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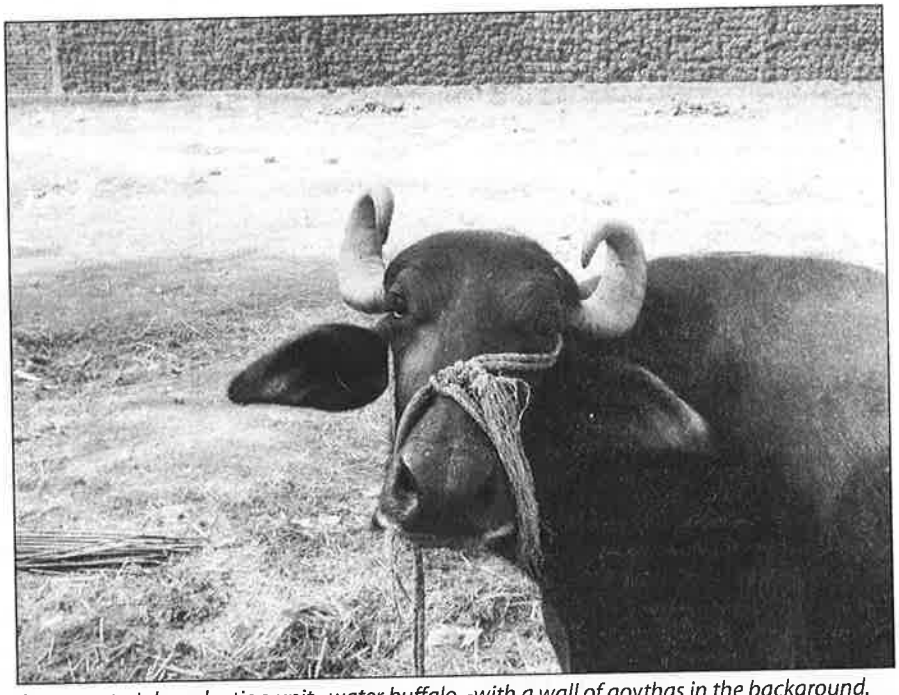
The Sacred Economics of Cow Keeping

Or, Getting Our Shit Together Indian Style

by Bill Giebler



A raw material production unit--water buffalo--with a wall of goythas in the background. (Bodh Gaya, India)

PHOTOS: BILL GIEBLER

"You don't have to be a brilliant to create effective recycling programs," Rajah Banerjee said from across his desk last April. He shuffled papers, stopped to pour me another cup of Darjeeling tea, and then looked up again. "You just have to observe the poor and you'll see what's possible."

Observing the poor was an easy task to come by in India, and in doing so I witnessed some very literal ways we could all stand to get our, well... dung together a bit better. I'd been in India just under three weeks, in a home stay volunteer program at Banerjee's Makaibari Tea Estate, 35Km south of Darjeeling, and was helping to revitalize the farm's compost project. Makaibari is a model tea producer—the first organic tea farm in India, among the first to become fair trade, and one of the only to practice biodynamic agricultural principles. Producing compost onsite had fallen by the wayside, and building large centralized compost beds became the primary focus of my volunteer work, and the beginning of my explorations in poop.

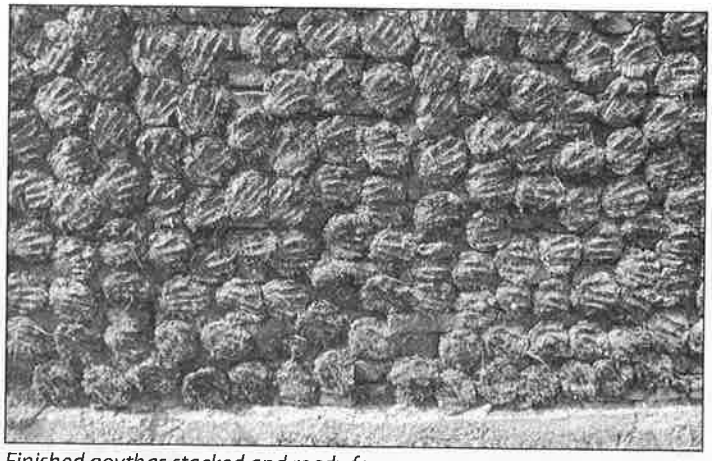
The idea was this: some of the local boys would manage three large compost beds, positively affecting the whole community. The boys would make money by making rich organic compost and selling it to the factory. The factory would save money by reducing—and eventually eliminating—the amount of outside compost they need to buy, while increasing the quality of compost they apply to the fields. The primary feedstock for the compost would be cow dung, bought—by the boys—from the villagers, providing a small ripple of economic activity deeper into the village, and creating another incentive for keeping cows. The declining cow population was a frustration for Banerjee, a proponent of diversity on the farm.

