

Tobacco and Poverty Observations from India and Bangladesh

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1st Edition: October 2002

2nd Edition: July 2003

PATH  Canada

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Photography by K.V. Suvarna and Sagar Karnik

Acknowledgements

We would like to express our heartfelt thanks to Dr. Binod Agarwal, Director of Taleem, Dr. Ginny Srivastava, Kamalendra and R.D. Vyas of Ashta Sansthan, Fr. Xavier Devadas, Fr. Barnabe Dsouza and Sharon Dsouza of Shelter Don Bosco, and Tara of Spandana, for their valuable cooperation in organizing and conducting the research in various States.

Sian FitzGerald, Executive Director of PATH Canada, provided oversight to the project from its inception as well as editing this 2nd edition.

Syed Samsul Alam Tuhin of Work for a Better Bangladesh deserves special mention for his formatting job, under impossible time constraints!

Cancer Patients Aid Association, Mumbai, helped immensely with financial management in India.

We would like to express our sincere appreciation for the financial support provided by World Vision Canada and World Vision Taiwan, without which the study would not have been possible.

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Executive Summary

The tobacco industry frequently argues that it is a significant source of employment, and that economies, particularly of low-income countries, will suffer greatly if strong tobacco control legislation is passed. This argument is significantly weakened by the fact that global tobacco consumption is still on the rise, and is likely to remain so for decades, due to tremendous increases in global population. The industry also exaggerates the numbers of people employed by tobacco, by counting those for whom tobacco is one of many sources of employment. Research suggests that rather than hurting economies or employment, tobacco control would actually benefit both.¹

Profits from the sale of tobacco products are not evenly distributed among those involved in the work. As this report shows, much of the economic gain from tobacco remains in the hands of a powerful few, while a vast number of workers remain desperately poor.

This report documents the conditions of some of those whose work is related to tobacco, as farmers, leaf pickers, and bidi rollers, in India and Bangladesh. For many, the income gained from this employment is barely enough to sustain them, or is insufficient to meet the most basic of needs. Some have had their health ruined by their work, others consider tobacco-related employment a form of slavery, and would gladly switch to another field if other sectors of the economy developed sufficiently to offer them a change. The report also documents the misery suffered by women, children, and tribal people, whose oppressive circumstances make them available for exploitation by the middlemen in the tobacco industry. Investment in education for children, and initiatives for equality for women and tribal people, would help the poor to rise from their deplorable conditions in tobacco-related employment, while bringing significant economic benefits to the country as a whole.²

In addition to looking at those whose employment is related to tobacco, we also investigated some of the more vulnerable population groups who use tobacco, specifically street children and pavement-dwelling families in Mumbai City of India. For the poorest of the poor, who happen to be the most likely to use tobacco, daily expenditures on tobacco products represent a significant portion of daily income, and a further hindrance to the investments needed to help lift them out of poverty.

The studies presented in this report, along with other research, suggest that investment in other sectors of the economy rather than in tobacco would enhance development efforts. Meanwhile, investing in tobacco simply maintains the cycle of poverty and misery for most of those involved. While this report focuses on India and Bangladesh, the results are applicable to the rest of the world, where similar conditions exist, and where farming of tobacco often means cycles of debt, ill-health, and inescapable poverty.³

¹ Jha, P. and Chaloupka, F. *Curbing the Epidemic: governments and the economics of tobacco control*. World Bank, 1999. www.worldbank.org

² World Bank, *Engendering development: through gender equality in rights, resources, and voice*. World Bank policy research report, Washington, D.C. 2001.

³ Campaign for Tobacco Free Kids, *Golden Leaf, Barren Harvest: The costs of tobacco farming*. Washington, D.C. 2001.

Tobacco farming in India: An unreliable option to growers and workers, expensive proposition to farmers and a death warrant to forests

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Editors note:

Farmers who have switched from tobacco to other crops describe the reasons for their switch, and the deforestation caused by tobacco growing in Karnataka. Their reasons include the expense of the inputs, the labour-intensiveness of caring for the crop, and the problems obtaining wood from the forests to cure the tobacco. These studies illustrate how the efforts of the Government of India to save its forests are endangered by the practice of cutting trees to cure tobacco, suggesting that investment in other sectors would contribute to efforts to save the forests. As a significant side-effect, the economic and health condition of farmers would benefit from a switch from tobacco to other crops.

This study was conducted in Shimoga and Davanagere districts of Karnataka, one of the leading tobacco farming States in Southern India. The area was formerly known for its rich forest cover. People engaged in various sectors of tobacco farming were interviewed, including tobacco nursery growers, labourers, and farmers, as well as people who have left these occupations and moved over to alternate employment activities. A bidi roller and a local Tobacco Board official were also interviewed. This research was carried out in collaboration with Spandana, an NGO from Shimoga District of Karnataka State.

Background

Is tobacco farming lucrative? Do the people who do most of the work benefit the most from tobacco cultivation? Or is this another field in which people's health suffers and the economic benefits for the majority are minimal, while the owners and bosses reap the lion's share of the profits? While some of the people interviewed are in one sense happy to have the work, it is obvious that if other sectors of the economy grew, they would benefit from switching from tobacco growing to a more lucrative, less time-consuming, less physically-taxing and more environmentally-friendly form of employment.

While tobacco growing can provide the funds for basic existence, it keeps the poor entrenched in a cycle of poverty, as can be seen in the cases of those whose children are illiterate labourers like themselves. While the owners benefit from a continuing pool of desperate people with no better source of livelihood, tobacco cultivation is obviously not benefiting the economic development of the country. The intensive, difficult, and health-harming nature of the work means that people are happy to make a move from tobacco growing to something more remunerative.

Farmers say that at least four acres of tobacco cultivation is required to make it a viable venture. Four acres yield about 30-40 quintals, which means the barns have to be operated about 10 times in a season. Two to three cartloads of wood are used for each round of curing. In an annual growing season, a farmer uses about 25 cartloads of wood. Each cartload contains about one tonne of wood. The government depot costs are about 1,200 rupees *per tonne, which would cost the farmer 30,000 rupees just for the wood. Clearly this is not a viable proposition. Instead, the farmers obtain the wood by bribing the forest guard, at an average price of 150 rupees per cartload, which works out to about 4,000 rupees for 25 tonnes.

Thus one farmer with four acres of tobacco cultivation causes a loss of about 25,000 rupees to the Government exchequer. Karnataka has about 18,400 registered and more than 16,000 unregistered tobacco cultivators producing about 50,000 million kgs of tobacco every year. The huge loss of revenue to the Government by the pilferage of firewood for tobacco curing can be easily estimated. A Study funded by Karnataka State Department of Science and Technology estimates that 120,000 tonnes of firewood are needed every year to cure tobacco leaves in Karnataka.⁴ However, these are very conservative estimates and the actual use would be much higher (as derived from the present study).

The resultant scarcity of wood is compelling many farmers to shift out of tobacco farming, says a local Tobacco Board employee. He confirms that at one point there were 1,200 farmers registered with the Tobacco Board in Shimoga; now they have been reduced to half (635), with the others moving on to more viable crops.

* * *

Case Studies

1. The intensive, risky work of raising saplings

Chennamma is a 45-year-old woman who is essentially landless, except for the small plot of land on which their house is situated and a small backyard. Her family consists of 6 members. Her husband is idle, contributing nothing to the household; the other household members combine other occupations with tobacco farming.

While Chennamma's family used to lease land for use as a tobacco nursery, last year the nursery was affected by root rot, and all the saplings were destroyed. As a result, this year they were only able to grow the saplings on the small plot of land behind their home.

Chennamma explained that raising tobacco saplings is an extremely intensive process: "the beds have to be as clean as those we sleep on". Plastic residue—a common problem in South Asia, with the ubiquitous use of thin plastic bags leading to soil pollution—is the enemy of tobacco nursery growers; if the soil contains plastic, the seeds will not sprout. Chennamma plays the biggest role in her family in terms of caring for the young plants. Her two sons help her in digging and loosening the soil, but the entire task of cleaning and making the beds and watering

* 48.59 Rupees = US\$1.

⁴ Energy Utilisation in Karnataka: Part-I An Overview of Energy Conservation in Tobacco Curing : <http://ces.iisc.ernet.in/energy/paper/part1/>

is hers. All this work is extremely intensive; the watering, for instance, must be done very carefully with hand-held watering cans.

After the beds are prepared, one matchbox full of seeds is mixed with one can (10-12 litres) of water, and spread on the bed. Insecticide is immediately applied around the beds to prevent ants and other insects from eating the seeds. Two bundles of dry paddy straw are placed on each bed to protect the seeds from sunlight and rain. Two kilograms of fertiliser are used for each ten beds, to promote plant growth. The leaves must be washed immediately after the fertilizer application to prevent them from drying.

Chennamma explained that “work is difficult, but it also brings profit. We get profits only if the climatic conditions are stable and it rains at the right time. The plants also should not be affected by diseases. If the stem near the root begins to rot, we know that it has been affected by the root rot disease and all our profits vanish overnight.” She does not consider there to be any labour costs, since they are all done by the household members. On a good season, they earn a profit of 1,500-2,000 rupees per season; in other seasons they grow chilli, brinjal, tomato, greens, and other vegetables in their backyard.

* * *

2. Tobacco nurseries, dangerous chemicals

At age 48, Girijamma’s main responsibility is raising tobacco saplings. During other seasons, for about three months a year, she works as a labourer in other people’s fields, earning 30 rupees a day. Her family is landless, except for the patch on which their house stands. Her family consists of 4 members. Her illiterate husband is also a day labourer, earning 40-50 rupees a day, and helps her with the nursery work. Her two children dropped out of school after a few years; the son looks after their three cows, and her daughter does housework and for 3-4 months a year works as a day labourer, earning 30 rupees a day.

Girijamma has been working in tobacco nurseries for the past 12 years. While some years the work pays off, last year, due to drought and plant disease, their saplings were destroyed, so the investment—rent of land, buying of seeds, and chemical inputs—was all lost. Many people raise saplings, as it is the only work available from April to June. As a result, there is an oversupply of saplings, and the prices for them are very low. Following a disastrous year like last year, the number of nurseries declines, as many people lost on their investment. While Girijamma is again raising saplings this year, she was not able to rent land, and is only using the small space behind their house.

She and her daughter are the ones who clean the beds after the men do the digging. She explained that the women’s work includes breaking the soil into fine powder, making the beds, and carefully removing all waste, such as paper, plastic, and stones. Since they have no well at their home, she and her daughter must walk about a quarter of a kilometre repeatedly to fetch water for the beds. Unless it rains adequately, four cans of ten litres each are used three times daily for the nursery each time the plants are watered. Heavy rains and hailstones can destroy the saplings.

Paddy straw placed on the beds is turned once every 3-4 days. After about 15 days, some of the paddy straw is removed; later, the rest is taken away. These are also women's jobs. Fertilizer is applied at the beginning and again after a month of sowing. Pesticides and insecticides are also used. The women regularly weed the beds and cut away excess grass. After two months of intensive work, the saplings are ready to be packed and sold. Girijamma explains that the rate for the saplings depends on their availability and quality, which in turn depends on that year's climate, rains, etc. The range is quite wide, from 20 to 2,000 rupees per thousand saplings.

