

Inquirer Magazine

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THE PHILADELPHIA INQUIRER

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Lawrence Otis Graham
on the black elite

Going platinum

Can chocolate save the world?



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By Rick Nichols

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LETTERS

The importance of being curt

What a treat to see local treasure Terry Gross on the cover of Inquirer Magazine ["The well-edited life of Terry Gross," Jan. 17]. What a disappointment, though, to read Susan Caba's failed attempt at an insightful piece on this wonderfully articulate, down-to-earth woman.

Yes, getting a rapport going *does* require a sense of how the person being interviewed operates. Asking such a busy woman at work, by way of introductory "small talk," something as large as what Terry thought of the Clinton tape was clumsy and deserved the "curt" response it got.

When attempts to get personal details about Gross failed (fun though they would've been to read), Caba should have focused instead on getting reflections on the rich, vast reservoir that is the accumulation of thousands of hours of skillful, intelligent listening to many of the world's most interesting people.

Reading such an insensitive article on Gross was frustrating — as if someone had taken us to see a wonderful movie, but forced us to watch it through a blindfold.

Laura Loewen, Doylestown

Gone but not forgotten

The nicest dress I've ever owned was a Claire McCardell ["Heroes of Style," Jan. 3, by Patricia McLaughlin] — sheer wool, utterly simple, simply beautiful. Wish I still had it. Came from Bonwit's, and I wish it was still around too.

Mae Gonzales, Philadelphia



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The chocolate solution

We have a vested interest in seeing the continued popularity of chocolate, to provide an additional livelihood option for poor farmers.

— Peter Matlon, chief of the United Nations' Food Security and Agriculture Program

Under certain conditions cocoa may switch from a status of deforestation agent in the 20th century to a reforestation agent in the 21st.

— Francois Ruf, French economist and chocolate researcher

Something tells me there must be a flaw in the logic, a hole big enough to drive a truck through, because it is simply too delicious that chocolate — *chocolate!* — should arise at this late date to rescue the planet.

It was supposed to be solar, wasn't it? Or turning the heat down to 68? Or saying no to beef? I know it wasn't supposed to be chocolate.

Yet that is what the people in the know tell me. After centuries of denial, of pretending cacao beans grew on the docks of New York, of twiddling while the forests burned, Big Candy has had an epiphany: Staying the old course means a global chocolate deficit, wild price swings, and the almost certain loss of an opportunity of unfathomable dimension — chocolate for China.

By last spring, the reality had dawned glaringly on the captains of the \$8 billion annual U.S. chocolate industry, of which Pennsylvania is the biggest player. Convening in Panama with scientists from the Smithsonian Institution, they swore allegiance to a new ethos: growing the temperamental chocolate tree more in harmony with its shaded, rain forest origin.

There could be enormous implications, most of them appetizing, if that approach takes root. For the wood thrush winging south, there could be more wintertime habitat. Reversing deforestation would keep more carbon in vegetative form, instead of in the atmosphere where it stokes global warming. Soils could be improved, species protected.

Small landholders, who might otherwise use slash-and-burn techniques, could have a new, perennial cash crop. In the impoverished high jungle of Peru, there could even be — if the right tumbler falls in place — a new drug-fighting tool.

But at first blush, the news had a rather disconcerting edge: "Chocoholics Take Note," the New York Times warned on its front page last May, "Beloved Bean in Peril."



Even in diaspora — say, in the glass-topped atrium of Hershey's Chocolate World — the cacao tree is a hauntingly odd and magnificent creature.

It shoots up a couple of stories in Hershey, shorter than it might grow in the Amazonian wild, where 80-foot specimens aren't uncommon. Yet it's taller than it is in cultivation, where farmers

Move the cacao bean back into the forest, and the planet's win-win scenarios flourish. By Rick Nichols



prune it to 12 feet to improve yields and accommodate machete-harvesting.

Still, this tree in Hershey is the real McCoy — droopy, shiny, beagle's-ear leaves, silvery bark

splotched with lichen and, jutting directly from the trunk, young lima-green pods that, when mature, will have a ridged, oblong form.

Within these pods — on different varieties



Cacao pods, source of the beans that become chocolate, grow from the trunk. A Peruvian nursery coddles young plants (left).

they may be lime or mahogany or banana yellow — reside 20 to 40 cacao beans in a gooey white pulp. The pulp is an animal magnet: To get at the sweet, nutritious stuff, monkeys or tapirs gnaw through the pod, discarding the bitter seeds, becoming the Johnny Appleseeds of the natural chocolate world.

