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Your voice, in fact, is another key. It should be assured; use a strong, full (but not overwhelming) resonance. Speak clearly and distinctly. Show enthusiasm through pitch, volume and inflection. Vary your vocal qualities, but always speak naturally and at ease.

"Communicating is about openness," Jousan adds. Here are the keys:

- **Care** about what you're talking about.

- **Connect**—use your physical self and tell stories or solve problems.

- **Commit**—you learn to speak by making a commitment.

If you've ever taken a Dale Carnegie course—and they are recommended, especially for people in managerial positions—

you know the group's three steps to effective communication:

- 1) Make communication a top priority in every interpersonal situation.

- 2) Be open to other people. Share and listen.

- 3) Create a receptive environment for communication by laying a foundation of genuine trust and shared interest. Be sincere.

The Carnegie people, in one of their books, offer these tactics:

- Try to see things from the other person's perspective. If you're talking to an employee who has made a mistake, find out why the mistake was made so you can offer advice.

- Don't listen to hear. Listen to learn.

In order to find out why the mistake was made, you must pay careful attention to that same employee.

- Apply the Golden Rule and respect the dignity of others. For instance, criticizing that employee in front of his peers is taboo. Always take him or her aside.

- Be quick to admit mistakes and slow to criticize. And when you criticize, above all, be constructive so that the employee will follow instructions and do it right next time.

Additional information on this subject is available through a wide variety of books you can find at your local public library. Look in the section with the Dewey Decimal code number 658.84.

—Jerry Roche

Compost preferred over topsoil as soil amendment

As compost becomes more available to landscapers, more and more topsoil is being replaced with compost for a variety of project uses.

■ Whether for general grading purposes, lawn establishment or renovation, or tree and shrub planting, landscapers purchase and handle a tremendous amount of soil products.

One of those products—topsoil—has never been available in good quantity. Wide differences in availability exist among different areas of the country. Even

within small geographic areas, price and supply can vary considerably, especially given the high cost of trucking topsoil, even over short distances.

Many contractors have difficulty with topsoil availability in metropolitan areas. In fact, some city and county governments have banned the shipment of topsoil across city or county lines to limit the stripping of topsoil before construction or new development.

Compost, on the other hand, is becoming increasingly available. More and more cities and towns, private composters and landscape contractors are composting,



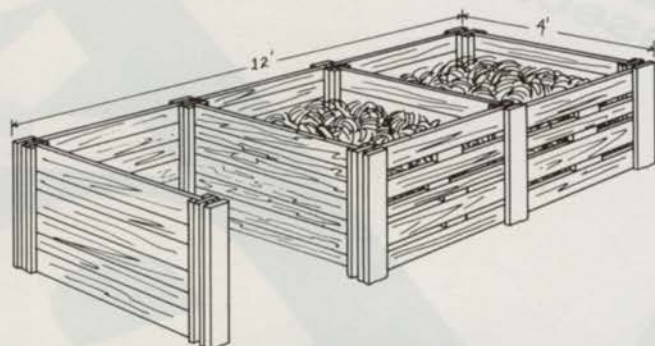
The quality of materials used determines the quality of the compost you produce.

leading to a greater supply at reasonable prices. The greater availability is being driven by landfill bans on the disposal of yard waste, leaves and grass and a dramatic rise in tipping fees for disposal a landfills or incinerators.

Today, compost can be purchased from any private composters, municipalities or bulk and re-wholesale yards serving landscape contractors.

Superior quality—Even the best topsoil available often contains rocks and sticks, and weed seed is invariably a problem when topsoil is used for new lawn establishment. Properly managed compost should avoid each of these problems. Rocks and sticks should be screened out and the vast majority of weed seeds are killed by the high temperatures developed during composting.

Compost consistency also gives the contractor numerous advantages over topsoil. Compost provides for a uniform, fine texture, without clumps, which makes for easy handling. Topsoil can vary widely in



A compost bin doesn't require a complex design. Just make it easy to work with.

consistency.

