O2Compost

Compost Systems & Training

Products & Services Guide

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Protecting Our Land, Air and Water Resources

Create Quality Finished Compost in 60 Days Without Turning the Pile!

Introducing O_2Compost

O_2Compost is an environmental consulting firm that specializes in the design of aerated compost systems for farms, industries, municipalities, and government institutions. We are located in Snohomish, Washington and since our formation in 1996, we have designed over 750 composting systems located throughout the United States, Canada, and seven foreign countries.

O_2Compost systems are used to convert all varieties of organic wastes into a value added product for use on pastures and landscapes and for sale to local gardeners. With an emphasis on keeping it simple, we have developed composting systems for every scale of operation and for every budget. The O_2Compost system that is best for your situation is determined by the volume of material that you will be composting and your preference for a portable, semi-portable or permanent system.

Our Mission

As environmental engineers, scientists and educators, O_2Compost's mission is to teach the art and science of aerated composting, and to change our collective thinking from **Organic Waste Problem to Natural Resource Opportunity**.

Through composting, we strive to empower individuals to become advocates for sustainable agriculture and stewards of our land and water resources so that together we can positively impact the world for generations to come.

Advantages of the O_2Compost System

- Produce finished compost in 60 days or less without turning the pile!
- Eliminate adverse impacts to surface and ground water resources;
- Destroy parasites, pathogens and weed seeds in the finished product;
- Eliminate offensive odors;
- Significantly reduce flies, rodents and other pests;
- Improve your animals' health;
- Eliminate the time and expense of off-site disposal;
- Create a nutrient-rich product that is safe to use on pastures and gardens;
- Earn a profit by selling your finished compost and create a return on your investment; and
- Improve the appearance and value of your farm or business.

What is Composting?

Composting is a biologic transformation of raw organic materials into stable, humus-rich substances suitable for growing plants.

Aerated Composting includes the addition of fresh air (oxygen), which optimizes the composting process and produces a safe product that is free of parasites, pathogens and weed seeds.

Aerated Composting is elegant in its simplicity and is the perfect solution to a challenging environmental problem.

O_2Compost Method of Composting

All O_2Compost systems utilize the Aerated Static Pile (ASP) Method of Composting. With the ASP method, we induce the airflow through the compost pile to maintain aerobic conditions throughout the pile; stimulate microbial activity; and eliminate the need for pile turning.

All of our compost systems mitigate adverse impacts to surface water and ground water resources and satisfy regulatory requirements for a Best Management Practice.

How O_2Compost Systems Work

All O_2Compost systems utilize a three-step process: 1) filling the compost bin; 2) active composting; and 3) curing.

1. Each compost bin is sized to accommodate 3 to 6 weeks' worth of manure and soiled bedding. The manure is added daily and the airflow is started when the bin is full. O_2Compost systems may also be used for yard waste, food waste, and other organic by-products.

2. The active phase of composting is a bacterial driven process that generates heat. We utilize this heat to destroy parasites, pathogens, and weed seeds in the mix. The active phase of composting lasts approximately 30 days.

3. The subsequent curing phase is a fungal driven process that reduces the compost mix to a more uniform, soil-like texture. The curing phase takes an additional 30 to 60 days to produce finished compost.

O_2Compost System Size and Configuration

The O_2Compost system that is best for your situation is determined by the volume of material that you will be composting. The following pages discuss each available O_2Compost system so that you can determine which option is best for you.

The configuration of your compost system is determined by your property and specific needs. The following are examples of O_2Compost systems. While the configuration in each category is the same, the size of the system is determined by the volume of material to be composted.




The On-Grade Compost System is perfect for farms and stables with flat topography. On-Grade systems have three or four bins, each with an aeration floor. They are designed to be constructed with lumber, although masonry block and concrete construction can also be used. Roof designs are included.




The Top-Down Compost System is ideal for farms and stables with sloping topography. With this approach, the compost structure is built into a hillside, thereby allowing for the raw manure to be dumped into a bin from above and the finished compost to be later removed from below – taking full advantage of gravity. Top-Down systems have three or four bins with aeration floors. They are designed to be constructed with your choice of masonry blocks or cast-in-place concrete. Roof designs are included.




The Free-Standing Aerated Static Pile and Block Bays are well suited to flat ground conditions. The aerated static pile is the simplest and least expensive composting method. No structure is required; but block bays can be constructed, if desired. This approach simply includes pipes on grade attached to an aeration manifold or cast-in-place trenches to distribute the airflow evenly across the base of the pile.