There is a hint, as well, in this tourist garden, warmed against Pennsylvania's chill, of cacao's botanic habitat and preference. Soaring far above the cacao, blocking from one side the brimming shelves of Mr. Goodbars and bags of Kisses, is a huge palm, its leaves the size of pool floats.

Cacao likes the shade, what biologists call the understory of the rain forest canopy. It can grow in the open sun, and in fact will grow more quickly in a sunny, unshielded plantation. But it is only a matter of time before it gets stressed out, falling prey to fungi and other pests, unable to keep up yields, staggered and broken by its unnatural exertions.

There are ways to keep the ruse going, of course. The growing environment can be "technified." Like an athlete dependent on performance-enhancing drugs, plantation cacao can continue performing with the crutch of herbicides and pesticides and fertilizers.

But it is a losing proposition and in the end is costly, environmentally unfriendly and, frankly, not particularly necessary. Better that cacao get back closer to nature where its predators have *their*

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RICK NICHOLS writes the magazine's Food column.

CHOCOLATE

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predators, where the larva of the pod borer meets its match in a wasp and where pollinating midges proliferate.

This is not a crop that rests easy on the plantation. And the days of trying to grow it in rows lined up like redcoats are going quickly.

Trace your finger around the middle of a globe and you tick by the cacao lands, where annual rainfall can exceed 80 inches and, within 15 degrees of the Equator, where summer never ends.

For centuries, the cacao bean flowed out like a chocolate river. In the last 30 years, in fact, world cacao production increased more than 150 percent.

But cacao was keeping pace only because it was chewing up ever greater quantities of rain forest as yields fell and old orchards failed.

And inexorably the pace was quickening: Demand was up 50 percent in Europe over the past 15 years — and two billion new consumers in Asia were in sight.

From the 16th century onward, cacao had been marching around its equatorial alley — from Mexico to Central America, then colonial Spanish and British holdings in the Caribbean, then Venezuela and Brazil, and West Africa, and finally, Indonesia and Malaysia.

On plantations, away from its aboriginal roots, deprived of the rustic shade and back-scratching relationships with its forest friends, it is a fat target: Costa Rica's crop all but disappeared in the late 1980s due to monilia, a fungus that causes frosty pod disease. In Brazil's cacao lands, the yield was more than halved by witch's broom, which sends a spray of crazy shoots up from the tree's trunk. Black pod, a cousin of the potato blight that turns pods into shriveled parodies of jalapeno peppers, has been detected near cacao-growing regions of Indonesia.

So the heydays came and went — in Latin America, Africa, the Far East, leaving behind ravished landscapes occupied by squatters, logged for the last smidgen of profit.

That Ghana and the Ivory Coast are producing close to 70 percent of the world's bulk supply is cold comfort: Too many eggs are in that one basket.

Cacao's cut-and-run ethos has hit the wall. "The problem," observes B.K. Matlick, a globe-trotting cacao consultant and former Hershey Foods Corp. executive, "is that we were running out of places to grow."

The silver lining is that cacao, the cause of so much forest devastation, now has the potential to pay back part of the debt.

That's because higher prices anticipated from the coming surge in demand might finally move small farmers to do the right thing — plant an organic polyculture of, say, limes, mangoes, coconuts and cacao *within* a reforested setting to insulate them from the ruin of boom-bust cycles.

Matlick sees a brave new supply network — five million smallholders, tending their trees as intimately as a Vermont dairy farmer tends his cows.

On the day before Valentine's Day in Philadelphia last year, Allen Young, an evolutionary biologist and curator at the Milwaukee Public Museum, pro-



Slash-and-burn agriculture, such as a Peruvian rice plot (above), degrades the environment; shade-grown cacao helps reverse the effects. David Butler (left) maintains a cacao "gene bank" in Trinidad.

posed going one step further. Speaking to the American Association for the Advancement of Science, he advocated returning cacao-farming to its pre-Columbian roots — growing it directly in old forest, where yields might be lower but the trees could produce with little intervention for generations.

If a demonstration project he is running in Costa Rica bears out his proposition, he says, cacao may have another spinoff: The "rustic shade" of the forested groves will almost certainly attract a proliferation of native and migratory songbirds — and right behind them, the great American ecotourist.