Explaining why she does the work in spite of all the difficulties, she replied, "Work is difficult, risky and unpredictable. But we do this work because there are no other jobs available at this time of the year. *When we spray chemicals, our hands and feet burn. We don't even let cattle anywhere near the plants once they have been sprayed.*" Summarising her twelve years of raising nurseries, she says that she has made profit only in seven years. In one spectacular year, about six years back, she received 2,000 rupees per 1,000 saplings, because hers were among the few that survived that year. In the remaining five years she has lost money, her intensive effort, and her exposure to dangerous chemicals, all for naught.

* * *

3. A second life for a former tobacco farmer

Mangala, a 32-year-old female labourer, earns 30-40 rupees a day, depending on the season and job she finds. She lives with her mother and niece on two acres of land which they lease. For 15 years, Mangala performed different kinds of work related to tobacco cultivation and processing. She knows the whole range of jobs associated with tobacco, like planting, weeding, making and maintaining beds, picking tobacco leaves, tying leaves, and removing leaves after drying and grading. She used to work in three tobacco cultivation fields and barns during each tobacco season, but has since stopped.



Maize thrives where tobacco was formerly grown

Speaking about the duration of work and remuneration, she says, “I would stay back in those people’s houses during the season and would work during the night too. I used to earn about 2,000 rupees per month during the cultivation season.”

Asked about her reasons for stopping tobacco-related work, she explained, “Every year after working in the tobacco season, I used to fall sick. I used to suffer from fatigue, stomach ache, leg pain and chest congestion. The local doctor, Sudha, gave me medicines and tonics. In 1999 my condition deteriorated greatly after the tobacco season. Dr. Sudha referred me to a hospital. They conducted many tests and carried out a chest X-ray. The first question that doctor asked me was, whether I smoked cigarettes or bidis or used any other tobacco products. I asked him angrily whether I was a Bombay girl to do such things.

“The doctor told me that my insides had been corroded due to tobacco dust. The doctor suggested that I stop my tobacco related work. Over three days, he gave me three injections, each costing about 300 rupees. They asked me to get admitted to the hospital, but I refused. Soon after that I was bed ridden for almost three months. I became very pale and thin. I spent almost 15,000 rupees on medical treatment that year. It was then that I stopped working in the tobacco fields and processing units. I am well now.” When asked if she would go back to work in tobacco fields now, she replied, “*Even if they offer me 100 rupees a day, I will not go back to tobacco work. I almost died and am having a second life, and I don’t want to spoil it.*”

Speaking about the time when she used to work in tobacco fields, Mangala adds a new dimension – that of family relationships. “My relationship with family members also soured during that period due to late and odd working hours. Due to the lure of the income that I was earning from this job, I neglected my home, household responsibilities and took my family members for granted. I used to stay away from home even at nights. But my family members did not like this. Lots of clashes used to take place at home. But now our relationship is all right and we are back to normal.” She now works in groundnut, maize or paddy fields. Speaking about the difference in the work on tobacco fields and her present work Mangala says, “I don’t feel tired now. Comparatively, I earn about 3,000 rupees less than what I used to, when I worked in tobacco fields. But compared to the physical and mental torture I endured during that time, this life is much better.”

* * *

4. A steadier, more secure income from cows rather than tobacco

Deepamma, 39 years old, is a mother of 2 children. Along with her husband, she raised tobacco nurseries for two years, which yielded them good profits. In the second year they increased their investment and the number of rows of saplings. But the saplings were afflicted by root rot disease. To add to their misery, rains failed that year and even the saplings that escaped the disease could not be sold. They incurred a loss of 2,000 rupees that year and could not repay the loan they had taken for raising the nursery.

Speaking about the uncertainties and high risks involved in raising nurseries, Deepamma says that since the nursery work begins in summer, there is a problem of irregular power supply. This makes it difficult to water the saplings (pump sets are used to water the sapling using ground

water drawn from bore wells). The saplings are so fragile that, even though the plants look fine in the evening, they could be stricken by disease the next morning.

The job also involves a lot of hard labour. During the nursery formation period, they have to leave early in the morning to finish work before it gets too hot. Deepamma says that during that period the household work gets neglected and children too are ignored. They have stopped raising nurseries since incurring losses.

Deepama took an interest-free loan of 20,000 rupees through the woman's Self Help Group (SHG), and bought two cows. At present, she is repaying the loan at the rate of 400 rupees per month, and in addition is also able to meet their other household expenses from the money earned by selling milk. Deepama adds, "if not for these cows, we would have starved this year, especially since the rains have failed and nobody would have bought our saplings if we had continued with tobacco". Now she makes a profit of about 800 rupees per month. Additionally, they get manure which is used for the maize crop in the two acres of land that they own.

* * *

5. Unsteady profit, and no time for school

Roopla Naik is a 45-year-old man with ten years of education. He oversees tobacco cultivation and curing, though it is his wife and four daughters who assume most of the responsibilities. His mother, most of his siblings, and his nephew are illiterate, having dropped out of school (like his oldest daughter) to work in the tobacco fields. They own ten acres of land, four of which are used for tobacco, and two each for cotton, maize, and paddy.

Speaking about the whole process of cultivating and curing, Roopla says that a lot of care is required from the planting stage to the last stage. He says that they hardly sleep during the entire curing process.

In the barn, fire is lit and a temperature of 90 degrees centigrade is maintained for the first 24 hours. During the second 24 hours, the temperature is gradually raised to 200 degrees. During the next 24 hrs, the temperature is gradually reduced. On the fourth day the tobacco is left in the barn without fire for conditioning. It is then removed on the fifth or sixth day. To get a cartload of wood from the forest, they bribe the forester 100-200 rupees depending on the type of wood.

Last year the price of tobacco was down and they did not make much of a profit. In fact they couldn't repay their loan from the local moneylender. But if the prices are good, they make a profit of up to 6,000-8,000 rupees per acre. The loss of forest is not a concern for them, and the possibility of expanding their other food crops, which might be more consistently profitable, does not seem to have occurred to them.

* * *

6. Caring for tobacco saplings: too great a burden

Murugeshappa, in his Seventies, has a relatively large land holding of 22 acres. He started tobacco cultivation in 1979 with help from Golden Tobacco Company. Six tobacco companies had their offices in his village, Sowlanga. The companies used to approach people with large land holdings and motivate them to cultivate tobacco in the fields. They would also make arrangements for the cultivators to get bank loans for building barns for curing tobacco and provide the required support for cultivation, such as technical know-how and raw materials for curing tobacco.

Murugeshappa says that Indian Tobacco Company (ITC) dominates the auctions and tobacco trade in the region. He accuses the ITC of causing the closure of several local, smaller tobacco companies like Malnad Tobacco Company. ITC advised Malnad Company to approach farmers and encourage the cultivation of tobacco on a large scale, with the assurance that ITC would buy all the produce. Malnad Company invested a lot of money to provide the farmers with the necessary infrastructure. However, ITC did not honour its commitment of buying back all the tobacco produced, driving Malnad Company into bankruptcy and eventual closure. This affected the farmers too, since the cheques given to the farmers by the company were not honoured, driving many farmers into debt.

Murugeshappa used to cultivate tobacco on four acres of land, but stopped in 1997. There is nobody in his family who was willing to shoulder the huge responsibility of caring for the saplings and curing the leaves. He says “the care given to tobacco during the curing process is like the care given to a patient in the Intensive Care Unit.”

Large landholders like him earn a margin of about 25-30% profit in tobacco cultivation. The workers benefit from the continuous labour of three months. But the fatigue and illness accompanying the tedious labour drains the earnings.

* * *

7. Curing barns: expensive and highly flammable!

Sankalappa started tobacco cultivation in 1978. Malnad Company helped him to get a bank loan of 25,000 rupees to construct a barn. Sankalappa has 20 acres, out of which they used to cultivate tobacco on 4–5 acres. Sometimes they attempted cultivation on 6–7 acres of land. But that created a problem because one barn would not be large enough to cure all the tobacco produced in a growing season. The optimum area of cultivation would be four acres⁵, so that all the tobacco grown could be cured in one barn. For tobacco produced from four acres (around 30–40 quintals), the barn would have to be used about ten times. Extending the cultivation area therefore meant more investment in constructing more barns.

⁵ These figures are specific to the local region where most of the cultivation is of the rain-fed variety.



Pile of wood for curing tobacco

Before they sow the seeds, they have to plough the land about eight times. The process of tobacco cultivation in this region is heavily rain dependant. Before sowing the seeds, they loosen the soil, after which rows of trenches are dug in the ground. All soil clumps are broken down into fine powder. About 25–30 labourers are employed for this purpose. This is followed by application of fertiliser. The land used for cultivating tobacco is changed every year for good yield, necessitating more land holdings for higher profits.

Curing tobacco requires about two tractors of firewood per round of barn use. About 700 wooden sticks are required for tying tobacco grown on four acres of land. The tobacco leaves are tied to the sticks and hung up in the barn for drying while wooden logs are burnt below to provide the required heat for curing tobacco.

They used to get the firewood and sticks from Hosajoga forests. Sankalappa claims that wood is now scarcely available in those forests, as they have been heavily degraded. He says that in the past three or four years, it has been difficult to bring wood out of those forests, even if it is available, since they have to negotiate with the Village Forest Committee (VFC)⁶ who watches over the forests in that area. Earlier they only had to bribe the forester; now they have additional obstacles to overcome.

Sankalappa stopped cultivating tobacco in 1997 when his barn was burnt down. He claims that tobacco farming is a profitable venture and he wishes to start again. However, it does not seem to have fetched him sufficient earnings to rebuild his barn, which would cost him around 30,000-40,000 rupees.

⁶ VFCs have been formed under the Joint Forest Planning and Management (JFPM) programme of the Government of Karnataka. Under the programme, the villagers had to protect a pre-determined patch of forests around their village. In return they would get a part of the proceeds from the forests. This programme was being implemented under an externally funded project. Unfortunately, the Government and the Karnataka Forest Department neglected the VFCs after the project ended in 1999-2000. Now, most of the VFCs have either become dormant or less vigilant due to the utter neglect of the Government.

At present his family is cultivating maize on nine acres, groundnut on two acres, *ragi* (finger millet) on two acres, and areca nut on two acres. Last year they had a yield of nine quintals of *ragi* for which they got 260 rupees per quintal; 16 quintals of groundnut at 1,250 rupees per quintal; and 82 quintals of maize at 400 rupees per quintal. Sankalappa said that he made a profit of about 15,000 rupees last year.

* * *

8. From tobacco to sugarcane

Shankarappa is an illiterate 55-year-old man. His two sons dropped out of school after a few years, while his young grandchildren continue to study. While Shankarappa used to grow tobacco in addition to paddy and areca nut, he is now switching from tobacco to sugarcane.