Micro-Bin Compost System

Horse & Alpaca Farms

O_2Compost Micro-Bins are small, free-standing boxes that are equipped with a simple pipe-on-grade aeration system. Several design options are included in the training manual that comes with the Micro-Bin kit. The bins sit directly on the ground or a paved surface and they can be constructed out of ¾-inch plywood or 2x6 tongue and groove lumber. Micro-Bins can vary in size, but typical sizes include 4'x4'x4' (~3 cubic yards); 4'x6'x4' (~5 cy); and 6'x6'x4' (~ 6 cy).



Micro-Bin Kit Includes:

- Training Manual with Alternative Designs
- High Impact Plastic Aeration Blower
- Dial Cycle Timer
- 20-inch Temperature Probe
- Aeration Manifold & Fittings
- O_2Compost Technical Support

The cost of an O_2Compost Micro-Bin Kit is $675 plus shipping. The cost of the kit plus materials to construct two compost boxes (purchased locally) is approximately $1,000. In addition, if you ever decide to upgrade to a Cornerstone or Sterling Compost System, we will credit you for the total amount that you paid for the Micro-Bin Kit toward your next purchase.

Pilot Projects & Research

O_2Compost also specializes in helping private and public sector clients conduct food waste compost pilot projects. Conducting a pilot project with an O_2Compost Micro-Bin allows our clients to:

- Test the feasibility of collecting and composting source-separated organics;
- Produce a finished compost product that can be laboratory and field tested;
- Quantify the actual volume of waste that is produced over a given period of time;
- Identify logistical constraints in collecting, mixing and processing food waste residuals;
- Provide hands-on training for management and operating staff;
- Establish confidence with stakeholders (decision makers, regulators and neighbors);
- Reach a Go / No-Go decision quickly and at a minimal cost; and
- Establish a basis for full-scale system design and a budget for construction.

Benchmark Compost System

(~10 cubic yards / month)

The Benchmark Compost System is a permanently constructed O_2Compost System that utilizes fully designed, standard AutoCAD drawings. O_2Compost has created a "design library" of systems that vary in size, configuration and building materials. Together, we will discuss the specifics of your situation and your preferences and select a standard set of drawings that best meet your needs. The Benchmark Compost System includes:

Standard Construction Drawings

- Your choice of system configuration and building materials
- A materials list, contractors bid sheet, construction notes, plans, sections and details

Aeration Equipment Package

- High Impact Plastic Blower, sized appropriately for the volume of material to be composted (2 year extended warranty)
- Digital Cycle Timer: (1 year manufacturer's warranty)
- (3) 4-inch Diameter Slide Gate Valves
- 36-inch Temperature Probe

Complete On-Line Training Manual

- The basics of aerated composting
- Step-by-step instruction
- Monitoring forms
- Troubleshooting guide

O_2Compost Technical Support

- During construction;
- Start-up of your system; and
- Throughout the first three months of operation

Example Pricing (On-Grade)	**Owner Built**	**Contractor Built**
Benchmark Training Program	$2,375	$2,375
Construction Materials	$5,000	$5,000
Labor	DIY $0	$5,000
Total Cost Estimate (No Tax)	**$7,375**	**$12,375**

Cornerstone Compost System

(up to 40 cubic yards / month)

The Cornerstone Compost System is a permanently constructed O_2Compost System that allows for design modification to fit the owner's specific needs and preferences. We begin by selecting a design from the O_2Compost design library and then make selected design modifications (4 hours of design time are budgeted for this work). Alternatively, we will work with your architect and engineer to make changes to fit the overall aesthetics of your farm. The Cornerstone Compost System includes the following:

Modified Construction Drawings

- Your choice of system configuration and building materials
- A materials list, contractors bid sheet, construction notes, plans, sections and details

Aeration Equipment Package

- High Impact Plastic Blower, sized appropriately for the volume of material to be composted (2 year extended warranty)
- Digital Cycle Timer: (1 year manufacturer's warranty)
- (3) 4-inch Diameter Slide Gate Valves
- 36-inch Temperature Probe

On-Line and Printed Training Manual

- The basics of aerated composting
- Step-by-step instruction
- Monitoring forms
- Troubleshooting guide

O_2Compost Technical Support

- During construction;
- Start-up of your system; and
- Throughout the first year of operation

Example Pricing (On-Grade)	**Owner Built**	**Contractor Built**
Cornerstone Training Program	$3,875	$3,875
Construction Materials	$7,500	$7,500
Labor	DIY $0	$7,500
Total Cost Estimate (No Tax)	**$11,375**	**$18,875**

Sterling Compost System

(up to 250 cubic yards / month)

The Sterling Compost System is a permanently constructed O_2Compost System that is custom designed to meet our clients' specific needs and preferences. We follow a detailed six-step design process and integrate the owner and their equine facility designer throughout the design process.