Once upon a time, Trinidad was prime cacao country. Into the 1920s, in fact, the island off Venezuela was supplying a tenth of all the cacao in the world.

It is well-situated: The nearby island of Tobago typically takes the brunt of hurricanes. Early strains naturally interbred, joining some of the fine flavor of the delicate *criollo* with hardier *forastero* in a hybrid that would become sought after by manufacturers and planters alike — *trinitario* by name.

But the glory days of the former British colony



are long gone. Harvests are 20 percent or less of the old days. Drive along the Churchill-Roosevelt Highway, past the roadside stands offering shark and pumpkin, past the sugar cane that surrounds the airport, and it strikes you how often cacao is referred to in the past tense.

"I used to pick on my grandfather's [cacao] estate," my cabdriver says. "Now I drive a taxi." The lady who used to make the doughy cocoa balls that were grated for "cocoa tea," I'm told, might not be back selling at the Central Market.

There is no one explanation for cacao's disappearance here: You hear it blamed on the discovery of oil and gas, on the development of tourism, on a 1956 government employment program that paid unskilled laborers more than they could make tending cacao. As in Brazil, the crop fell victim to witch's broom, a particularly virulent disease. Some say the colonialists saw greener pastures and moved their operations to Africa.

But there are precious legacies here in Trinidad, with powerful lessons for the future.

One is in the humped, green mountains to the east, the Agostini estate, predating 1870. For generations, shaded by a tall canopy of trees called *immortelles* or *madre de cacao*, the diverse 750-acre estate (it also grows citrus, coffee, bananas and avocados) has continued to produce quality cacao beans for Valrhona, a premium French chocolatier, using

Where most is grown



yearly manual pruning and the forest's natural protections.

The other is a germ plasm bank, once known as the Imperial College Collection. Overseen these days by David Butler, chief of the Cocoa Research Unit at the island's University of the West Indies, it preserves rare living specimens.

Almost 70 years ago, his predecessor, a British geneticist named Frank Pound, searched the rain forest of Peru's upper Amazon for many of these trees, looking in their original habitat for particularly vigorous and productive trees.

Today there are 3,000 types in the collection, now called the International Cocoa Genebank. Over the decades they have been used for cacao breeding stock sent the world over — after spending two years in strict quarantine in greenhouses in England or France. Until work on quicker propagation techniques bears fruit at Pennsylvania State University, it is chips off Pound's old soldiers that will help cacao stand its ground against predators from Africa to Papua New Guinea.

Last September, as tropical storms slashed through the cacao lands of the Dominican Republic to the north, specialists from the American Cocoa Research Institute gathered in Trinidad for the institute's 50th anniversary conference. They took in the lessons from chocolate's history — and plotted a more sustainable strategy for their raw material.

It was not without a certain sense of urgency. Stockpiles of harvested beans shrank from 1.5 million tons in the early 1990s to 1.1 million last year, as demand increased.

The horizon looked fine for the short term. But what close observers such as Mars Inc.'s director of international environmental affairs, John Lunde, were realizing was that if the trends didn't turn around there could be serious trouble five, six years down the road.

In the chocolate business that is an extremely meaningful span of time: It takes at least five years before a cacao tree yields its first commercial harvest.

Mark Taylor, an analyst hired by the industry, had a few more words of caution. So much cacao-growing is concentrated in West Africa that a bad weather year or infestation there could play havoc with supplies around the world.

Moreover, it isn't out of the question, added Harry Evans, a British plant pathologist, that a rogue plant scientist could unleash some alien bacteria, sabotaging vast acreages.

If this picture doesn't change, it doesn't take a pessimist to envision the chocolate industry blowing its biggest marketing bonanza since Milton Hershey put the candy bar in reach of the common man: In China and India, snack-food budgets are inching up, and the industry wants part of the action.

Between 1988 and 1994, as Joel Glenn Brenner reports in her new book, *The Emperors of Chocolate*, chocolate consumption doubled in China. And starting from the current annual rate of 14 grams a person — barely three Hershey's Kisses, compared to 12 pounds in the United States — there is an extraordinary void to fill.

If a shortage doesn't kick prices out of whack.

Japan offers ample evidence that a chocolate tradition doesn't have to be born: It can be made.