When asked about his reasons for abandoning tobacco cultivation, Shankarappa explained that nobody in his household is ready to take on the responsibility of tobacco cultivation, which requires a lot of care, high investments, and much responsibility. Firewood for curing tobacco is also not available as freely as before. They used to get their firewood from nearby forests; however the VFCs in those areas now prevent outsiders cutting their forests.

* * *

9. Maize: almost as profitable as tobacco, and better for the forests

Venkatappa is a 40-year-old man who lives with his wife, three daughters, and son. All his children are in school, including his 17-year-old daughter, an impressive fact given that his wife is illiterate. Venkatappa has 8.5 acres of land in which he grows paddy, cotton and maize. Venkatappa started growing tobacco in 1978. He explains that during every tobacco season, they would bring about 30 cartloads of wood from the nearby forests, to cure the tobacco grown on 3-5 acres of land.

Reminiscing about his tobacco growing days, Venkatappa told us, “I used to go to the forests with four labourers and get nearly 30 tonnes of wood every year, for curing tobacco. Now, the forest guard does not cooperate much in cutting wood for curing tobacco. Earlier we used to just pay him 100-150 rupees per cartload of wood and get wood from the forests just 2 kms away. Today even if we trek 10 kms, we will not get enough wood. **Our forests have been destroyed due to the tobacco crop.** Tobacco companies in the pre-Board days were more cooperative and would provide us coal for curing tobacco. Today people rely completely on wood from the forests.”

Venkatappa’s family stopped growing tobacco about four years ago. *Speaking about the reasons for stopping tobacco cultivation, Venkatappa says that five years ago, they spent about 20,000 rupees for tobacco cultivation and got back only 12,000 rupees in returns, driving them into debt.* While they used to make a profit of about 14,000 rupees on four acres of tobacco, this year they made a profit of 12,000 rupees from the maize grown on those same four acres.

* * *

10. Freedom from guilt

Nilesh is a 33-year-old farmer with six acres of land of his own, and six acres of land that he rents. Initially he grew tobacco on four acres. Later he increased the tobacco farming area to six acres, but even then the yield was less and the profits were lower than the previous years. So last year he cultivated tobacco on four acres, and maize, cotton, and ragi on the rest. Nilesh feels that soil productivity decreases due to tobacco cultivation.

After two years of tobacco cultivation, his family has stopped for various reasons, including the fact that his family does not have a curing barn, and they have to rent the land. A further reason is that Nilesh is the President of the Village Forest Committee (VFC) in his village. *He explained that he felt it was not right for him to steal wood from the forests while preventing others from doing so. He adds that another reason that compelled him to stop cultivating tobacco was that many of the labourers who got paid meagre amounts for their labour fell ill during or immediately after the processing period. This used to weigh on his mind when he was cultivating tobacco. He says that he now feels free of that guilt. Presently he is growing maize on all twelve acres of land mainly because it is less labour intensive, requires less care, is not very rain dependent, and is quite profitable.*

* * *

11. The health costs of tobacco labour

Navakka is a 37-year-old uneducated woman labourer. Her work is seasonal; during the tobacco growing season, she works in the tobacco fields, and the rest of the year she works in other fields or houses. She earns 30-40 rupees a day depending on the season and the kind of job. Her family has no land; even their hut is built on someone else's land.

Her family consists of five members. Her husband is an illiterate seasonal labourer, who earns about 5,250 rupees a year; her three children are also illiterate labourers, earning 30 rupees a day.

Navakka began working in tobacco fields and processing units when she was 12 years old. She knows the whole range of skilled jobs associated with tobacco, like planting, weeding, making and maintaining beds, picking tobacco leaves, tying leaves, and removing leaves after drying and grading. She earns 40 rupees a day on planting days, and 30 rupees on other days.

Navakka explains that the days the tobacco leaves are cut are very hectic. They work continuously from 7 a.m. to 7 p.m., only taking coffee breaks. The work includes picking the leaves before 10 a.m., loading them onto a vehicle, bringing them to the owner's home, and tying them into bunches of 10-12 leaves. The bunches are then tied onto sticks for curing in the barns. The work is done almost exclusively by women, since only they possess the skills and patience needed for the job. The men then take the sticks to the barns. After processing, women labourers carefully untie the leaves from the sticks and keep them in storehouses. Grading is also done almost exclusively by women; most men reject the task because "it involves sitting for days on end (and sometimes even during the nights)".

Every tobacco season, Navakka suffers from fatigue, leg pain, back pain, headache, and frequent vomiting. Doctors have told her that she is anaemic, for which they give her tablets and tonic. It

is a regular feature every year during the tobacco season that the workers fall sick and spend money on doctors and medicines. *Navakka told us that she wanted to teach her children to grade the leaves, but her children refuse to learn, saying, “You have spoilt your health. Do you want us also to spoil our health doing this work?”* On being asked why she does this job in spite of all its difficulties, she replied that it gives her continuous labour for 3 or 4 months at a stretch.



Labourers working on tobacco curing

Tobacco cultivation in India: Time to search for alternatives

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Editors note:

The following article discusses various issues about the cultivation of tobacco in India, including its origins, the problems it causes to the environment and farmers, and potential alternatives. The writer finds that tobacco is not a native crop in India, and suggests that just as other cropping patterns have been changed for various reasons, so tobacco cultivation could be reduced in favor of more beneficial alternatives.

Summary: Key points about tobacco agriculture

- ?? Net returns from tobacco are less than for many other crops, and tobacco is very labour intensive, requiring intensive crop husbandry practices. It is also hard on the soil, and requires many inputs such as fertilizers and pesticides as well as irrigation to sustain returns.
- ?? Tobacco cultivation affects the health of farm workers, causing nausea, allergies and reduced appetite.
- ?? Alternatives to tobacco cultivation are available and can be achieved through a broad diversification programme with the help of Government and NGOs.
- ?? Most farmers cultivate tobacco not because it is particularly profitable, but because their families have traditionally done so. By providing information about alternate crops, extension workers could convince many tobacco farmers to switch to other crops.
- ?? Any costs of tobacco crop substitution must be seen in the context of public health costs from disease and death from tobacco use, which negate the revenue earned from tobacco.
- ?? Cultivation of tobacco defeats the very purpose of agriculture, that is, to provide food and to enhance quality of life, whereas tobacco cultivation causes disease, disability and premature death.
- ?? Farmers are not threatened by tobacco control. Given the momentum of tobacco use, it will take decades before the industry faces declining profits as a result of tobacco control. Meanwhile, there will be plenty of time for farmers to switch to other crops, and in many cases, the switch will actually benefit the farmers.

Tobacco - An Alien Crop

Over the years tobacco use in India has acquired various forms and received social sanction, to the extent that many believe that tobacco is a part of our ancient civilization and see little cause for concern about its growing use and public health consequences. This is not so. The tobacco plant is in fact a native of Mexico, Central and South America. No wild relatives of cultivated tobacco are found in India or Asia. All popular varieties being cultivated in India are introductions and selections from the USA or Canada, with most being Virginia tobacco, introduced from the state of Virginia, USA.

The tobacco crop was not introduced in India until the 17th century. Today India is the second largest producer of tobacco, accounting for 10% of global production, a distant second to China, which accounts for 34%, and followed closely by Brazil, at 9%.⁷

Tobacco Cultivation Thrived with Government Support

Tobacco has been a high revenue crop and has indeed flourished under government support and attention in the last 50 years. Systematic improvement of the crop was initiated in India in 1947 with the network of All India Coordinated. Seven research centers were set up in India, in Madras, Andhra Pradesh, Punjab, Bihar, Mysore (Karnataka), West Bengal and a Central Institute at Rajahmundry (AP). In addition there are specific Research Institutes devoted to the improvement of quality and marketing of tobacco. There is also a Central Tobacco Promotion Council, which sends delegations outside India to promote the export of Indian tobacco.

Despite the attempts to promote it, the crop is grown less due to calculated decision making, in spite of all the impetus it has received, and more due to family tradition or custom. Meanwhile, the cost of production does not take into account the family labour where particularly women and children are working.

Area Under Tobacco in Most States is on the Decline

Although tobacco production has increased at the national level, the picture is different across many states. Tobacco cultivation has been phased out from Punjab, and production has declined in Haryana and Himachal Pradesh. As shown in Table 1, in Andhra Pradesh, Gujarat, and Karnataka, the area under tobacco cultivation increased until 1984, then declined by 1996. The trend of decreasing cultivation is seen in all other states except Karnataka. Production in 1995-96 was lower than in 1960-61 in all but three states.⁸

Table 1. Area Under Tobacco Cultivation (Ha x 10 cube)

State	1960-61	1983-84	1995-96
Andhra Pradesh	143.0	187.1	148.3
Gujarat	93.0	108.3	96.7
Karnataka	39.0	48.0	63.8
Maharashtra	26.0	10.1	-
Bihar	16.0	13.4	13.9
Tamil Nadu	19.0	12.4	6.8
Uttar Pradesh	19.0	14.7	16.4
West Bengal	17.0	15.4	11.7
Orissa	21.2*	12.4	12.9

⁷ Campaign for Tobacco Free Kids.

⁸ Sanghvi L.D.:1992, and Agricultural Abs Punjab 1996.

* For 1980-81.

Despite all the support the tobacco crop has received, the net area under tobacco cultivation increased only slightly, from 3.57 thousand hectares in 1950-51 to 5.01 thousand hectares in 1983, whereas in the same period other crops have shown significant increase. It is clear that tobacco production is being “sustained” with the help of supportive agencies only, and is not a crop of choice with the growers.

Since historic times, changes in cropping patterns have been necessitated by several different reasons and circumstances. Some recent cropping pattern changes include:

1. Indigo farming was reduced from 3,75,000 ha in 1857 to 2,200 ha in 1956;
2. Land under ganja in 1983 was brought down to 13,932 ha in 1993;
3. Andhra Pradesh and Karnataka switched over to groundnut from traditional millets in recent decades;
4. Rice cultivation was introduced and encouraged in Punjab; however this region is now again on the threshold of another change in cropping pattern necessitated by ecological conditions and low profitability.

As a crop tobacco is known to be “hard on land”:

?? It leaves chemical residues inducing soil sickness;

?? On account of resulting soil sickness and pressure of diseases and pests, crop management practices have to be intensified through the use of chemicals (fertilizers, pesticides etc.) and other crop husbandry practices;

?? In a micro-level study and action programme, it was found that the farm workers when attending to the tobacco crop suffer from nausea, allergies and loss of appetite;

?? The Virginia tobacco grows well on black soil and replaces cotton, cereals, and vegetables, thereby affecting the food security of the growers.

Tobacco Crop Substitution: Some Possibilities

A targeted effort is needed in order to replace tobacco cultivation with beneficial crops. The argument that the crop is being cultivated because the farming community has no alternative to their livelihood is not valid. Tobacco itself is not a traditional crop of the Indian and Asian subcontinent. It received initial support because of cheap farm and family labor available in India. Later it prospered with the support of market/government lobbyists.