Custom Construction Drawings

- Your choice of system configuration and building materials
- A materials list, contractors bid sheet, construction notes, plans, sections and details

Aeration Equipment Package

- Steel Industrial Grade Blower, sized appropriately for the volume of material to be composted (life-time warranty)
- Industrial Grade Cycle Timer: (life-time warranty)
- (3) 4-inch Diameter Slide Gate Valves
- 36-inch Temperature Probe

On-Line and Printed Training Manual

- The basics of aerated composting
- Step-by-step instruction
- Monitoring forms
- Troubleshooting guide

O_2Compost Technical Support

- Perpetual On-Call Support
- New Staff Training
- Laboratory Test
- Marketing Assistance

Example Pricing (On-Grade)	**Owner Built**	**Contractor Built**
Sterling Training Program	**$7,575**	**$7,575**
Construction Materials	**$12,425**	**$12,425**
Labor	**DIY $0**	**$15,000**
Total Cost Estimate (No Tax)	**$20,000**	**$35,000**

Paragon Compost System

(~10 cubic yards / month)

The Paragon Compost System is a kit structure that has been designed in cooperation with Barn Pros, a specialty supplier of high quality wood barns and residential farm structures. The designs for an appropriate Paragon System have already been completed – we will help you select the system that best fits your needs. The photo below shows a 3-bin, top-down Paragon Compost System that complements the aesthetic of the barn behind it.

Custom Construction Drawings

- Your choice of system configuration and building materials
- A materials list, contractors bid sheet, construction notes, plans, sections and details

Aeration Equipment Package

- Steel Industrial Grade Blower, sized appropriately for the volume of material to be composted (life-time warranty)
- Industrial Grade Cycle Timer: (life-time warranty)
- (3) 4-inch Diameter Valves
- 36-inch Temperature Probe

On-Line and Printed Training Manual

- The basics of aerated composting
- Step-by-step instruction
- Monitoring forms
- Troubleshooting guide

O_2Compost Technical Support

- Perpetual On-Call Support
- New Staff Training

Example Pricing (Top-Down)	**Owner Built**	**Contractor Built**
Paragon Training Program (O_2Compost)	Included	Included
Kit Structure plus S&H (Barn Pros)	$9,695	$9,695
Concrete & Roofing Materials	$5,500	$5,500
Labor	DIY $0	$6,500
Total Cost Estimate (No Tax)	**$15,450**	**$21,950**

Each O_2Compost System Includes	Micro-Bin	Benchmark	Cornerstone	Sterling	Paragon Kit
Price for Complete Compost System & Training	$ 675	$ 2,375	$ 3,875	$ 7,575	$ 9,695
Steel Industrial Grade Blower / Timer* (Upgrade)		$ 1,875	$ 1,875	Included	Included
Standard Design, Selected from Design Library	✔	✔			✔
Modified Standard Design w/ 4 Hrs. Design Time			✔		
Custom Design w/ 16 Hrs. Design Time				✔	
Materials List	✔	✔	✔	✔	✔
Contractor's Bid Sheet		✔	✔	✔	✔
Building Kit (Materials) Shipped to the Project Site					✔
Complete Solar Power Assembly (Available)**	✔	✔	✔	✔	✔
High Impact Plastic Blower	✔	✔	✔		
Steel Industrial Grade Blower* (Upgrade)		✔	✔		
Steel Industrial Grade Blower* (Included)				✔	✔
Small Dial Cycle Timer	✔				
Large Digital Cycle Timer		✔	✔		
Large Industrial Cycle Timer* (Upgrade)		✔	✔		
Large Industrial Cycle Timer* (Included)				✔	✔
20-inch Garden Temperature Probe	✔				
36-inch Industrial Temperature Probe		✔	✔	✔	✔
Aeration Manifold	✔				
4-inch Slide Gate Valves		✔	✔	✔	✔
Abridged Printed Operations Manual	✔				
Complete On-Line Operations Manual		✔	✔	✔	✔
Complete Printed Operations Manual			✔	✔	✔
On-Line Technical Support through Start-up	✔	✔			
Personal Technical Support through Start-up			✔		
Personal Technical Support - Perpetual				✔	✔
On-Site Training Course (Available)**				✔	✔
Laboratory Analysis on First Sample				✔	
Marketing & Sales Assistance - Personal Advisor				✔	
Starting a Composting Business - Personal Advisor				✔	
* Includes Lifetime Warranty					
** Ask for Quote					

Micro-Bin

Benchmark

Cornerstone

Sterling

Paragon

Frequently Asked Questions

Question: How big does my compost system need to be?

