

The Price of Spice



Indonesia's clove plantations are still recovering from the monopoly period. To secure future supplies, the kretek industry must invest in production now.

By Taco Tuinstra

Every country has a smell, usually recognizable only to foreigners, or to natives who've been away for some time. I, for one, never realized how much my home country, Holland, smells like cow manure until I returned there for a visit after having lived overseas for several years. The mail arriving from India at *Tobacco Reporter's* offices invariably smells like hemp, while some parts of eastern Europe still smell like coal, the region's primary source of energy during communist times.

Indonesia, too, has an unmistakable scent—that of kreteks, or clove cigarettes. Long after the demise of the Dutch and British East India Companies, "Spice Islands" still seems an appropriate nickname for the archipelago.

The question is, for how much longer?

Planted in the 1960s, the current generation of clove trees is gradually becoming less productive, and it is unclear whether

farmers are planting new trees rapidly enough to replenish volumes. If the kretek industry doesn't invest in production now, some fear it might soon face shortages of the precious spice, like it did at the start of the century. "I am worried," acknowledges Angky Camaro, managing director of Sampoerna's Indonesian cigarette business. And his concern is echoed by many in the business. "We must encourage farmers to plant trees," says Sutanto Adhidharma, deputy purchasing director at Djarum.

KEY INGREDIENT. There is much at stake. After tobacco, cloves are the most important component of kretek cigarettes. Cloves give kreteks their distinctive sweet taste and produce the characteristic "crackling" as they burn and pop during the smoking process. The word *kretek* is





Jimmy Hastomo, a spice merchant, examines a recently arrived clove shipment at his warehouse in Singaraja, Bali. The liberalization of the clove trade in the late 1990s has brought back some balance to the market, but concerns about supplies remain.



Top: Clove trees are notoriously slow to regenerate, making it difficult to recover lost volumes. **Bottom:** Cloves must be picked at exactly the right time. If the farmer harvests too early, the bud will be too small. If he picks too late, the clove will have turned into a useless leaf. The timeframe is less than 10 days.

derived from the way this sounds to Indonesian ears—"kreteketek."

And kreteks are not just some quaint niche product in the world's fifth-largest tobacco market. In 2005, Indonesia's cigarette manufacturers produced 225.5 billion cigarettes, and 90 percent of those were kreteks. Cloves are significant on a macroeconomic level, too. Because many kreteks are manufactured by hand, the tobacco industry is a huge employer. Between them, Indonesia's cigarette makers have some 360,000 workers on their payrolls, most of them kretek rollers. Needless to say, tobacco companies are keen to secure their clove supplies.

To sustain current production volumes, the kretek industry needs approximately 90,000 tons of cloves annually. The volumes coming to market, however, vary greatly from year to year. "Because of the way cloves are harvested, production goes through a four-year cycle of large and small crops," explains Wulan Goei, clove development manager at Sampoerna. At the high end of the cycle, Indonesian farmers will produce close to 100,000 tons; at the low end, they'll harvest about 40,000 tons. A bumper crop—the next one is expected in 2007—is always followed by a small harvest.

But these figures are estimates only. Clove production is dominated by smallholders, some of them producing as little as 150 kg per season from perhaps 10 trees. With 1.5 million clove farmers spread throughout Indonesia's vast archipelago, it's difficult to gather accurate production figures. The overall trend, however, is undeniably downward. Surveys suggest the area under clove cultivation today is 250,000 hectares, compared with 550,000 hectares 20 or 30 years ago.

MARKET DISTORTION. The supply of cloves, like that of other commodities, is governed by price. In an ideal situation, the price of cloves is low enough to keep kretek manufacturers competitive and high enough to keep farmers interested. While not perfect, the free market is the most effective mechanism to achieve a happy medium between buyers' and sellers' interests. The problem is, for much of the 1990s, the Indonesian clove market was not free. The

Smoking for health

The first clove cigarette was reportedly created in the 1880s by Haji Jamahri, a resident of Kudus, Java. Seeking relief from his asthma, Jamahri rubbed eugenol, a clove oil with soothing properties, on his chest.

Jamahri felt a bit better, but sought a way to bring the cloves in even closer contact with his troubled lungs. He sprinkled some cloves in tobacco, rolled the mix into a cigarette and then smoked it. The relief he felt was so complete that he started marketing his invention to fellow residents in the Kudus region.

Over the next century, assisted by the advent of mechanization and modern marketing techniques, clove cigarettes spread through Indonesia until they completely dominated the market. These days, more than 90 percent of cigarettes sold in Indonesia contain cloves, and Kudus remains the center of kretek production.

But even as clove cigarettes started as a home remedy against asthma, today's kretek industry carefully avoids making any health claims, reminding smokers of the harmful effects of tobacco use instead. —T.T.



Workers sift through cloves in the warehouse of a Bali merchant. Like all suppliers to the tobacco industry, clove merchants must make sure their product is free of foreign matter.

government pulled out of the clove trade in 1998, but the effects of its meddling are still felt today.