Meanwhile, the black soils where Virginia tobacco is grown are very fertile and good for cotton, as well as certain vegetables and grain crops.

Alternative indigenous crops

Potential alternate crops include cotton, soybean, okra, eggplant, tomato, and chilies. The planting of fruit orchards, or diversifying towards floriculture, are also possible in areas where tobacco is currently grown. Multiple alternative crops will lead to higher economic gains.

An important plant of Indian origin, Plantago (Isbgul), which grows well and prospers in the mild winters, can be considered a viable alternative to tobacco. Plantago seed husk is used worldwide as a natural mild laxative. Traditionally in India Plantago has been used for this

purpose. The plantago crop has lent itself to mechanization. In the Western hemisphere, Mexico has taken up large scale cultivation of Plantago, where it was introduced from India. Considering its export potential, plantago cultivation can be revived in India.

Adoption of alternate crops already grown in the area

As can be seen in the following table, even in those states where tobacco is a major crop, other crops are being successfully cultivated. The popularity of tobacco is to a great extent due to its higher purchase price, but doesn't take into account the inputs required. The soil and other weather conditions are equally good for cultivation of other crops like cotton, chilies and grain crops already cultivated in the region.

Table 2. Percentage area covered by tobacco vis-à-vis other crops in the area having tobacco based farming system (1984-85) in the states of Gujarat and Karnataka

Crop	Gujarat	Karnataka
Food Crops	33.7	32.2
Groundnut	3.7	17.6
Castor	0.8	-
Cotton	2.1	-
Sugarcane	-	1.7
Fruit crops	1.7	-
Vegetables	0.7	0.9
Fodder Crops	2.0	2.9
Tobacco	53.6	35.9

Source: Jaisani B.G.: 1989.

A study⁹ carried out in Gujarat, another major tobacco growing state, revealed that:

- ?? Irrigated castor fetched the highest returns of Rs. 9,702 per hectare followed by irrigated cotton, which realized Rs. 9,560 per ha.
- ?? However, in the irrigated tobacco fields, two crops, tobacco-summer bajra or tobacco-summer groundnut, could conveniently be grown with a net realization of approximately Rs. 5,500 for tobacco-summer bajra and Rs. 5,700 for tobacco-summer groundnut per ha (see Table 3).
- ?? As regards the cropping sequences, tobacco-tobacco is the normal crop sequence in the majority of tobacco growing areas. Under assured water supply, tobacco-summer bajra is the normal crop rotation. Crop rotation studies have indicated that tobacco-summer bajra (first year), cotton (second year) and tobacco-summer bajra (third year), rotation gave more remunerative price than the traditional practice of continuous tobacco cultivation.
- ?? Tobacco-summer groundnut is also becoming a popular crop sequence in the tobacco growing areas of Gujarat.

⁹ Jaisani B.G.:1989.

Despite availability of alternate substitutes, tobacco continues to be cultivated mainly because stray cattle do not graze on it and because it is considered drought resistant. Irrigated conditions help improve yields.

Table 3. Economics of tobacco vis-à-vis other crops in Gujarat State

Crop	Yield (kg/ha)	Cost (Rs./ha)	Gross (Rs./ha)	Net (Rs./ha)
Tobacco	2,093	5,575	9,942	3,367
Bajra (Summer)	3,025	3,835	6,050	2,215
Cotton	2,740	5,510	15,070	9,560
Groundnut (Summer)	1,327	4,170	6,635	2,465
Soyabean	772	2,165	2,316	151
Castor	3,575	2,810	12,512	9,702

However, for better returns tobacco is usually cultivated after fallow; that is, the fields are left unused, with no off-season crop of any type being planted. This is important due to the heavy soil sickness induced by the tobacco crop. In fact, in a highly competitive agricultural scenario, keeping the land fallow is not sound economics.

Implementing the Alternate Cropping System

Following independence, a nationwide effort was undertaken in India to improve the agriculture scenario, as agriculture formed the economic backbone of the country. The Indian Council for Agriculture was established for an all-India coordinated effort to improve important crops, which included tobacco. These reforms helped India become self-sufficient in food grains, and improvement of the cash crops helped the textile, sugar and tobacco industries to prosper.

It is now time for new agricultural reforms with respect to crops to be considered seriously, given grain surpluses and health-related fallout of tobacco cultivation.

It is critical to reduce the area under crops that harm the health, such as tobacco, and those which are surplus, like wheat and paddy. Demarcating crop zones and cultivating for quality is necessary so as to compete effectively in the global and indigenous markets. The optimum crop environments available should be judiciously tapped. This proposal has come about in view of the over-production of rice and wheat in Punjab, and other states of India also having become self-sufficient in food grains, as it is difficult to export this surplus produce. Furthermore, in areas where there is a shortage of water, farmers may be advised not to cultivate rice.

A similar policy is required to reduce the cultivation of tobacco, in view of its direct adverse effect on users and the burden on health costs from premature deaths and disease in the economically productive age groups.

The green revolution in Punjab also eliminated tobacco cultivation from the State. In Punjab, about 1,000 ha was under tobacco until 1964. Later, the Government Tobacco Research centre was closed down. The remaining area in Punjab under tobacco was phased out and later

prospered as a cotton belt with the introduction of American cotton. Subsequently rice cultivation has also begun in some of these areas.

In conclusion, tobacco was never a traditional crop in the regions of India where it is now being cultivated. It can be replaced with a crop which is at least equally profitable, has export potential, and is user friendly. Plantago is a suitable alternative as it requires mild temperatures. Potential also lies in switching to other crops already being grown in the respective areas, with support from the government under the Blue Box or the Green Box strategies. All this no doubt requires a long-term, well-coordinated strategy involving policy makers, scientists, extension agents, NGOs, and farmers.

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To produce or not to produce: tackling the tobacco dilemma in Bangladesh

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Editors note:

Recent research conducted in Bangladesh indicates that tobacco may not be as profitable as many believe. The authors of this study found that growing vegetables and sunflowers can yield more money than tobacco at a lesser cost to the environment, and also benefit the health of the farmer. The following Executive Summary presents the main findings of the study, and argues that sound economic strategies will mean an investment in other areas of the economy, rather than tobacco.

Executive Summary

This study looks into the economics of tobacco cultivation in Bangladesh. Tobacco has been cultivated in Bangladesh for ages. Though the crop used to be grown in different parts of the country, it has now become concentrated in the regions of Rangpur and Kushtia. Recently, it has been reported that forests are being cleared in the Chittagong Hill Tracts to accommodate tobacco. An important source of this proliferation has been the patronisation by the various tobacco companies. In their quest for the cheapest possible price, these companies have been promoting tobacco farming as the trump card for prosperity and success of the farmers and their families. From the macro-economic point of view, it is seen as a good revenue source for the government.

At the macro level, tobacco cultivation appears to have reached a plateau and is now gradually dwindling. But a sustained decline is clearly lacking. Moreover, our survey shows that the crop is gaining increasing importance at the micro level. A quarter of the sample farmers have taken to tobacco farming in the past five years. Apparently the driving force behind this phenomenon has been the profitability of growing this crop. Tobacco has the reputation of being a very profitable crop with few 'equally lucrative' substitutes.

Results from a survey of 300 tobacco farmers revealed otherwise. Tobacco cultivation requires intensive labour and most farmers economise on the labour cost by using their own household labour. From the study it emerged that almost 50% of the total economic cost of labour is attributable to household labour. When the imputed value of this is taken into account, tobacco loses much of its profitability. High gross returns per acre do not necessarily imply high returns to labour. Therefore, when weighed on a cost-benefit scale, tobacco often yields a lower ratio than other food and cash crops. Indeed in our study a number of such crops were identified – maize, potato, sugarcane, sunflower, cauliflower and tuberose.

Substantial cost differentials exist between flue-cured tobacco and sun-cured tobacco – with the former being more than twice as expensive to grow as the latter. When tobacco leaves are dried

in barns to which heat is applied from the exterior, it results in flue-cured tobacco, while simple sun drying of tobacco leaves yields sun-cured tobacco. Our study revealed that sun-cured tobacco, which is grown widely in Rangpur, has a number of financially viable alternatives including boro rice, wheat, maize, potato, cauliflower, sunflower and tuberose. With flue-cured tobacco, which is predominantly grown in Kushtia, the range of alternatives is lower – sugarcane and tuberose.

In terms of material inputs as well, tobacco involves higher costs than most other crops. The bulk of this cost arises from fertilizers and curing fuel. These two items also account for more than 50% of the total cost of production. Given the input-intensive nature of tobacco, substantial capital is required during its production. Often farmers have to access loans or credit from external sources. Most of these farmers belong to the marginal and small farm size categories. Since the majority of these loans are tied to tobacco, the loans work to enhance the poor farmers' cycle of dependency. Moreover, with little collateral, farmers are forced to seek loans from the exorbitant village moneylender rather than approach formal financial institutions which disburse loans on easier terms.

Apart from the profitability aspect, guaranteed market and ready cash also play an important role in the farmers' decision to grow tobacco. The rational and intelligent farmer is unwilling to risk producing highly perishable food crops for which he may not get adequate buyers. On the other hand, with tobacco he knows that there will be buyers, though he may have to sell his produce at slightly lower prices.

Patronisation by different tobacco companies has been an important propelling factor in the spread of tobacco cultivation. These companies have their own registered contract growers who are mostly medium and large farmers. These farmers are provided with inputs such as free seeds, fertilizers, pesticides, and technical assistance. Depending on the consumers' preferences and market demand, the farmers are informed of the exact grade and quantity of the leaf desired by the companies which would be procured from them at a pre-determined price. Thus, for obvious reasons, the economic condition of the contract growers is much better than others. In fact, demonstration effect has an important role to play here; the non-contract grower is tempted to take up tobacco farming because his neighbour (who happens to be a contract grower) suddenly earn more money.

There is also an indirect patronisation by the companies. In addition to their contract growers, these companies also have traders who supply them with tobacco leaves. These traders buy out the required tobacco from the farmers, keeping some margin for themselves. In fact, in our survey, it emerged that most farmers disposed of their produce to these traders.

Tobacco is a health and environmental hazard. Continuous inhalation of the tobacco aroma emanating from the fields often causes dizziness, nausea and vomiting. Dermal absorption of nicotine while harvesting the green leaves leads to an illness called 'green tobacco sickness'. Curing of tobacco leaves and excessive use of chemical fertilizers contribute to environmental degradation. Interestingly, the majority of the farmers seemed aware of this. The survey also indicated that they were willing to quit tobacco production but were not well-informed about plausible alternatives, nor about ways to make the transition.

It has been argued that tobacco is a significant contributor to the government treasury, since this industry is one of the highest taxpayers. However, this cannot be encouraged, regardless of the quantum of its contribution to the government treasury. It is imperative for the government to understand that the direct and indirect costs of tobacco-related diseases offset the revenue from this crop, and accordingly stringent measures must be taken to curtail the production and use of this commodity. Farmers must be informed of the true economies of tobacco. In addition, they must be shown appropriate and feasible alternatives to tobacco through agricultural extension services. Providing marketing facilities, introducing sustainable procurement drives at reasonable prices, and enhancing the storage facilities would also act as catalysts for farmers to quit growing tobacco.