Answer: The size of the system depends on the volume of material that you will be composting. In general, we design each bin to hold 3 to 6 weeks worth of raw material. For initial planning purposes, a typical 6 to 8 horse farm will have a compost system that measures 10 feet wide by 25 feet long. The actual size will vary to match your specific preferences.

Question: Where should I put my compost system?

Answer: You should locate your compost system where it is most convenient, ideally within 25 to 50 feet of your barn. Because it eliminates problems with odors and flies, we locate it close to the barn for chore efficiency. It needs to be near electricity, unless operated by solar power. It should also be located near a source of water.

Question: How does the aeration system work?

Answer: All O_2Compost systems deliver air to the base of the compost pile, generally with either a slatted floor for smaller systems or aeration trenches for larger systems. Pipes on-grade can also be used for free standing piles and block bay systems. Oxygen is delivered to the pile using an electric blower that is operated by a timer, both of which are included in all of our training programs.

Question: How does an O_2Compost system improve the value of my farm?

Answer: There are many answers to this question, including:

- It improves the aesthetics of the barn and surrounding area;
- It improves the pasture quality;
- It solves a universal problem that can serve as a sales feature to a prospective buyer;
- It can create a new profit center that can be passed along to the next owner;
- It improves neighbor relationships; and
- It epitomizes the Sustainable Farm Ethic.

Question: How long does the composting process take with the O_2Compost system?

Answer: The active phase of composting takes approximately 30 days, followed by the curing phase which takes an additional 30 to 60 days. Compost can be applied to pastures after approximately 45 days and can be sold for use in gardens after about 90 days.

Question: What do we do next?

Answer: The next step is for you to schedule a telephone call with us so that we can learn more about your specific needs and preferences. It will take about a half hour and together we will determine if an O_2Compost system will work on your farm. If you have any other questions about the O_2Compost systems, please send them to us at info@o2compost.com.

Testimonials

Herb Schmoll – Morriston, Florida

"A year ago, we were spending two hours each day spreading fresh manure and soiled bedding on paddocks already overwhelmed with the burden of all of that waste. We had a problem of dying grass and severe erosion caused by the crust of all that dried waste. We had looked at having our waste hauled away but the cost was prohibitive. We were desperate.

Now we spend less than 15 minutes per day disposing of our stall waste in aerated bins adjacent to the barn and 30 to 45 days later we have 6,000 pounds of valuable compost ready for use as a pasture enhancement, rain erosion maintenance, and lawn and garden fertilizer. We even barter our compost with a neighbor who trades their fresh vegetables for our compost. Every promise Peter Moon and O_2Compost has made has been met and many have been exceeded. Our relationship has been worth every penny we spent and has already paid off our investment with labor saved as well as increased efficiency and productivity."

Annie Mitchell – Escondido, California

"My first batch of compost turned out great. I spread it around my plants. I'm hoping my next batch will be even better because I have switched from shavings to pelleted bedding. I am really enjoying composting and feel good that I can take something that no one wants and turn it into a valuable resource. My system is very easy to use and contains no manure odor. I can't say enough good things about my system and about O_2Compost."

Marci Wright – Columbus, North Carolina

"We had O_2Compost design a three-bin system for two horses. The contractor that built our new barn also built the composting bins into the slope at the far end of the center aisle barn. This allowed easy top-down loading and easy access on a cement apron from the bottom to offload the finished compost. The bin dimensions were sized to O_2Compost specifications and built of cement block walls. One great innovation from the contractor was the sliding roof design that helped make managing the three bins quite easy.

Although we sadly sold our farm two years after the system was built, the composting bins worked like a charm. O_2Compost was very helpful during the training stage and beyond. Our compost was beautiful and weed free. It was highly sought after by neighbors and friends. We used most of it to augment our extensive perennial gardens. We were delighted to be able to turn a farm liability into an asset. Manure management via the forced air composting system meant far greater efficiency, odor free, and bug free composting. Rather than have to buy a good compost, we were manufacturing our very own!"

Bob Nickerson – Sterling, Massachusetts

"Our system was built to support a 10-horse operation. Originally I thought I would sell half of the compost and use the other half for myself but I have not been able to use any myself except for my vegetable garden since I sell everything I make. I will be adding a 40% increase to the price of my compost starting July 1 in the hope that it will slow down my sales - I really need some compost myself. The system has significantly improved manure management for the farm."