When kreteks started to gain popularity after World War II, the Indonesian government embarked on a major smallholder clove intensification program, providing farmers with cheap credits and agronomic assistance. The goal was to reduce Indonesia's dependence on clove imports from Zanzibar and Madagascar. The government supplied farmers with seeds and encouraged production throughout the archipelago.

At first, the strategy seemed to work, with Indonesia becoming self-sufficient in the 1970s. But then it fell victim to its own success. Government support, combined with strong demand, encouraged farmers to grow more cloves every year, which eventually led to overproduction. After a bumper harvest in the late 1980s, the price collapsed and many farmers suffered great financial losses.

In 1991, Hutomo Mandala Putra, the youngest son of then-President Suharto, established the Clove Support and Trading Board, or BPPC, after its Indonesian initialism. Ostensibly, the BPPC's objective was to protect clove farmers from market fluctuations and to ensure that the country's kretek manufacturers received a constant supply of cloves. In reality, the BPPC bought cloves at prices far below their market value, and grotesquely overcharged kretek manufacturers for their supplies—with BPPC officials pocketing the difference.

Discouraged by the bad prices, many farmers neglected their trees and turned to more lucrative crops such as cacao and vanilla. To keep supplies tight—and prices high—the BPPC even *paid* some farmers to uproot their clove trees. The farmers who continued producing cloves skimped on essentials such as fertilizer, resulting in inferior products.

Then came a succession of poor harvests due to adverse weather conditions. These factors, combined with the loss of production from the switch to cacao and vanilla, led to a drastic shortfall in clove output during the late 1990s. The price of cloves peaked at 80,000 rupiah—almost \$9—per kg, pushing many smaller kretek manufacturers out of business.

Indonesia dismantled the BPPC in the wake of the 1997 Asian financial crisis, at the insistence of the International Monetary Fund, which viewed the monopoly as emblematic of many of Indonesia's economic problems. But in its short life, the agency managed to inflict considerable damage on the clove and kretek industries. “We were shocked by the state of many clove plantations after the monopoly period,” says Goey of Sampoerna's clove development department.

SEEDS OF RECOVERY. Recovering lost production has proved a challenge because the clove tree is notoriously slow to regenerate. Whereas tobacco goes from seed to smoke in one season, it takes five to eight years before a clove tree starts producing



After harvesting, cloves are dried in the sun to seal in their rich flavors.

Top clove-producing countries and share of world production

Indonesia:	63 percent
Madagascar:	19.7 percent
Tanzania:	12.6 percent
Sri Lanka:	1.9 percent
Comoros:	1.3 percent
Others:	1.5 percent

Source: United Nations Food and Agricultural Organization Tobacco and Clove Farming report, March 2004.

the desired spice—and 20 years before it reaches top productivity. “For the farmer, that’s a long time to go without income,” says Camaro.

Indonesia’s kretek manufacturers have been working diligently to restore production. Sampoerna’s clove development department was established last year specifically for this purpose. The department supplies growers with trees for replanting and provides inputs such as fertilizer. It intends to grow 1 million new trees over the next five years. The company has created nurseries in Gorontalo Province, Sulawesi, and Pacitan in eastern Java.

Kretek companies also assist farmers with agronomic advice. While not as labor intensive as tobacco, clove trees are more demanding than some other crops. They must be planted at a sufficient distance from one another (minimally eight meters) to ensure sunshine reaches all leaves. Farmers must regularly clean their surroundings and fertilize twice a year. Cloves trees are also sensitive to disease and, with living standards having plummeted since the 1997 crisis, increasingly subject to theft.

The good news is that the clove trade is once again governed by the laws of supply and demand. The price has stabilized at approximately \$4 per kg, which Camaro says is the right level. “It is low enough to keep us competitive and high enough to keep the farmer interested,” he says.

The return of a market mechanism has encouraged at least some growers to reinvest in production. “I recently planted new trees on empty land,” says Made Mulyawana, a small trader in Kayu Putih village, Bali. During the monopoly period, Mulyawana diversified into durian, a tropical fruit with such a strong smell that it’s banned from certain hotel rooms. But he never abandoned cloves altogether, as other farmers did. “Durian is good money,” he says, “but it cannot be kept for as long as cloves can.” Today, Mulyawana owns 600 clove trees.

Due to the geographical spread of production, most kretek manufacturers buy their cloves from traders rather than farmers. “It would be impractical to buy directly from growers,” says Goey. ►

Distribution of Indonesian clove farms by island

Sulawesi:	145,389 ha
Java:	139,920 ha
Sumatra:	65,803 ha
Nusa Tenggara:	37,454 ha
Maluku and Papua:	37,113 ha
Kalimantan:	4,204 ha

Source: United Nations Food and Agricultural Organization Tobacco and Clove Farming report, March 2004.

"We'd have to set up hundreds of buying stations across Indonesia." Farmers, in turn, prefer selling to merchants because, unlike some of the smaller kretek manufacturers, they can pay immediately. Traders also serve as a buffer. If the kretek manufacturers' needs are fulfilled, they will keep buying from farmers and store the cloves for the next selling season.