The supply measures delineated above have to be integrated with demand measures aimed at reducing tobacco consumption. Once these instruments are effectively employed, we can expect farmers to be motivated to quit the production of this so-called 'profitable' crop and start growing crops which are 'green' in the real sense of the term.

Tobacco farmers in Bangladesh: Exploitation at the hand of the tobacco companies

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Editors note:

Tobacco cultivation is often seen as a major benefit to the economy, particularly of poor countries such as Bangladesh. The following research indicates that while tobacco cultivation benefits some people, for most it is a burdensome job with meager economic returns. National statistics suggest that the district in which most tobacco is grown is one of the poorest. Tobacco cultivation is also a major cause of deforestation in Bangladesh, which should be a further cause of concern to the government. The research was carried out by Work for a Better Bangladesh, which works on tobacco control and urban environmental issues.

Summary

While Bangladesh is not one of the major world growers of tobacco, it does grow a fair amount. The acreage devoted to tobacco has decreased from 1991 to 2000, from almost 91,000 acres to just under 80,000 acres, while the production increased slightly, from over 34,000 to over 35,000 metric tons.

Table 1. Area and production of tobacco in Bangladesh, 1991-2000

Year	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00
Area (in acre)	90,910	89,325	90,545	89,285	89,525	86,180	81,105	78,240	79,910
Prod. (in M. tons)	34,080	36,380	37,770	37,760	39,375	38,100	36,655	28,795	35,480

Source: Bangladesh Bureau of Statistics, *2000 Statistical Yearbook of Bangladesh*. Dhaka: June 2002.

As can be seen in Table 2, Rangpur is the most significant district for tobacco cultivation, with other districts such as Kushtia also growing large quantities.

Table 2. Acreage and production of tobacco in three districts where tobacco farming is high, 1991-2000 (Area in acres and production in metric tons)

District	Area and Production	91-92	93-94	95-96	97-98	99-00
Kushtia	Area	9,940	13,290	13,200	14,480	16,650
	Prod.	3,615	5,675	5,635	7,245	7,990
Chittagong	Area	1,240	850	725	990	995
	Prod.	375	265	190	505	480
Rangpur	Area	59,180	63,375	64,300	57,320	50,860
	Prod.	23,375	27,630	29,635	26,130	23,970

Source: Bangladesh Bureau of Statistics, *2000 Statistical Yearbook of Bangladesh*. Dhaka: June 2002.

Interestingly, these two districts are among the lowest in terms of literacy rate: 26.7 among both sexes in Rangpur and 25.8 in Kushtia, compared to a national average of 32.4¹⁰ (Table 3). While Kushtia fares slightly above the national average in terms of average daily calorie intake (2,185 calories vs. the national average of 2,157), Rangpur fares much worse (2,014 calories). Kushtia and Rangpur are both under the national average in terms of daily consumption of rice (417 grams in each district, as compared to 426 for the national average), and for monthly expenditure on milk (30.7 taka per month in Kushtia and a mere 15.3 in Rangpur, compared to a national average of 38.2). The only area in which they both seem to benefit is in their comparatively low expenditures on tobacco, presumably since they grow enough that they do not need to purchase it¹¹.

When asked if their family faces economic hardship to meet its basic needs, over 40% of households in Kushtia, and over 59% in Rangpur, said yes, as compared to almost 45% of households nationally.¹² Both districts thus fare worse than the national average in terms of literacy, and while Kushtia is doing slightly better in terms of some economic statistics, Rangpur, where most of the country's tobacco is grown, is doing far worse. Tobacco, the traditional crop for much of the population in both areas, is clearly not helping to eliminate, or even in the case of Rangpur to reduce, poverty.

Table 3. Assorted measures of well-being in tobacco-growing areas vs. national average

	Literacy	Economic hardship (yes)	Daily caloric intake (Kcal)	Daily rice consumption (grams)	Monthly expenditure on milk (taka)	Monthly expenditure on tobacco (taka)
Kushtia	25.8%	40.4%	2,184.8	417	30.7	31.3
Rangpur	26.7%	59.2%	2,013.7	417	15.3	18.9
National average	32.4%	44.7%	2,156.6	426	38.2	47.8

Source: Bangladesh Bureau of Statistics, *2000 Statistical Yearbook of Bangladesh*. Dhaka: June 2002 and Bangladesh Bureau of Statistics, *Analysis of Basic Needs Dimension of Poverty, Volume III*. Dhaka: August 1998.

In order to gain more in-depth understanding of the situation of tobacco farmers in Bangladesh, we traveled to Kushtia and talked to 35 tobacco farmers from different villages. According to national statistics, residents of Kushtia should fare somewhat better than in Rangpur. The farmers described their work, and their sense of exploitation at the hand of a few rich middlemen and the tobacco companies.

According to the farmers we interviewed, British American Tobacco (BAT) has built up a grower class in the region, consisting of BAT's registered farmers. The farmers with whom we spoke said that the registered farmers working for BAT, Dhaka Tobacco, and other companies account for 10% of the total number of tobacco farmers in the area.

¹⁰ Bangladesh Bureau of Statistics, *2000 Statistical Yearbook of Bangladesh*. Dhaka: June 2002. Figures are for 1991, the most recent available, for those aged 7 years and over.

¹¹ Bangladesh Bureau of Statistics, *Analysis of Basic Needs Dimension of Poverty, Volume III*. Dhaka: August 1998.

¹² Bangladesh Bureau of Statistics, *Analysis of Basic Needs Dimension of Poverty, Volume III*. Dhaka: August 1998.

Registered farmers, especially those of BAT, receive seed, fertilizer, pesticides, and other inputs from the company as a loan, so that they do not need to make any sizeable investment at the time of farming. Most of the registered farmers are content with their conditions, and feel they are making a reasonable amount of profit. Even among this group, a few problems emerge, in terms of long waiting periods to sell the leaf, or being charged for the inputs they received from the company at a high rate when they sell the tobacco.

But the bigger problem is that faced by the non-registered growers. BAT determines how much tobacco they will buy from the registered farmers. If those farmers need more tobacco, they buy it from non-registered farmers at a low price. Thus while a few farmers benefit, the majority are forced to sell their leaf at low prices. The pattern of exploitation holds the same for local companies, which the farmers claim take one to two months, and sometimes even a year, to pay the farmers for their tobacco.

As an example, there are about 150 tobacco farmers residing in Nayenpur village of Kushtia district, of whom only *eight* are registered farmers. The remaining farmers must use their own money to buy seed, fertilizer, pesticides, and other inputs. The unregistered farmers sell their tobacco to brokers on the open market; the brokers then sell the tobacco to the various companies. While registered farmers receive 60 taka (US\$1.04) per kilogram from the companies, the unregistered farmers receive only 20-30 taka (\$0.35-0.52), and sometimes as little as 5 taka (\$0.09) per kilogram, which is insufficient to meet their production costs.

A number of farmers in the area now grow corn, vegetables, sugarcane, and other crops instead of tobacco. They find that growing corn or vegetables can be more profitable than tobacco, but most farmers do not have sufficient money to invest in these alternate crops. If they were able to obtain loans from government banks to switch, they would gladly grow vegetables and other crops rather than tobacco. But government loans are complicated and difficult to obtain. BAT and other tobacco companies are thus easily able to trap the poor farmers into growing tobacco, simply by making loans easily available to them.

A note on deforestation

Of further concern is the issue of tobacco's toll on the environment. As shown in Table 4, the forest area of Bangladesh, in square kilometers, declined from 1995 to 1997.

Table 4. Forest area of Bangladesh

Year	1995-96	1996-97
Area (sq. km)	21,913	21,657

Source: Bangladesh Bureau of Statistics, *2000 Statistical Yearbook of Bangladesh*. Dhaka: June 2002.

The forest area is also declining in the areas in which tobacco is grown, Table 5 (Kushtia is not included as its forest area is virtually nonexistent).

Table 5. *Forest area in Districts where tobacco growing is high*

District	1995-96	1996-97
Rangpur	28.75 km	27.77 km
Chittagong	4,924 km	2,730 km

Source: Bangladesh Bureau of Statistics, *2000 Statistical Yearbook of Bangladesh*. Dhaka: June 2002.

Research suggests that tobacco growing is a significant cause of deforestation in Bangladesh, accounting for over 30% of annual deforestation, putting the country third internationally in terms of the severity of the problem. Not only is tobacco farming not a great source of income to farmers, it is also disastrous for the environment.

Table 6. *Rates of deforestation caused by tobacco*

Country	Total annual wood consumption ('000 tons)	Total annual deforestation ('000 hectares)	% of total tobacco related deforestation
South Korea	272.2	13.0	45.0
Uruguay	7.6	0.4	40.6
Bangladesh	128.0	9.0	30.6

Source: Geist, H.J. "Global assessment of deforestation related to tobacco farming." *Tobacco Control* 1999;8:18-28.

Case Studies

1. "Usually I just run into debt."

Mahbul Alam* is a 40-year-old tobacco farmer of Nayanpur village, Mirpur thana, Kushtia. He has three children, the eldest of whom is in school. Alam owns one acre of land, and leases another acre to cultivate tobacco. Half of what he earns selling tobacco goes to pay rent on the land; he uses the rest to pay for all his inputs, and hopefully make a profit. Since Alam is not a registered farmer, he sells his tobacco on the open market, receiving from 5 to 30 taka per kilogram for the leaf, as opposed to the 60 taka earned by registered farmers.

When asked why he sells his tobacco at such a low rate, he replied that he has no choice, as there are no other buyers, and otherwise the tobacco would remain unsold and rot. As to how much he earns, Alam replied, "I often cannot meet my expenses. I have to borrow money to meet the family expenses, and the educational costs of my children. I always hope for profit and continue growing tobacco, but usually I just run into debt." When asked about the common belief that growing tobacco is profitable, Alam became angry, replying, "The profit goes to those who have a lot of land and a company card, so that the company buys directly from them. But the number of cardholders is very small. Most of the farmers are like me. We are always deprived, while the profits go to the buyers of the tobacco and the companies."

* All names have been changed in the case studies.

2. The pains of curing tobacco

Gulam Ali, a 35-year-old man who has three acres of land which he uses to cultivate tobacco, described the process of curing tobacco. Curing is needed for the taste, aroma and color; the process takes one and a half months. Each batch of tobacco requires 4-5 days to dry, during which someone must keep watch all day and night. Due to the unavailability and expense of wood, the tobacco is usually dried by burning straw.

Gulam's wife, 12-year-old son, and younger brother all help him with the work of growing tobacco. He and his family members assume the chore of watching the tobacco as it dries. He said they become dehydrated sitting by the fire, and must drink a lot of coconut water, date juice, and other liquids. The work also exhausts them; when the process is over, they have no energy left for other work. "Whenever I sit down, I fall asleep. It is so tedious and painful to dry tobacco," says Gulam.

