves the fewest amount of labor hours. You can literally compost in place or relocate the final product. This method mimics the process that turns natural duff into leaf molds.

WINDROW-COMPOSTING is another method used. A linear pile of organic material is emassed. In this style of making humus, the line of material is periodically rolled-over, back-and-forth, until the final product is created.

COMPOST-HOLING or verti-mulching is a third favorable way to create humus in place. Auger the soil in a circular fashion around the outside perimeter of the plant. This zone is often referred to as the “12:00 shadowline” or the outer canopy. Backfill the cored-out hole with the compostable materials or select a soil blend. Irrigate or drip-irrigate over the augered zone. This allows deep water penetration.

*** NOTE: (Compost-Holing is the best way to recycle pet manure, because the compost blend is not disturbed.) The depth of the hole is determined by trying to encourage plant roots to grow deeply and spread-out to anchor and counter-balance the branch scaffolding. Periodically widen the pattern of holes to maximize root development.

Other methods of aerobic composting are: OPEN AREA PILES, 3-CHAMBERED SYSTEMS, various FRAMES, TUMBLERS & STRUCTURES.

VERMI-COMPOSTING or Worm Bins are the ultimate compost digesters, but require more sophistication and harvest time to obtain the humus, castings, or the worms themselves.

ANAEROBIC METHODS

Various closed system methods are used to create humus through the process of fermentation…each is sealed because a secondary smell is the result of this process.