In the early 1990s, the International Cocoa Organization decided to go after a bigger share of Japan's \$34 billion annual confectionery market, in which chocolate was low bean on the totem pole, surpassed by rice crackers and traditional Japanese sweets.

The objective, rather than pushing any particular brands, was to raise chocolate's profile and change its kid-stuff image. Pamphlets and newsletters on chocolate's healthy aspects were sent to 5,000 nutritionists. A Chocolate Week exhibit promoted Valentine's Day lore and, again, nutrition. Chocolate was hailed as a stress reducer, heart-attack preventer, cancer inhibitor, and not all that bad for your teeth.

Indeed, premium dark chocolate with small amounts of sugar does let its natural calcium and potassium shine (not so ordinary milk chocolate). There's even evidence that chocolate's high phenol level helps ward off heart disease and that its primary fatty acid doesn't affect cholesterol levels.

But adding highly caloric chocolate to a high-fat diet does your body no favors; lucky for the Japanese, their diet is low in fats.

In 1995, the First International Symposium on

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CHOCOLATE

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Chocolate and Nutrition attracted a crowd of 300 to Tokyo. That, in turn, spawned a magazine article and, eventually, a 50-minute Nippon Television show called *The Surprising Effect of Cocoa: Source of Health and Longevity*.

Within a week, supermarkets ran out of cocoa powder and manufacturers were running newspaper advertisements apologizing for the shortage.

The results: In 1996, sales of chocolate items jumped 20 and 30 percent, with demand for sugared cocoa powder tripling.

It was an old strategy for chocolate purveyors, actually.

In 1824, the British chocolate pioneer John Cadbury, a Quaker, made his name promoting hot chocolate as nourishing drink for the working classes. The way he saw it, if you needed a daily pick-me-up, chocolate was a heck of a better bet than the crack cocaine of the day — cheap, skull-popping gin.

Cadbury was selling to 15 million Britons. With India and China on the horizon, chocolatedom has a potential market in the billions.

In Hershey, Pa., you see the awesome power of modern chocolate-making. The giant silos at the north end of the main Hershey's plant can store 90 million pounds of beans — enough for more than five billion candy bars.

Used to be you could tour the actual plant, but that ended in 1973, partly because so many people were marching through that their combined body heat was throwing off temperature controls.

So nowadays there's Chocolate World, a simulated tour. Not that it has dampened the crowds: More Americans trek here to the heartland of Pennsylvania dairy country — Hershey's was founded on *milk* chocolate after all — than visit the White House. By 2 to 1. "Chocolate? The President?" the Hershey's PR manager proffers. "You make the choice."

Pennsylvania is the nation's top chocolate-making state. Mars Inc. has a big plant in Elizabethtown. Blommer Chocolate Co. in East Greenville makes chocolate for the wholesale trade. Godiva, the premium boxed chocolate owned by Campbell Soup Co., has a Reading facility. Wilbur Chocolate Co., home of the unwrapped bud, settled in Lititz after starting up in Philadelphia.

Just across the river, in Pennsauken, N.J., is a facility of the French giant — Barry Callebaut USA, one of the world's largest processors of chocolate for the commercial baking and restaurant trade.

Still, Hershey's is where it all began, after Milton Hershey saw German chocolate machinery at the 1893 Chicago world's fair and bought it off the exhibit floor. Now, 24 hours a day, seven days a week, beans from the tropics go in one end and Hershey bars, Kisses and Reese's Peanut Butter Cups stream out the other.

The conversion process has remained much the same over the years. The 150-pound burlap bags of beans arrive in boxcars, the last leg of a trip that has started in Ghana, or possibly Indonesia.

They've already gone through several changes, including a complex fermenting process in which fruity, winy notes from the pulp leach into the beans'



An end result: Hershey's Kisses by the ton, under the watch of Martha Goodling in Pennsylvania (above). A competing crop: Coca leaves, future cocaine, being dried in Peru (left).

interiors. They've been dried in the sun, or in ovens, shrinking water content six-fold, concentrating flavor and helping prevent mildew. They may even have been "danced," as is the old tradition in Trinidad: Barefoot workers shuffle through troughs of drying beans, polishing them to a high sheen and getting rid of debris.

At the rail siding, the bags are slit and the beans are sent up a long conveyor, then dumped onto shaking screens to sift out twigs and nubbins. Beans from different locales are kept separate, the better to facilitate the extremely sensitive roasting — beans of differing ripeness, variety and origin require, like coffee, different roasts.