3. Turnips vs. tobacco

Kutubur Rahman is a 40-year-old father of four, two of whom are in school. He has three acres of land, which he uses to grow rice and turnip. It takes a month and a half for the turnip to mature, yielding a net profit of 20,000 taka (\$346). Kutubur explains that cultivating tobacco requires 24,000 taka (\$415) per acre, as opposed to 9,000 (\$156) for turnips, then returns 12,000-14,000 (\$207-\$242) after four months. Though it requires more labor and money, the return is less than for turnips. "So why would I grow tobacco?" asks Kutubur.

4. No time for studies

Karim Uddin is a 42-year-old farmer, and father of two children. His son studies in class 10, but also helps with farmwork. Karim explains that it takes four months to grow tobacco, from sowing the seeds to selling the leaf, and that a great deal of labor is required during that period. His wife and son must help him with the work, which hampers his son's studies. His son must take three to four months off from school in order to help with the tobacco farming. Karim told us that he goes to the school himself to ask for leave for his son, who then becomes weak from the effort he spends in growing tobacco, and thus is not able to study at night. While his son's examinations are approaching, he has no energy for preparation, so it will be tough for him to pass the examinations, which worries his parents, who would like to see him have better opportunities for the future than they currently enjoy.

5. For lack of a bank loan...

Rajab Ali is a 55-year-old resident of Baruipara, Kushtia. He is a registered farmer of BAT, cultivating tobacco on two acres of land. He told us that cultivating tobacco is expensive and labor-intensive, and that its cultivation harms both health and the environment. When asked why he grows tobacco, he explained, "I have no money. BAT helps me with everything for tobacco cultivation, so I have no expenses. I want to cultivate corn. I went to the bank, but the bank refused to give me a loan to grow corn. They want some money before they will give me a loan, but if I give them money, then I will not have enough left to grow corn. But tobacco cultivation is not so profitable. Only at the beginning did we receive some money from BAT, but the selling price is not sufficient for our labor. If the government would give people loans to grow other crops, then not just me, but many other farmers would stop cultivating tobacco."

6. A hard sell

Anwar Haq, aged 52, is also a registered farmer with BAT, growing tobacco on his four acres of land. He explains that BAT gives him seed, fertilizer, and insecticide to grow tobacco, but he and other farmers face problems when it comes to growing, curing, and selling. Sometimes the buyers keep the farmers waiting all day, and they have no right to sell to anyone else. Sometimes the company representative rejects their tobacco, and they must return with their unsold leaf. “It is a hard job,” says Anwar. “We have to remove the bad leaf, which increases our labor cost. The companies are thus able to reduce our profits, but if we complain, they threaten to cancel our registration.”

7. Can corn earn me more?

Kamruddin, aged 35, is a well-educated man with a small family. While historically his family has grown tobacco, he has come to question this decision. “My father also told me that growing tobacco is not as profitable as he thought,” he commented. His father previously stopped growing corn to grow tobacco, believing he would make more money, but his experience proved otherwise. After taking into account all the inputs, he was actually earning less money, and so switched back to growing corn.

Since Kamruddin’s labor force consists only of himself and his wife and father, and his wife is busy with their baby, he cannot afford to provide all the labor needed to grow tobacco, and does not wish to use a portion of his profits to hire people to do the work. He is also worried about the health effects on his baby of the various chores involved in cultivating tobacco, and the baby’s potential exposure to nicotine from the plants. For this reason he has decided to grow corn instead, which while yielding a seemingly lower profit, also requires far less work and inputs. “For me and my family, corn works out better than tobacco.”

Bidi workers in Ahmedabad, India: Monotonous work, low pay

Priya Raghavan, Research Associate, TALEEM

Editors note:

One of the main segments of tobacco-related employment in India and Bangladesh is bidi work. The process of making bidis is quite labour-intensive, and thus employs a large number of people. Most of the employees happen to be women and children; the uncomfortable, boring, repetitive nature of the task, and its extremely low pay, mean that men are unlikely to accept the work. This study presents the findings of discussions with bidi workers in one area of India, highlighting the stories of some of the individuals involved in this work. The research was carried out in collaboration with TALEEM Research Foundation, Ahmedabad. TALEEM promotes research, education and training among the less privileged.

Summary

Interviews with bidi workers in Ahmedabad revealed various issues. The workers described bidi work as extremely low-paid, time-consuming, and uncomfortable. The work involves long hours in one position, repeatedly performing the same manual tasks. The monotony of the work combines with the physical discomfort of being stationary and engaging in repetitive movements, to make the task highly unpleasant.

Bidi workers seem to consist mostly of women and children, with men considering the work too low paid or otherwise beneath them. Women and young children are the most likely to submit without complaint to monotonous, physically painful work that pays very little. Since their time is considered of no value, the little they do earn is considered a benefit, while men would consider such low pay as an insult and a waste of time. The semi-purdah condition of many women's lives, in which they are unable to leave home to seek alternate work, also means that they have no choice but to accept whatever piecemeal work they can find at home.

With little by way of education, skills, and confidence, doing bidi work is one way for women to feel they are contributing financially to their household. The buyers obviously gain from the low status of women, using the situation to enforce low wages, refuse benefits, and to cheat women by selling them rotten leaves (the buyers refuse to accept the bidis rolled with rotten leaves, and force the women to buy fresh leaves to replace them). Women's lack of emancipation and options means that the buyers can simply threaten to stop selling them leaves if the women object to the abject conditions and exploitation.

Added to those problems is the issue of wages. The workers complained of being treated unfairly by the buyers, who often give them poor quality leaf, then refuse to pay them for bidis if the leaf is below standard. They found little success in resolving labor disputes. Interestingly, they reported that bidi work serves more as casual employment than as a major source of income. Rather than being a form of sustenance, it is simply a way to earn a little extra cash. Where bidi rolling is the major source of income, the workers live a difficult life, and are barely able to afford the most basic essentials for themselves and their families.

Case Studies

1. A widow's survival

Radhabehn Ramnarayan Sirpuram* is a 50-year-old widow. Her mother died when she was young, so most of her childhood was spent taking care of her two younger brothers. At the age of 18 she was married to a man who died seven years later. Radhabehn had four children with him, two sons and two daughters. While her older son has moved away and her older daughter is married and employed (also rolling bidis), the younger daughter was widowed two months after marriage, and returned to live with Radhabehn and the younger son.

Radhabehn learned bidi rolling after her marriage, about 30 years ago, by watching other women in her neighborhood. Since her daughter earns a decent wage doing tailoring, and her younger son is earning a good living polishing diamonds, she did not appear overly concerned at the very low rate of pay for bidi work. She also sees no alternative to the low wages, as she is not trained in other work. If she tried to demand better pay, the buyers would simply stop giving her work, and find other women in more desperate need of money to exploit.

Radhabehn rolls bidis for 5-6 hours a day, but with advancing age she says she is not able to roll bidis as fast as before. Long hours of sitting on the floor cause her body to ache, and while cutting the leaves she experiences pain from her wrist to her upper arm. Lately Radhabehn's health has been poor, and she is suffering from high blood pressure and chest pain. The medical tests she has undergone have cost her about 800 rupees**. She avails herself of the free medical facility provided to bidi workers at a health center, but those services only cover minor illnesses like cough, cold, and fever. In case of any serious illness or for any medical tests, workers have to visit private clinics and bear the costs, just as they must suffer the consequences of their lower productivity with advancing age.

2. Generations of bidi workers

Rajashree Avar is an unmarried 29-year-old woman, living with her family. Bidi rolling is the main source of income in their household. Rajashree, her other four sisters, and her mother all roll bidis. Her one brother earns about 1,000 rupees a month stitching women's clothes in a tailor's shop.

Rajashree's mother Shyamalaben learned to roll bidis from her sisters-in-law. When she started rolling bidis about forty years ago, the rates were 3 rupees per 1,000 bidis, which has now increased to 34 rupees per 1,000. However, Shyamalaben says that though the wages appear to have increased substantially, the purchasing power with the current wages is low.

Rajashree has been rolling bidis for the past 8-9 years. She learnt the trade from her mother initially by helping her tie the bidis, remove the veins of the leaves and cut the leaves. Now Rajashree herself rolls about 1,000 bidis in a day. Her mother and two younger sisters make about another 1,000 in a day. The mother's speed has fallen considerably now, so she cuts the leaves and the girls roll the bidis.

* All names have been changed in the case studies.

** 48.59 rupees = US\$1.

Rajashree explained that a labor union exists which attempts to raise the wages and improve the conditions of the bidi rollers. The union recently organized a work stoppage for a month and a half to secure employment benefits for the workers. At the beginning of the strike, the workers were firm in refusing to accept bidi work, but the buyers then turned around and refused to offer it to them, and as time passed, various people began to give in quietly and accept bidi work. In the end, the strike fizzled out, and the workers returned to the job at the previous rate.

Rajashree's family members complained of body ache due to long hours of sitting. They are unable to access the free medical treatment provided to bidi workers by a local NGO, because the clinic is too far from their home, and they would have to spend money on transport. They prefer to visit nearby private clinics when they fall ill.



A girl rolling bidis

While the family members acknowledge that bidi rolling pays very little, they are apprehensive about seeking other work, as they have never tried anything else. Bidi rolling can be performed at home, while they look after the children and household. Though the money is very little, it also requires almost no investment to begin, other than the raw materials which they must purchase from the buyers. With no skills or money to invest in other trades, they have no choices. Their meager earnings are barely sufficient to run the household and do not permit them to take any risks in alternate employment. They are caught in the poverty cycle, where lack of education, skills, and money forces them to accept low-paying work, which in turn guarantees that they will never be able to seek better alternatives. The buyers benefit from the women's poverty and lack of emancipation, paying them low rates and refusing them work if they protest.

3. A career in bidi work

Sudhaben Rajnarayan Koshti is a 29-year-old married woman, and the youngest of eight siblings. She only studied to class four before dropping out of school to join her mother in bidi work. She was married at age 20 to a man working in a textile mill, where he earns 30-35 rupees a day. They live together with her husband's mother and married brothers.

Sudhaben has two daughters, aged seven and two. Sudhaben has been rolling bidis for more than nine years. She works for about eight hours a day, making 600-700 bidis, for which she earns about 25 rupees a day. She is highly dissatisfied with her contractor, not because of the rates he pays, but because the leaves he provides are of poor quality, so she cannot use them all, thereby creating a shortfall in the number of bidis that she makes. She feels highly exploited because it is the contractor who gives her the leaves in the first place, yet if she makes bidis with the spoiled leaves, he rejects them. To meet the shortfall, she has to buy leaves from him at her own expense. It is no use to complain, as he merely suggests that she quit. Feelings of worthlessness, helplessness, injustice, and exploitation seem an intrinsic part of bidi work for Sudhaben.