On my last morning at Makaibari, as we collected a few tons of dung from the tea factory stables, I witnessed an even more intriguing use of the goods as I saw a small biogas system in action just down the road. Slick and simple, it goes like this: First, fresh dung is mixed with rainwater to make a sludge that is drained into big airtight underground tanks. After a few days, gas is released through a hose and used in the kitchen to power the gas burner. It's really that simple. And then the manure sludge can still be composted. Ideal!

Ideal, but the economics are challenging. The unit I saw cost about 35,000 Rupees (nearly $800 at the time of my visit) to build and has saved more than 6,000Rs worth of liquid propane gas (LPG) purchases each of its five years in operation. In other words, it has nearly paid for itself (a payback period artificially doubled by an Indian Government subsidy on LPG). In any case—whether a three or six year payback—it's the upfront cost that is the barrier. With a price tag that's about half an average annual family income, this sort of

expenditure is simply not available except through grants and donations.

Back to work. We shoveled the dung into the beds in alternating layers with weeds from surrounding tea fields, and then we were done. Done launching the project, that is. Next would come the long term operating of the program. Essentially: fill, water, wait, stir, sell… repeat.



Finished goythas stacked and ready for use.

This was my primary concern as I pulled away that April Monday morning. I'd covered the upfront costs, but was unsure of the economics of compost. Will the financial incentive be sufficient to motivate the boys to keep the program going? Will they find the monetary reward inspiring enough to invest in another batch? The dung costs 1Rs per Kg, and the vegetation and water are free. The compost will sell for 2½ Rs per Kg. Is this a good return? It depends on how much the compost reduces over the process. It sounds tight to me, but we're dealing in tons here, not Kg, and even a few hundred rupees is good money. At my parting tea party, I toasted the boys for their efforts and pleaded in slow English: "today is the end of building the units, and of my stay, but it is only the beginning of the compost project! Please keep it going."

They smiled and nodded and sent me on my way down the jeep road and into the heat of the plains. My next stop, some 16 hours later, was Bodh Gaya in India's Bihar state, and here I truly saw Banerjee's principle in action, and saw effective daily waste-to-fuel management. Bihar is, as described in Lonely Planet's India, "one of the poorest and most troubled regions." What I found was an unemployment rate of 75%. At least that's what my temporary friend and guide, Vinay, told me. "And homelessness is very high," a notion I couldn't begin to discern from the low living conditions I saw around me.

Here my poop education continued in the form of goythas. These disks of dung are all over the place in the villages of Bihar. You'll see women and children mixing manure, straw and water as one of the daily chores. One morning I watched two boys preparing these pancakes, the older one slowly adding water to the bucket while the younger was elbow deep mixing the mass. The goythas are then hand flattened and laid out—or often, slapped against a brick or concrete wall—to quickly dry in the unrelenting sun. I asked Vinay what they were for.

"We use them for cooking," he told me, showing me a circle of bricks on the ground. He grabbed a nearby cookpot and perched it on the bricks. There was just enough space beneath it for about four goythas. "This is very spiritual fuel," he said.

"So, 'holy shit' in the truest sense?" I joked. He returned a blank smile and I asked, "what makes them spiritual?"

"A cow is like a lawn mower and garbage collector in one," he said, revealing a close connection between the practical and sacred. "My family gets fresh milk every day, this is very important because of no refrigeration. Some people use them as plough power."

And what was not happening? It was not being hauled into ground water-poisoning, methane bubbling poo-pits. The very local—indeed, individual—handling of cows and their dung eliminated this threat altogether. But could it be applied on an industrial scale at high concentration feedlots? My next joke I kept to myself as I imagined marketing feedlot waste back home. Perhaps Giebler Cookies—employing my own name—for the regular size, and maybe even venturing out to small pellet stove sized Feces Pieces.

In any case, we've got a ways to go—or return—in the upper Western hemisphere. It's likely a problem of language. We use the word "resource" to describe dinosaur poo, but "waste" for the (eewww!) stuff that our lives produce every day. Perhaps a daily chore of elbow deep dung churning would help us get over our squeamishness and get our shit together.

Bill Giebler is a freelance writer from Boulder, Colorado who has written extensively for Real Goods Trading Corporation.