Typically, farmers sell to small village traders with a turnover of less than 100 kg per season. These small traders then sell to medium-sized traders (between 1 and 100 tons turnover), who in turn sell to big traders (100-plus tons). The clove trade involves huge cash flows. It has to, because whereas small kretek manufacturers often pay for their supplies in installments, the farmer demands cash upfront. Some clove trading operations are more profitable than the cigarette manufacturers they supply. Interestingly, many Indonesian clove traders are women.

Rivalry is fierce among merchants and they compete on more than price alone. "I try to offer farmers the best service," says Jimmy Hastomo, a medium-sized clove trader in Singaraja, Bali. Such services include fair weighing of deliveries and speed of payment. "Also, if a farmer is not satisfied with my price, I give him an opportunity to offer his goods elsewhere," says Hastomo. "If he doesn't find a better price, he can still come back to me."

Hastomo bases the prices he pays his farmers in part on those set by the big traders, with whom he is in daily contact. "Of course, I also have my own ideas about what the price should be," he says, smiling. In addition to cloves, Hastomo trades in coffee, vanilla and

cacao. The profitability of his crops varies from year to year. He says 2001—the aftermath of the BPPC—was the best year for cloves ever, from a trader's perspective. Farmers and kretek manufacturers obviously have different memories of this period.

While traders can profit from price fluctuations, the kretek industry would like to see stable prices and predictable supplies. A healthy population of clove trees is essential to this objective. Cultivation projects such as Sampoerna's are bound to help, but in the end, it all boils down to price. "If the price is good, the farmer will grow cloves," says Goey.

The biggest challenge is uncertainty. The geographical spread of production makes it difficult for kretek manufacturers to assess the future productivity of existing clove plantations. "We don't know enough about the condition of the trees out there," says Goey. There is also a lack of literature and institutional knowledge. Clove trees reach their maximum productivity between the ages of 20 and 40 years, but how quickly their yields decline after that remains unclear.

Indonesia's kretek manufacturers will do everything in their power to secure their clove requirements. It makes good business sense. Their investments will help keep their customers satisfied, their employees employed and their businesses profitable. But in the process, they will also help retain the scent that many visitors have come to associate with Indonesia. And that's a good thing. After all, it would be a shame if the sweet smell of kreteks gave way to an odor more commonly associated with developing countries—that of exhaust.

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History repeats itself

In the end, Tommy Suharto failed to control the clove trade—but he wasn't the first to try. Anytime a commodity is in hot demand, unscrupulous traders will try to monopolize the business and deny others a piece of the action. Some may succeed temporarily, but eventually they all flop. Inflated prices encourage customers to seek different sources, while underpaid producers migrate to more profitable products.

Cloves have been at the center of high-profile power struggles for centuries, but for different reasons. Whereas Suharto pursued cloves for use in cigarettes, previous monopolists were interested primarily in their medicinal qualities and effectiveness as a food preservative.

Cloves are the dried and highly aromatic flower buds of *Syzygium aromaticum*, a tropical evergreen tree. Among other things, cloves contain eugenol, an oil with antiseptic qualities that is still used in modern-day dentistry. Before the advent of cold storage and modern preservation techniques, people also used cloves to extend their food's use-by date or at least mask the appetite-killing stench of decay.

The need to preserve food was especially pressing in Europe, with its long and cold winters. But until the modern era, cloves grew only on a group of five tiny islands in the Moluccas archipelago, to the east of Sulawesi. Needless to say, there were vast fortunes to be made by selling this lucrative spice.

The quest for cloves is vividly described in Mark Hanusz's book, *Kretek—the culture of and heritage of Indonesia's clove cigarettes*. Until the modern era, he writes, the spice trade between East and West was controlled by Arab merchants. After the fall of

Constantinople in 1453, the Arabs granted the Venetians exclusive rights to the oriental commodities market, and Venice became the center of the international spice trade. Other European countries feverishly tried to circumvent both Arabs and Venetians.

The Portuguese sailed around southern Africa and established a new trade route to the east. They set up enclaves in the Spice Islands, which were taken over by Spain after the Iberian Peninsula united.

But other European powers weighed in, and by the middle of the 17th century, the spice trade was firmly in the hands of the Dutch East India Co., or VOC. To keep prices high, VOC consolidated production in four islands and ordered production elsewhere to be destroyed. The monopoly was ruthlessly enforced: VOC imposed the death penalty on anyone caught growing, stealing or possessing clove plants without authorization.

VOC's reign proved fabulously profitable and helped pave the way for the Dutch golden age. In the end, however, it collapsed as other countries found a way around it. The French managed to steal some clove trees and planted them all over their possessions in the Indian Ocean. Clove seedlings were also successfully introduced in Zanzibar. Being closer to the European and Indian markets, Zanzibar, Mauritius and Reunion became the prime suppliers in the 1800s.

The emergence of new suppliers, together with the advent of modern food preservation techniques, greatly diminished the role of cloves in Indonesia's economy. Demand for the spice wouldn't pick up again until the early 20th century, when kreteks started gaining popularity. —T.T.