

## Cat Litter Ecology

**Makers of clay- and plant-based litters work to preserve, protect and improve the environment.**

*By Wendy Bedwell-Wilson*

You know your cat's litter ritual well: You scoop it daily. You replace it weekly. And once a month or so, you clean it out completely and disinfect the box. Whether you use clay, clumping clay or plant-based litter, you make sure that box is clean and fresh -- for the sake of your cat's health and your own nose.

But did you ever consider where that litter originates and how its mining or harvesting affects the environment? And have you thought about where the used litter ends up? You should. It just might change the way you look at your cat's litter.

The APPA reports that in 2004, 38.4 million American households owned cats, and the average family has 2.3 cats. Some 66.3 million of them live indoors, and they use approximately 10 pounds of litter per month each. That equals an incredible 3.9 million tons of litter per year.

### Clay: It Is Natural

According to the American Pet Product Assn.'s 2007-2008 Pet Owners Survey, the majority of cat owners use clay in their pet's litterbox. To fill that need, the United States Geological Survey reports that in 2008, an estimated 1.3 million metric tons of bentonite clay were mined to make the clumping type of cat litter alone. That's a lot of clay.

To extract the clay used for cat litter, mining companies dig at or just under the earth's surface to expose veins of the material, says Ray Brown, director of home care, research and development for Church & Dwight Co. Inc. in Princeton, N.J. The process, known as strip or surface mining, leaves behind a barren wasteland.

"Clay mining has gotten a bad name because years ago, that's the way it was," he says. "Companies went in there and strip mined and when they left, they didn't restore anything."

But today, environmental influences and government regulations have changed that process. Mining companies like Wyo Ben Inc. now repair the earth when they're done harvesting the clay -- and often make improvements on it. They're required to get land rights from the government, conduct an ecological evaluation of the area and be bonded to ensure the land will be restored after they complete the mining.

Wyo-Ben Inc., a bentonite mining company out of Greybull, Wyo., and recipient of the 1999 Wyoming Game and Fish Department Mine Reclamation and Wildlife Stewardship Award, reclaimed a 40-acre area in the Big Horn Basin, adding native vegetation and a 12-acre reservoir that supports a menagerie of animals, reptiles and water fowl.

"The mining companies are just a lot more cognizant of the environmental impact they're making and how they have to leave those areas when they're done," Brown says.

### Plant-Based Litter: It's Natural, Too

Unlike mined clay, plant-based litters, like wood pellets, corn cobs and wheat, are renewable and come from the waste stream of human food and manufacturing markets. Waste products like wood shavings, recycled paper and corn cobs find new purpose in cat litter.

"Companies, for instance, are taking corn cobs used for food for livestock or food for humans and turning it as a secondary use for value in an area that's needed," says Steve Bolkan, who's in research and development for Church & Dwight.

Wood pellets, a popular litter alternative, begin as dust on sawmill floors. Sean Berzenski, marketing assistant for Nature's Earth Products in West Palm Beach, Fla., says most wood pellet makers gather the shavings, dry them out at high temperatures and compress them into tiny pellets. What remains is highly absorbent wood that soaks up cat urine — and can be mulched in the backyard.

"It's 100 percent biodegradable, so it's just like mulch," he says. "The way we look at it is we take it from a used area and put it right back where it belongs."

When cat owners remove the fecal matter from these plant-based litters, manufacturers report that they can be composted or used as mulch in the garden around shrubbery, trees and flowers that aren't affected by the high ammonia levels. Mark Hughes, general manager of Pet Care Systems in Detroit Lakes, Minn., says that plant-based litter's biodegradability impacts the environment less than clay litters do.

"The big difference between most of the alternatives and clay litter is that the alternative litters are biodegradable in some format," he says. "Wheat degrades very fast. But if you were to put clay litter on your sidewalk, when you're 100 years old that clay litter would still be there. It doesn't break down."

#### Litter in the Landfill

Whether litters are clay- or plant-based, the majority of it winds up in our nation's landfills. Because clay-based litters are already in their fully degraded mineral form, they remain in the landfill. Clay swells to 10 to 20 times its volume when exposed to liquid, a property that weighs heavy in landfills but makes efficient cat litter — and an impermeable barrier at the base of landfills.

"Landfill liners are composed of compacted clay, and in most cases, the clay is the same used to make clumping cat litters," Brown says. "This clay prevents leachate from seeping out of the landfill and contaminating nearby soil and groundwater. Discarded clay cat litter would perform a similar function."

Plant-based litters biodegrade when exposed to air and water. When they're tossed in the landfill, they're packed down into an anaerobic mass and unable to degrade the way they're intended, instead producing methane, a greenhouse gas, says Mark Klaiman, owner of Pet Camp Cat Safari, a cat daycare and boarding facility in San Francisco. And although many communities offer large biodegradation or composting facilities, some will not take cat litter.

"For instance, in San Francisco we're not allowed to compost cat litter of any type right now due to cross-contamination issues," he says. "And if they go to a landfill, they don't break down the way they were intended. The landfill's not designed for biodegradation. That's what compost facilities or biomass facilities are for."

#### Making a Choice

So how can cat owners minimize the impact their pet's litter has on the planet?

If you choose a clay-based litter, use a clumping variety and remove the solid waste daily to prolong the litter's life, Brown says.

"When the litter clumps and you're fairly rigorous about going in there every day and taking out the clumps, that can do a very good job of keeping that litterbox clean and fresh," he says. "Then once a week, instead of changing the entire litterbox, you're just adding that pound that replaces the pound you scooped out during the week."

If you choose a plant-based litter, consider composting it in your yard -- after removing the fecal matter, of course -- rather than sending it to the landfill, Berzenski says.

"We tell consumers to use a natural litter and compost it in your backyard so it's not going into the landfill, and to use biodegradable poop bags," he says.

Regardless of the type of litter you choose, look for one that uses minimal or recycled packaging, Bolkan says. Make sure plastic jugs or buckets are made from recycled materials. Look for litter in boxes made from easily recycled corrugated cardboard rather than coated paperboard. Consider the amount of packaging compared to the contents inside.

"Cat owners can also look at the amount of packaging material per pound of contents inside," he says. "Choose one in which the ratio of package to contents is the lowest."

You adore your cat and you respect the environment. Thanks to clay and plant-based litter manufacturers' ongoing concern for the planet, you can rest assured that your cat's impact on the earth will be minimal. And by making informed choices and using as little litter as possible, you can lessen your pet's impact, too.

Wendy Bedwell-Wilson is an award-winning writer who has been writing about pets for nearly 10 years. Author of "Boston Terriers for Dummies" and "Yorkshire Terriers," Wendy shares her Oregon home with her husband, two rescued domestic shorthair cats and a Pointer-Greyhound mix.