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At Cafe Brinton, Today's Special Is Chicken a la Sawdust

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The Julia Child of Garbage Cooks Up Tasty Compost For the Microbial Palate

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MOUNT VERNON, Maine—A thousand tons of asphyxiated chickens are rotting. The local dump won't take the mess. State officials are threatening a big fine if it isn't cleaned up fast.

This is a job for William Brinton, the Julia Child of garbage, an internationally known master chef who shows clients how to mix, rake and bake their troublesome waste. His motto: "Compost happens."

In just weeks, his customized recipes can turn a big stink into savory plant food, usually at a cost far below that of alternatives, such as trucking the crud to an incinerator. It sounds simple, but Mr. Brinton's creations are a different kettle of fish from the suburban environmentalist's backyard heap. Compost doesn't just happen with stuff he is often hired to handle: tons of fish scraps, dead animals, paper-plant sludge.

Woods End Research Laboratory, his nine-employee firm here, sometimes experiments for weeks to find the right ingredients to blend with such wastes so they please the microbial palate. The resulting masterpieces biodegrade fast with little odor as bacteria gobble away. Recently, the firm even concocted a way to compost explosive sludge contaminated with TNT.

It was a "very challenging" *piece de resistance* that contained, among other things, buffalo dung, says Mr. Brinton.

Tons of Spoiled Spuds

An agricultural chemist who studied organic farming in Europe, Mr. Brinton, 37 years old, has quietly tilled his consulting niche for more than a decade. Now a bumper crop of business is coming in as composting takes off nationwide. Some clients, such as Walt Disney World in Florida, plan big composting projects to generate a low-polluting substitute for chemical fertilizers. Others, such as New York City's solid-waste agency, see composting mainly as a way to cut waste-disposal costs. On Prince Edward Island, Canada, which is fighting a potato disease, one of Mr. Brinton's composting recipes recently helped hard-hit farmers avoid the crushing blow of disposal costs for 16,000 tons of infected spuds. "Increasingly," he says, "people call us when they're in trouble."

Such as DeCoster Farms, a big egg producer in Turner, Maine. After a smoky fire smothered its chickens a few years ago, DeCoster buried them on its land. But state environmental officials soon found out and ordered DeCoster to exhume the birds and give them a better send-off; the regulators, fearing the decomposing animals would foul ground water, threatened fines if they weren't disposed of fast in a nonpolluting way.

William Brinton

To avoid whopping cleanup costs, DeCoster called Mr. Brinton, who activated his rot team. First the researchers, gagging, unearthed some of the birds and analyzed their chemical makeup at the Woods End laboratory, a renovated horse barn in Maine's lake country filled with beakers and lab benches. The chemist-cooks then began adding this and that to the chickens in pot-like "bench composters," seeking a combination that would "take off," or get

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steamy hot from chemical reactions as bacteria began eating in earnest.

Meanwhile, Mr. Brinton headed to a public hearing to reassure citizens who feared composting the birds would stink up the town. "I had to put my reputation on the line and say there was nothing to worry about," he says. Back at the lab, however, there were problems. Animal tissue is high in nitrogen and has to be cut with carbon to biodegrade well. But where to get lots of carbon fast? Moreover, the chickens were squashed and mixed with sandy soil, making a dense mess that air couldn't enter to fuel bacterial action.

But after four days, Woods End had a solution that went roughly like this: Take a chicken. Add a gallon of carbon-rich sawdust from a local lumber mill. Mix well. Carefully blend in a gallon of chicken manure. Let sit for two months, stirring daily. Serve to garden plants.

"It worked very well, and I was surprised," says James Brooks, a Maine environmental official who monitored the project. The decomposing chicken mix emitted little odor, he adds, and soon the birds had completely disappeared "with the exception of the tips of their beaks."

Mr. Brinton says the typical job costs between $10,000 and $50,000. He estimates he saved DeCoster about $67,000 in disposal costs.

Over the years, Mr. Brinton has turned the humble art of composting into a high-tech affair. Computers calculate needed ratios of ingredients such as manure, which adds bacteria and fuel for desired reactions. Another machine analyzes levels of plant nutrients in compost. The firm even has an automated simulator that replicates temperature lift-off inside big compost heaps when all systems are go.

But Mr. Brinton sometimes gets his most valuable data simply by sniffing. After years of experience, he says he can instantly tell what's wrong with some malfunctioning compost heaps by their characteristic stinks. An example is the awful smell emitted by decomposing lawn grass when it gets too alkaline, he says, handing a visitor a bottle of a chemical called cadaverin for a sample whiff of the odor. Used to train employees' noses at Woods End, the stuff smells like a dead body.

To prevent such odors, Mr. Brinton shows clients how to treat their heaps with tender loving care. At a pilot project he helped set up at a Nestle plant in New Milford, Conn., food-processing wastes are carefully mixed according to his recipe, then ladled into 270-foot-long troughs. A machine resembling a farm combine crawls along the troughs, turning the piles. Workers plunge yard-long, silver thermometers into the steamy heaps to monitor heat-releasing reactions. The place is faintly redolent of hay and cheddar cheese. Taking a whiff, John Dwyer, the project's manager, comments: "These things live or die by their odor."

But sweet smells from the compost kitchen are worthless if what comes out isn't nourishing, says Mr. Brinton, a quietly earnest man with Pennsylvania Quaker family roots. Indeed, some carelessly composted things are toxic to plants—too much chicken manure, for example, makes compost salty.

On the other hand, studies at Woods End and other places indicate certain types of compost actually suppress plant disease. Woods End rigorously tests clients' compost for plant-growing potential, shifting the input mix if necessary. Nestle's Mr. Dwyer shows off a lettuce head almost as big as a basketball that was fertilized with his operation's compost. "I've never seen lettuce like this come out of our garden" at home, he says.

Today lettuce, tomorrow the world: Mr. Brinton has some grand visions for his industry. One is a farming revolution in which compost helps growers get off their water-polluting chemical fertilizer habit. Recently, he planted seeds of the revolution in Eastern Europe by helping officials there plan massive composting operations to offset demand for costly fertilizers from the West.

He also envisions new technologies, such as special strains of bacteria and extra-fancy recipes to break down recalcitrant wastes. The TNT project, conducted with consultant Roy F. Weston Inc. to dispose of toxic wastes on military bases, shows the idea's promise, says Weston manager Rich Williams. But why buffalo chips?

Actually, says Mr. Brinton, his recipe just called for manure. But a buffalo herd happened to be near the project's Oregon test site, and its output "had all the right attributes. I liked it a lot."