Eventually, they go into giant tumbler ovens, but it is not until the beans are shot through a cannon-like tube, cracking open on a metal plate, that the real stars come out — the tiny nibs inside the beans. They have the humble appearance of fine-ground mulch. But for the first time in the process, you get a whiff of the intense possibilities.

Large granite rollers grind the nibs, and cocoa



MICHAEL BRYANT

Where much is processed



- 1 Hershey Foods Corp.**, Hershey, Pa. (Includes: Hershey bars, Mr. Goodbar, Hershey's Kisses, Reese's Peanut Butter Cups, York Peppermint Patties)
- 2 Mars Inc.**, Elizabethtown, Pa. (Includes: Three Musketeers, Milky Way)

- 3 Blommer Chocolate Co.**, East Greenville, Pa. (Industrial chocolate manufacturer)
- 4 Godiva**, Reading, Pa. (Boxed chocolates, owned by Campbell Soup Co.)
- 5 Wilbur Chocolate Co.**, Lititz, Pa., (Wilbur Buds, chocolate wholesaler, cocoa)
- 6 R.M. Palmer Co.**, West Reading, Pa., (Seasonal specialty chocolate)
- 7 Goldenberg Candy Co.**, Philadelphia (Goldenberg Peanut Chews)
- 8 Barry Callebaut USA**, Pennsauken, N.J. (Gourmet coating chocolate, chocolate chips and bulk chocolate)
- 9 Mars Inc.**, Hackettstown, N.J. (Includes: M&Ms)

SOURCE: Chocolate Manufacturers Association

In June, Michael Maxey, director of alternative development for the U.S. Agency for International Development in Peru, flew to Elizabethtown, Pa., to brief the chocolate-industry brass on a matter of mutual interest.

Washington was looking for ways to wean Peru's poor peasant farmers from growing coca, the shrub whose leaf is the source of cocaine. All sorts of alternative crops had been tried in the past — coffee, pineapples, nuts, even cacao.

But the first time the United States tried to promote cacao growing in the Andean river valleys, in the late 1980s, Shining Path guerrillas and Colombian drug lords held sway, coca prices were soaring, while cacao's were at rock bottom.

Nothing much came of the crop-substitution campaign, except for some reproofing words in Congress for being ineffectual and peasant anger at massive spraying of a coca-killing herbicide called Spike.

Today, almost every factor is different: The guerrillas are weak and fragmented. The Peruvian air force has over the past few years shot or forced down 30 drug planes. And, if Maxey is reading the signals right, the tight supply means that cacao prices will eventually be heading up.

At Mars, where he made his presentation, the industry executives were all ears.

In fact, with so much cacao concentrated in Africa, industry researchers had earlier that spring set a goal of diversifying the supply within 10 years.

The American Cocoa Research Institute's Sustainable Cocoa Program had even anointed good candidates: Panama and Vietnam.

But one of the best was Peru. It had perfect soil and a perfect climate, if a shattered infrastructure.

Most of all, it had a head start — a tradition of cacao growing.

As a poverty-fighting tool, cacao certainly looks like a winner to Peter Matlon, chief of the food security program for the United Nations' Development Program.

Unlike so many other crops, it can be pursued by small farmers without high start-up costs. In fact, in depressed Indonesia and Malaysia it appears that smallholders using "machete technology" — hand-pruning and harvesting — are more effective in controlling pests than modern pesticides are.

Matlon has also seen field data showing that

shade-grown cacao can preserve up to 75 percent of the biodiversity of a virgin forest, do wonders for soil fertility — which tends to be stripped by monocropping — and soak up greenhouse gases better than almost any other tropical crop. In 1997, due to continued logging and widespread fires, the world's forests for the first time lost more carbon than they absorbed, making this attribute of cacao all the more appealing.

Allen Young, the biologist from Milwaukee, has conducted some intriguing parallel research. For some time, it has been known that only a small percentage of the cacao tree's flowers were being pollinated by the tiny midge, meaning that yields were correspondingly low. Young scattered the floor of a cacao plantation with debris more reminiscent of a tropical jungle, such as old banana tree stems hacked into fibrous discs. In plots where only rotting cacao leaves provided nesting for the midges, the insect count was low. But near the rotting banana stems the midge density jumped 200 percent, resulting in a 15 percent increase in the natural pollination of the trees nearby.