Save on labor costs—Compost weighs much less than topsoil. Compost weighs about 1200-1300 pounds/cu.yd. A cubic yard of topsoil weighs between 1900-2000 pounds. This means that the compost can be shipped for less cost than topsoil, and more product can be delivered with each truck load. Once on the job site, reduced labor is required to handle, shovel and rake compost. Equipment wear is also reduced.

Agronomically, compost offers many advantages over topsoil:

- nutrient value;
- high amount of organic matter;
- nutrient and water holding capacity;
- neutral reaction.

Compost will contain more nutrients than topsoil, thus reducing fertilizer

requirements at the time of establishment. This is true for both the primary as well as the secondary and trace elements.

Composts themselves do vary in nutrient content. Compost derived from animal manures or sewage sludge has higher nutrient levels than compost derived from yard waste. When using yard waste compost as a soil amendment, reduce normal fertilization rates at the time of establishment by up to 20 percent. If using animal manure or sewage sludge compost, reduce rates by up to 40 percent.

Compost will typically contain 20-30 percent organic matter, while most topsoils contain less than three percent. The organic matter imparts several benefits to the subsoil when compost is used as a soil amendment. Both clay and sandy soils are improved by the incorporation of compost. Other improvements include: aeration, improved soil structure and higher water and nutrient holding capacity. Irrigation and fertilization requirements will be lower where compost is used.

The organic matter in compost also delivers another major benefit with its associated high level of microorganism activity. Microorganism activity has long been known to be a major factor in reducing thatch development in lawns. In addition, recent research has

shown high levels of microorganism activity can be responsible for reducing soil borne pathogens such as *pythium* and *rhizoctonia*, and help to release micronutrients and make them available for plants to use.

Most composts have a pH that is neutral to slightly alkaline, generally from 6.5 to 8.0, so lower limestone is required to correct acidity.

Aesthetic benefit—Compost is dark and rich looking, and customer satisfaction with it is high. Based upon looks alone, most people will choose compost over topsoil every time.

Other compost quality issues. Users of compost need to be aware of a few additional unique characteristics before using compost. For instance, users should ensure compost is mature and fully stable.

Bottom line rewards

■ Composting saves money.

Jerry Lee, technical services manager of Wight Nurseries, knows that composting offers bottom line rewards as well as ecological benefits.

The company composts scrap plant material, soil and all.

"We just knock off our pots, which leaves the soil on the plants," he says.

Wight Nurseries stores excess materials on a concrete slab until enough accumulates to warrant starting the grinding cycle. Material is loaded into an eight-foot tub grinder, then stacked into five-foot high windrows after it comes off the conveyor belt.

The total composting cycle takes about 12 weeks. The compost must reach a 130-150 degree temperature to compost successfully. The compost is then tested for nematode and water molds. If the tests are negative, they use it. If the tests show traces of nematodes or water molds, blending continues.

"Our original investment was about \$30,000 in equipment and operating costs," says Lee. "In the first year alone, we recouped that expense."

The benefits: no landfill visits to discard sand and scrap, which saves on tipping fees. "It's only about \$8 per ton in our area, but potting soil is pretty solid stuff, so it doesn't take long for those \$8 fees to add up," says Lee.

The company also saves on sand supplies. "Our old potting soil mix was 80 percent bark and 20 percent sand," says Lee. "Now, we blend in material that passes the test, instead of the sand." Particle size is about the same as sand.

But here's a warning: be sure you know and follow local regulations.

—ALCA Landscape Contractor News

If not, plant growth problems may result if sufficient fertilizer is not added at the time of establishment.

Reputable suppliers carry mature and stable compost.

The source of compost is another concern. Yard waste and animal manure compost can generally be considered to be of high quality. Compost made from sewage

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Compost efficacy

■ Research by Peter Landschoot and Andy McNitt at the Penn State University Turfgrass Research Center during a 1992-1993 research project, studied the efficacy of seven compost amendments on clay loam subsoils. They were most interested in how different compost mixes effected turfgrass rate of establishment; overall turf quality; organic matter content; bulk density and infiltration.

"Our goal," says Landschoot, "was to simulate a situation in which a contractor removes good topsoil from a new development and hauls it away from the site—a common practice that leaves a subsoil high in clay, low in organic matter and nutrients and unsuitable for good turf growth."