Sudhaben also expresses disgust with the trade because of the inadequate returns for the effort. She would like to quit and look for other employment, but her husband and other family members object to her working outside the home. Other home-based labor, such as making candlewicks, is similarly time-consuming and low-paid, and is thus not a viable alternative to bidi work.

Since the clinic is too far away for her to visit, Sudhaben does not benefit from the free medical services provided by a local NGO. While she belongs to the trade union, it has obviously done nothing to lessen her feelings of exploitation, to improve her working conditions, or to increase her pay.

4. Children are the only social security

Kamma Ramdas is a 72-year-old widow, who moved to Ahmedabad about fifty years ago with her husband. Her husband died when she was carrying her youngest child. Though Kamma gave birth to nine children, only four survived. While her sons were able to study for a few years, her daughters never went to school, and are now married and living with their husbands' families.

Having learnt bidi rolling from other women in the neighbourhood, she has continued the work for 25-30 years. She also taught her daughters, and together they make 1,000 bidis a day, which was the sole support for their family after her husband died. As she grew older, her vision and speed declined, as did her income, but fortunately her children began earning to support the family. She has since retired from the work.

Her involvement in the labor union was more positive than other interviewees, in that she saw increases, albeit extremely small ones, in the income. Meanwhile, the work caused her backache, chest pain, and pain in her hands. While she occasionally used to visit the free health services provided by a local NGO, she can no longer afford the travel, nor can she travel alone with such poor vision. Though she worked at the same company for 25 years, she received neither employment allowances nor retirement benefits.

5. Stuck in bidi work

Manamma Laxmi Duttu Mantati is a 50-year-old widow, the oldest of five siblings. Married at age seven, she had no opportunity to attend school, and was forced into employment as soon as she got married. Her mother-in-law found weaving handloom sarees to be a strenuous job, as it required sitting in the scorching sunlight, and suggested bidi rolling as a less unpleasant alternative. After studying for a year, Laxmi was able to roll bidis herself by age eight.

Her husband, who was working in a mill, began drinking and gambling heavily, and contributed almost nothing to the family's support. Laxmi was forced to support the family herself through the only trade she knew, bidi rolling. At the age of 21, her husband, who was in his forties, was crushed under a wall and died. She received no death benefits from the mill.

Although Laxmi gave birth to four sons, two were born premature and later died. She receives little support from her sons, who have more affection for alcohol and gambling than for their mother.

Laxmi is accustomed to spending 8-10 hours a day rolling bidis, in which time she used to be able to roll 1,700 bidis. Due to labor disputes, about seven years ago a contractor paid her 3,000 rupees compensation, then fired her, in order to avoid having to pay higher wages and benefits. She then started rolling bidis for another company, working for 7-8 hours to roll 600-700 bidis, for which she earns 600 rupees a month. Having been trained as a midwife by the union, she is now able to earn an extra few thousand rupees a year for assisting with deliveries. Like other bidi workers, she complains of headache, backache, and cough.

While Laxmi used to save 40-50 rupees a month, she can no longer afford to due to the rise in prices of essential commodities. She has sold all her jewelry and used all her savings to support herself. She feels that the actual value of the income from bidi work was greater 25 years ago, but sees no option for changing her job, since she has no skills for other work. Fortunately one of her brothers who visits her occasionally gives her money, without which she would not be able to survive. For Laxmi, life is a daily struggle to meet her most basic needs, a life where the future is even dimmer than the present.

6. Lacking choices

Sushilaben is about 50 years of age. She was married at age 18 to a mill worker, who was earning 4,000 rupees a month. After the mill closed, he found work at a cloth factory for 1,000 rupees a month. They have five children, two of whom are married. With the help of a loan, Sushila and her husband were able to buy a 3-room house.

Sushila has been rolling bidis for 30 years. While she learnt the trade as a child from neighbourhood women, her father did not allow her to make them. She now makes bidis at home for 8-10 hours a day, along with her youngest daughter and two daughters-in-law, for which they earn very little—68 rupees among the four of them—and receive no benefits.

Due to her age, Sushila can no longer roll the bidis, but uses her skill to cut the tendu leaves. Due to tremendous inflation, she feels that the payment of 25 years ago, of 3 rupees per 1,000 bidis (as opposed to 34 now) was higher, in terms of what she could purchase with the pay. The

long hours of sitting in the same position cause body ache, but the women see no alternative to the work, as they have little education and no other skills.

7. Bidi work is better than nothing

Married before she reached the age of 15, Ayesha Salim Khan has been living with her husband's family for the past 22 years. She has four children; her daughter is still in school, while her three sons dropped out after class 10 to start work. She learned bidi rolling as a child, but only began doing it two years after her marriage, along with some friends and neighbours. Her husband and children object to her rolling bidis, but she feels it keeps her gainfully occupied, and gives her a little pocket money for odds and ends, and to feel that she has some worth, since housework is not considered genuine labour.

Ayesha works quickly, and is able to roll about 1,000 bidis a day in just four hours, leaving her time to attend to her family and complete her household chores. The work also allows her to benefit from the special government program for bidi workers, namely a scholarship for her daughter. The kind of bidis she rolls are larger, and she gets paid 36 rupees per 1,000, rather than 34.

Ayesha was recently involved in an unsuccessful strike by the bidi rollers, demanding higher remuneration. The strike did not resolve any issues. Following the strike, like the others in her neighborhood, she returned to work under the previous conditions.

For Ayesha, bidi rolling is a reasonable form of employment; it is a common, acceptable form of work for women in her neighborhood, and gives her a small additional income, that she can consider her special contribution to the household.

8. From bidi rolling to tailoring

Motiben Jayantilal Koshti, aged 38, comes from a family of bidi rollers. Having been widowed about ten years ago, she is the sole source of support for her two children and herself, with whom she lives in a one-room house. She used to roll bidis full-time along with her mother and sister, but soon found that the work paid too little to earn a living. She had learnt tailoring as a hobby in her childhood, and would stitch clothes for her family.

About seven years ago, Motiben realized that she should try earning her living that way instead, and successfully changed her vocation to tailoring. She is delighted with the change, since tailoring is far more lucrative than bidi rolling. While she can only earn 34 rupees a day if she is able to roll 1,000 bidis, she makes about 100 rupees a day for tailoring, and earns even more during periods when many festivities and weddings occur.

Motiben's mother and sister continue to roll bidis, not because the work is enjoyable or pays well, but because "it's what we do".

Visit to the bidi dispensary, Manikhadki, Rakhial, Ahmedabad

The bidi dispensary has been set up by SEWA, a Non-Governmental Organisation working for the benefit of bidi rollers. As the doctor whose name was posted in the workers' dispensary was on leave, we spoke to the pharmacist, Mr. Hitesh Dave, who is running the clinic in the doctor's absence. Mr. Dave joined the clinic only a few months ago, but has been working with bidi rollers for 13 years. Mr. Dave explained that bidi rollers frequently complain of backache from many hours of sitting in the same position, and also occasionally of cough. He said that some bidi rollers also complain of their skin turning yellow from bidi rolling. He felt that bidi rolling does not affect the workers' health greatly if they are able to do it outdoors.

Child work in the bidi industry, Bangladesh

Therese Blanchet, Social Anthropologist
Report prepared for UNICEF, Dhaka, March 2000

Editors note:

The following article is an excerpt from a report commissioned by UNICEF in Bangladesh. While the report highlights the difficult conditions suffered mainly by children in the bidi industry, it also illustrates the problems faced by the women in this line of work. For most, the pay is so low that the job can hardly be considered as viable employment, and other reasons account for their involvement in the work, mainly exploitation by parents and husbands. The stories the bidi workers tell illustrate the extreme difficulties of their lives, and the misery of a form of labour that offers almost no chance for advancement or economic improvement. This excerpt is printed with permission from UNICEF.

Background

This report presents information gathered in five sites in Bangladesh, from a questionnaire administered to 440 households, focus group discussions, case histories of child bidi workers, and interviews with labour union leaders, mothers and fathers of child workers, ustad (supervisors/trainers) and divers (registered workers who sub-contract others), factory managers, teachers and head teachers, NGO workers, and factory inspectors. Children were observed working at the factory and in their homes.

Bidis are cheap hand-rolled cigarettes filled with the chopped leaves and shredded stems of the tobacco plant, then flavored with spices. Bidis are sold in packets of 25, for US\$0.05-\$0.07¹³. Bidis are simple to make, requiring no sophisticated technology, or even electricity. Unlike Indian bidis, Bangladeshi bidis are rolled in cigarette paper, rather than in tendu leaf. The transition to cigarette paper made the rolling of bidis much easier, so that the job could easily be carried out by children.

Rather than paying workers directly, a quota system is used. Those who hold a number receive payment for delivery of a certain number of bidis. It is the middlemen who contract the bidi rollers, generally women and children, and who keep the largest share of the pay for the work. In one site, workers (those who actually roll the bidis) receive \$0.18-\$0.71 per day, depending on the quantity they can handle (3,000-12,000 bidis/day). In that site, newcomers are not paid the first 3-4 months of work. In another site, home-based workers were paid 7.2 times less than factory workers. In another site, women report that after two hours of work, they earn \$0.04, whereas a cup of tea costs \$0.04-\$0.05. Bidi workers receive from 22%-65% of the wages stipulated by government, with the higher figures going mostly to adult men and women, and children and young women being paid on the lower range of the scale.

One sub-contractor, referring to a sign at the entrance of a factory stating that he is against child labour, remarked, *“The owner placed this here but he does not want to stop child labour. Nor*

¹³ All taka figures from the original report have been converted into inflation-adjusted US dollars.

does the government. Who will work for \$0.35 a day? No adult. We need the children. The owner gives us \$0.59 for this work but we get it done for \$0.35. We cheat the children.”

Making bidi is a repetitive and boring job that requires sitting in the same position for long hours, and provides little intellectual stimulation.

Reasons for doing bidi work

The reasons for children and women to engage in bidi work vary by site. Given the extremely low pay, it is not only poverty, but other factors, that cause parents to push their children into the work. This study found that 36.6% of mothers said that poverty was the main reason they engaged their children in bidi work. Other reasons include:

- ? ? Mothers who work at factories for (relatively) decent pay, who have no one to look after their children or protect their daughters at home; they then bring the children with them to the factory, and the children naturally spend their day working as well.
- ? ? Purdah of mothers, which causes them to work at home (not being allowed to go to the factory); since they and their daughters earn so little, they may push their sons to work in the factory.
- ? ? Women whose husbands either do not work, or do not share their income with their wives, may force their young children to make bidis, since they can also force the young children to hand over their entire income.
- ? ? A way of controlling children (keeping them out of trouble). *“Let him not be a thief or a dacoit. Let him learn to work,”* said one mother of her son.

Men consider “sitting work” unmanly, and, combined with the low pay, refuse to do the work, forcing their wives and children into it instead. Among bidi-making families, there is a high rate of polygamy. Women and children engaged in bidi work can support themselves, allowing men to marry more wives. Through their polygamous unions and the fathering of many children, men effectively ensure a steady supply of bidi workers. If a wife becomes sick and unable to work, he may divorce her.