Almost half a million Indonesian farmers are already working small cacao holdings, usually along with food crops, and Matlon sees room for many more. In a land where slash-and-burn agriculture and devastating forest fires have become a way of life, he sees cacao as an agent of reforestation.

"It's one of the win-win-win investments that can be made in a number of countries," he concludes. "We're less concerned that people in high-income countries get their high-end fix of chocolate," he tells me. "We see it as a way to directly help low-income people to strengthen their livelihoods."

The family-farm, shade-grown technique is not always an easy sell, especially to agriculture ministries. And if demand for high-end chocolate falters, there may be no sale at all, meaning more lost habitat, more threatened forest, and one fewer option to upgrade living standards at the low end.

That's why Matlon is rooting for cacao prices to stay robust and healthy.

In October, the usual hazy spring smog hangs in the air over Lima.

The chocolate gringos have descended to test the waters for a resurgent Peruvian cacao

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butter, a vegetable fat, is liquefied and squeezed out, leaving a thickened, nonalcoholic syrup called chocolate liquor.

When more fat is pressed out, you get chalky, powdery cakes that have the shape of movie reels. It is by pulverizing them that powdered hot chocolate is made, and baking cocoa and flavoring for ice cream.

For sweetened candy, sugar and flavors such as vanilla and milk are blended into the chocolate liquor. Every step in the process affects the quality of the final product, especially the proportion of chocolate liquor — U.S. companies typically use far less than premium European chocolatiers.

But to give it that creamy, velvety texture it still must be stirred in huge open vats by mighty mechanical arms for as long as 72 hours — *conched* in chocolate lingo.

The rest is pouring, molding and wrapping.

From its 17 factories in North America, Hershey produces hundreds of millions of pounds of chocolate and candy each year (exact figures are not given out). Hershey and its second-place arch-rival Mars are estimated to have 70 percent of the U.S. market.

What is the factory here capable of? Plinking like coins in the tray of a forever-hitting slot machine, foil-wrapped Hershey's Kisses come off the line at a daily rate of 25 million.



CHOCOLATE

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industry. B.K. Matlick, the former Hershey's expert who now consults around the world, has organized a forum sponsored by the American Cocoa Research Institute.

Although Peru has potential on paper, it is a hard case, its people cruelly split between a European-descended elite and the impoverished Indian majority, guerrilla war smoldering in the hinterlands, drugs once meant for export boomeranging back, hitting home.

It often takes longer for cacao beans harvested across the Andes to reach Lima than it takes them to travel by freighter from Lima to New York. There is red tape and cynicism, corruption and danger.

Yet a certain esprit develops at Matlick's forum. During hot chocolate breaks as well as formal sessions, it is clear the industry has sent heavy hitters — and that the Peruvian government is paying attention.

John Lunde, Mars' voluble director of international environmental affairs, lectures on the considerable interest that international agencies are showing in sustainable cacao-growing. He tells how soil chemistry

actually improved in Cameroon when cacao was grown sustainably, how it provides a broadened rural-income option.

"The world is hungry," he concludes, "for the taste of Peruvian chocolate again."

Then quietly Mars makes a promise: It will buy 5,000 tons of new cacao, a drop in the bucket for the industry, but a welcome vote of confidence for Peru's skeptical officialdom.

For two days the talks go on in Lima's gleaming Miraflores Park Plaza hotel. There are lessons on fermentation and chain-saw pruning, on grafting and fighting the dreaded frosty pod rot. Prakash Hebbar, a Penn State microbiologist on loan to the U.S. Department of Agriculture, discusses advances in using natural, beneficial microbes, rather than soil-salting copper fungicides.

Peru's agriculture minister, Rodolfo Munante, gets swept up in the possibilities. It is not lost on him that plant-disease problems and indiscriminate spraying of fungicides in Africa might make a dent in the harvest there. Maybe it's time to create a germ plasm bank in Peru. Or a special seal — a Juan Valdez-like imprint — to tell the world Peruvian cacao is back. How about, he suggests, "Gold Peru!"

Matlick expected 50, maybe 75 bureaucrats, cacao buyers, extension agents and brokers to show up. More than 260 are here, eager to hear the prospects for this sweet, chocolate dream.