Eight different composts, a reed sedge peat and a topsoil were applied at two rates: 6.2 cu. yds. per 1000 sq. ft. and 3.1 cu. yds. per 1000 sq. ft., at depths of four to six inches. The compost mixes tested were:

- yard trimmings;
- a biosolid compost from the water department;
- brewery waste;
- mushroom media;
- paper pulp;

Landschoot: to examine compost efficacy as top-dressing.



- a mixture of various manures;
- a topsoil-amended plot.

The plots were seeded with Kentucky bluegrass. Among the findings:

- all compost treatments increased soil organic matter content, reduced bulk density and increased water infiltration rates when compared with the topsoil treatments and the unamended control plot;
- good turf quality was correlated with increasing levels of available phosphorus and nitrogen recovery;
- starter fertilizer increased the rate

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sludge or municipal solid waste (MSW) may contain contaminants. If you use these composts, know the producer, check with others who have used the product and ensure that the compost meets all local, state and federal regulations.

Producers should be able to produce test results for heavy metal and pathogen contamination in sewage sludge or MSW compost.

—Dr. James Wilkinson, vice president of research and development for Earthgro, Inc., in the *Bulletin of the New York State Turfgrass Association*.

of turf establishment with all treatments except the biosolid compost and the brewery residues.

Landschoot says the quality of the material used is a big issue, as well as the length of time it takes before the organic portions of composts break down, how long soil improvements last and the effects of compost additions under heavy-traffic conditions. He plans to examine those issues in the near future, as well as a look at the efficacy of various compost mixtures when used as a topdressing.

Sprayer tune-up time

■ A pre-season check is a good time to spot needed repairs.

Although sprayer brands and types differ slightly, they operate on the same principles. Industry and university experts recommend using the following checklist to tune-up all sprayers:

Check for wear and tear—Look for obvious damage to frame, running gear and tank.

- ✓ Drain antifreeze or water and check the pump for cracks or leaks.
- ✓ Test throttling valves, pressure gauges, hoses and clamps for leaks.
- ✓ Check nozzle gaskets for a tight fit.
- ✓ Clean line and tip strainers with fresh water and a soft brush.

Check for uniformity—Calibrate. Make sure nozzle size flow rate, and spray pattern are uniform across the boom.

✓ Measure flow rates from each nozzle and replace any tip which varies 10 percent or more from manufacturer's speci-

fications. If two or more nozzles are off by 10 percent, replace the entire set of tips.

✓ Identify nozzle needs for the upcoming season. New chemicals or application procedures may require different nozzle types, sizes or pressure ranges.

✓ Replace worn nozzles before the season and keep extra nozzles on hand to avoid unnecessary delays during the season.

Check for safety—Equip your sprayer to carry fresh water for rinsing gloves and tools, and for cleaning spray tips and screens.

✓ Use appropriate safety equipment. Basic protective gear includes a long-sleeved shirt, long pants, sturdy shoes or boots, chemical-resistant apron, gloves and goggles or a face shield. Read label instructions to identify further safety precautions.

✓ Be certain pumping and filling equipment has devices to prevent backflow and check valves to protect water supplies.

Do's and don'ts—Do check the chem-

ical label to determine recommended application rate.

Don't think of calibration as a once-a-year task.

Don't try to calibrate your nozzles by blindly raising or lowering pressure to change flow rate. There isn't a linear relationship between the two variables. For example, a nozzle spraying at 10 psi will deliver only twice the amount of liquid when the pressure is increased four times to 40 psi.

Do adjust for variances in nozzle flow rate when spraying solutions with substantially different densities than water. Some solutions, such as 28 percent nitrogen, are heavier than water and would flow at a lower rate through the same nozzle.

When checking ground speed for calibration purposes, use a stopwatch to measure the time it takes the tractor to go 250 feet, then calculate speed with this formula:

$$\frac{\text{Distance (ft.)} \times 60}{\text{Time (sec.)} \times 88}$$

Calibrate each nozzle individually, and check for worn or split hoses or leaky valves. **LM**