When the late British geneticist Frank Pound scoured the wild for cacao that was resistant to witch's broom in the 1930s, his most productive expedition took him to Iquitos, on the east-draining flank of the Peruvian Andes.

There, at the very source of cacao as a species, he carefully cut budwood and collected the specimens that form the backbone of the International Cocoa Genebank in Trinidad.

Now many of original forests that Pound tapped are gone, meaning that whatever secrets they might have yielded, whatever particularly vigorous specimens they might have offered, are gone, too.

In their place tortured landscapes alternate with spectacular green canyons. Old coffee plots stand next to hillsides shorn raw for subsistence farming.

Much of that environmental damage is a result of the drug trade — both the coca-leaf farmers' forest-clearing and disposal of chemicals and the aerial defoliants sprayed by U.S. anti-drug forces. But much of it is due, as well, to traditional agriculture, cacao-growing included.

It is in the valley of the Rio Apurimac, the geo-



In the Peruvian rain forest, soldiers help keep the peace. Tony Godoy (left, in cap) directs a new fermenting facility at Santa Rosa, a major step in rebuilding Peru's cacao production.

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It is in the valley of the Rio Apurimac, the geo-

graphic zone to the south of Iquitos, that all the issues collide. Two-thirds of the peasants in this isolated high jungle live in poverty, malnourished and unschooled — prime candidates to grow the most profitable crop available, prime turf for insurgency.

This is ideal cacao country as well, so now a question hangs pregnant in the rugged valley: Can the appetites of the First World be made to work for, not against, the sustainability of a desperately poor people and ravaged land?

Since 1996, the U.S. Agency for International Development has funneled \$15 million into the upper Apurimac, rehabbing more than 100 miles of roads, building seven bridges, trying to rekindle the cacao holdings — and connect them to the market.

Tony Godoy, a tall, blue-eyed contractor who works for a Peruvian rural development organization, is on the front lines, a key player in the new agronomic strategy overseen by the U.S. Embassy in Lima.

We set off in his Chevy Runner to see cacao nurseries and old groves and his own bold project, a pod-processing center that has the look of a jungle Fort Apache.

Everywhere we go, two pickup trucks filled with soldiers follow, their hair as clipped and black as a shoe brush. It is pacified here — presumably as long as you've got security riding shotgun.

We look at farms where growers know their trees by name. We stop at one of the district's four nurseries, this one on the land of sneaker-clad Santos Laura, who has more than 20 acres devoted to cacao. The immature plants, lined up in 20-foot rows under a feathery thatch of bamboo fronds, will be used to fill in gaps in older groves even as veteran trees are pruned and fertilized to bring them back to fuller productivity. Across the valley, 800,000 seedlings are being nurtured.

At the moment, with coca-leaf prices inching up and cacao's dipping slightly, the project is touch and go. You can see Indian women, barefoot and in dusty fedoras, scuffing across tarps of coca, readying

it for the local tea trade and the international drug market. And while the illegal coca-leaf crop here has been halved since 1995, cacao yields are just beginning to climb.

Godoy drives me up the dirt track that connects the bustling riverfront town of San Francisco with the quiet village of Santa Rosa on the other side of a steep gorge. We pass women walking pigs on ropes, peasants squatting in front of pitiful pineapple stands, fording creeks swollen with October's spring runoff, the color of old aluminum, headed for the Amazon.

In a compound on the outskirts of Santa Rosa, Godoy's crew has made pegged boxes from tropical hardwood, capable of holding one ton of beans. This is where the important fermenting work will be done, enhancing the quality of beans.

This is where, centuries later, cacao has come full circle.

Last month, I phoned Michael Maxey, of AID in Lima, to see how the projects were going.

Bean yields, he said, are close to doubling, though they are still half the 400 pounds B.K. Matlick thinks is feasible from a rehabbed acre.

Godoy has bought a boat with a three-ton hold, the better to collect pods from a larger area.

Scientists from the Smithsonian are tentatively reporting higher numbers of tropical birds in shade-coffee and shade-cacao areas, the possible basis for a niche-marketing campaign — chocolate with a conscience!

This week the remote valley where cacao had all but disappeared, he said, is due for some of the best news in years.

With the prime minister of Peru and the U.S. ambassador looking on, Nestle/Peru is scheduled to open a local purchasing office, pledging to pay above-market prices for the above-average beans.

The chocolate strategy, however tentatively, is inching to the rescue. □