One case study involves a 15-year-old boy who has been making bidi for six years; he explains that his father gambled away a large sum of money he was managing, and so he and his brother were forced to drop out of school and make bidis. Said the boy, “My younger brother is in very bad health. But our father wants money. What bad effect this work has on our health, Father does not want to see. For the last three weeks [before the interview] we did not have a single day off. We have been working seven days a week, 10-12 hours a day.”

In the study, children’s bidi work contributed 8-40% of family income. Part of the reason for the high percentages, in the children’s words, are the fathers working little, spending most of their money on themselves, and showing no responsibility towards their families. On average across the sites, boys earn \$12.47 a month, and girls \$4.93. Part of the difference is that girls spend 40% less time on bidi work compared to boys, since girls must also do a range of housework and child care. The study found that while more boys than girls work in factories, more girls work from home, and quite possibly overall, more girls than boys do bidi work, as well as starting at a younger age than boys.

While many boys quit bidi work when they become older, and other occupations, such as rickshaw pulling, become possible, girls do not have such a choice. Though some girls may drop out temporarily during adolescence, many are forced to continue when they marry, and are thus consigned to a lifetime of bidi work.

Two sisters describe how they feel about bidi work:

“I don’t like sitting all day. I hate bidi work. I have been doing it for too long. The pay is so low and my mother keeps it all. I work because I am afraid of her. If I don’t work, she punishes me. If somebody told me to starve and not do bidi work, I would be happy.”

--11-year-old girl

“I have been doing this work since I was 5 years old and I don’t want to continue after my marriage. ... I will never let my children do bidi work, nor any work that requires sitting all day long.”

--14-year-old girl

Factory work

Of the working children surveyed, 13% were below age 9. The youngest children worked in factories the same number of hours as older children, and were generally in poor health and had stunted growth. The younger a child enters the factory, the longer he remains employed and the greater are the damages. Such children lack sleep and have poor appetite; sometimes they also lack food.

“At the factory, I am the youngest, so everybody beats me. Today I had a fight with another boy and the ustad [supervisor] sent me home. My mother was very angry when she saw me and she beat me. I still have to get the beatings from my father. This will come when he returns. My ustad knows that by sending me home, I will get more severely punished than if he punishes me himself.

“On the days I work, I am allowed to buy a plate of rice for \$0.05, but when I don’t go to the factory, I get no food. This morning, I went to the factory without eating. I came back without getting any food. The ustad did not even buy me a bun. Usually he does when I tell him I am too hungry to concentrate.

“My brother and I, we don’t like this work. But our parents don’t want to know. If I don’t go to the factory, I get no food.”

--Batsu, 8 years old

Batsu and his brother were covered with scabies, and appeared in very poor health. Batsu especially looked stunted.

Most (76%) of the boys worked in factories, and most of the girls (81%) worked at home. Each location has its problems. In general, the physical environment of the factory is worse than the home. Most factories are large tin sheds with cemented floors, on which hundreds of workers sit. Some factories are 2-3 stories high, with the upper floor getting unbearably hot during the hot season. None of the factories visited had fans. While some workers are able to sit on verandahs, others sit in dark, stuffy corners. Latrines are insufficient and those that exist are very poorly kept. Drinking water and canteens are also inadequate. However, in general, factory work pays much higher than work at home.

“Before I was healthy. Now I am weak and thin. Every day I breathe tobacco gas and fine tobacco dust. It is very hot at the factory. There is no circulation of air. And for hours I must sit in the same position. You see how small I am. That is why I don’t have a normal growth, because I spend all my time sitting.” --12-year-old boy

Among the many problems faced by those in bidi work are the repetitive and boring nature of the work; pain in different body parts; bad smell and lack of ventilation; abuse and harsh treatment from their supervisors/bosses; long duration of work; and stunted growth, back pain, loss of appetite, dizziness, heartburn, weakness, stomach upset, fever, headache, cough, and respiratory diseases. Factory bidi workers who spend their days indoors are generally identifiable by the yellowish colour of their skin. Tuberculosis is known as a common disease in crowded factories. The impact of breathing tobacco dust, and the likely high rates of smoking among bidi workers, are not known. While boys suffer from violence and beatings in the factories, girls suffer from sexual harassment.

An orphan living with her aunt tells this story:

“My sister and I worked for three years under the same ustad. He was very kind to us. At lunch, we could not go home, so he gave us a bun, biscuits, or something else to eat. I became very close to my ustad and depended on him. At night, we used to walk back together because we live in the same village. My aunt required that I make 10-12,000 bidi and earn US\$0.89-\$1.06 a day. To earn that much meant that I finished work late at night and walked back to our village which is some distance away.

“One night our ustad sent my sister Rina early and took me home alone. On the way, he kissed my breasts and touched me. I felt ashamed. He gave me \$0.18 and told me not to tell anyone. If I did, I would lose my job. I was crying and I was very afraid but the next day I told [my aunt] all the same. She did not believe me. She said I just tried to avoid going to work. So I went back to the factory because I feared my aunt. When my ustad saw me he realized no one would protest if he went even further with me.

“...Once his wife was away, he took me to his home. ... He grabbed me and did illicit things to me. ... In this way I had sex with him quite a few times. Then one day, I started menstruation. I told him and his attitude towards me suddenly changed.” After being fired, her aunt sent her to another factory, where she still has to work late at night.

“This is the way factory girls get spoiled. There is no justice for poor girls. My aunt keeps all of my income. She does not give me anything, not even pocket money. She collects my wages

directly. ... Don't worry about me. I am already spoiled. I think more about my little sister. What will happen to her? If she stays here, she will also get spoiled. I think it is better to die from a bullet than work here. Nobody believes us. Our word has no value."

--13-year-old girl

One bidi union leader known to arbitrate conflicts at the factory was asked whether he would intervene and defend a child if she complained of sexual abuse from her supervisor. He replied that as a labor leader, he was mainly concerned with the welfare of the official employees, not their helpers (the children).

Factory owners regularly ignore all the labor laws about maximum hours worked per day, mandatory vacations, decent working conditions, and minimum wage. A final problem with the factory environment is the often all-male atmosphere, in which children grow up with no positive role models. Lack of schooling, repetitive work, and no intellectual stimulation hamper the mental and social as well as physical development of children.

Home-based workers

Many home-based workers have a more flexible schedule than factory workers, and may do bidi work only part-time. Their work environment is generally more pleasant, and children work under the supervision of their parents, usually the mother. While some gather together under the shade of a tree and chat or listen to a radio, in other cases, girls and women work in isolation in the confines of their homes. Many of the female workers could not be visited by the study team, due to strict rules of purdah. One fourteen-year-old girl who does bidi work at home tells of being raped while her mother was away, indicating that home work is not necessarily safe for girls either. Also, mothers may put strong pressure on children to perform a large amount of work, so that the home-based work bears similar aspects to factory work.

"My mother does not allow me to go to school. She does not let me play. Sometimes I climb trees, I hide underneath the bed but my mother chases me and when she finds me she beats me. Sometimes she gives me \$0.02-\$0.04 so that I work with her. I hate bidi work but I must help my mother. My brother does not have to work because he is a boy." --7-year-old girl

One 13-year-old maid described her situation of making bidis for the family for whom she works. She gets no salary or pocket money for her daily bidi work. A 14-year-old girl describes the work, for which she gets paid \$0.10 for 5-6 hours. *"With the money, I buy clothes, pots, bangles or clips for my hair. I don't save for my dowry. It is so little money. I get paid once every one or two months. Sometimes the ustad doesn't want to pay us and there is a quarrel but we cannot quarrel too much. Otherwise, they will stop giving us work. We have to take the money as it is given. Here there is no other work for us."*

Schooling

Of the children aged 5-15 years old in the study, 53% were not attending any type of school at the time of the survey, and 40% had never been to school in their lives. Only 26% managed to combine school with work. It is virtually impossible for factory workers to go to school, since the hours are so long, and factory managers feel that teaching would interfere with production.

In some cases, since girls' work pays less, parents are more willing to allow girls to attend school than boys.

“Because of this bidi work, the country, the nation is losing. The children's health is spoiled and their life expectancy reduced by 20 years. They are not only deprived of schooling, but of everything else. Parents are the first to blame for this. Poverty is the argument they offer but many parents could afford to send their children to school. This generation of children is particularly badly affected by bidi work. The father may have studied up to Class VI but the son may not even reach that level.”
--*Headmaster*

Some parents prefer that their sons work than go to school, for fear that going to school will not teach them a good work ethic. There is a strong belief that should boys not be broken to the habit of work at a young age, they may never learn nor want to work, and may just hang around and eventually obtain money through dishonest means. School is not considered a good alternative to instill in children honesty and the habit of work. Here again, children may be forced into bidi work not due to poverty, but due to social reasons/prejudices. For daughters, bidi work is a way to keep them out of trouble. With some girls earning only \$0.03 for 2 ½ hours work, the pay is clearly not the motivation for the work, but rather the desire to produce virtuous girls—hard-working, fully occupied, and within purdah. **Bidi work is above all a means of controlling girls**, whereas for boys the income is also important.

Some parents who do not need the money, force their children to do bidi work as a means of education. One 11-year-old boy said that he is forced to work from 1½ to 4½ hours a day—less time on the days he attends school. *“If I don't, I get punished. My parents threaten me. They say things like, ‘You will go without food. I will kick you out of the house.’ I feel very bad when I hear this. Sometimes, to avoid being punished, I pay a neighbour out of my own pocket money to do the work for me.”*

A 14-year-old girl was given 8-10 hours of daily bidi work after she stopped going to school. Her mother explains that it is necessary to keep her busy and tie her down. Girls who go to school beyond Class V are perceived as being bad, which is why she dropped out of school. In one of the study sites, a religious leader apparently had visited in the 1950s and told parents, *“Don't send your children to school. They will be taught English and when they speak English they will become infidels.”* The same lines have been repeated by more recent religious leaders, causing at least some parents to pull their children out of school. In other cases, ustad may convince boys gradually to drop their schooling and come to work in the factories for pocket money.

“I was taken out of Class II and sent to the factory to make bidi with my elder brother. That was four years ago. We have to work because my father is no good. I hate this work. I would like to quit but my mother tells me to wait. She tells me that in another two years, I can go to Dhaka or Chittagong and get a job as a hotel boy. Any other work is better than bidi work. A rickshaw puller has the freedom to take rest, to move around in the open. He earns more than a bidi worker and does not have to sit in a stuffy factory all day long. Shop keeping is even better because it is safer. My father was a bidi worker but gave it up to become a rickshaw puller. Now he spends most of his income on himself.”

--*Mohinuddin, 12 years old*

Where men are often away, and women are forced by purdah to stay at home, there is nobody to supervise the boys. One way for parents to deal with the problem of dangerous freedom is to send sons to the factory under an ustad who will be asked to keep the child under strict control. Parents who send their children to the factory must tolerate the negative impact this has on their sons. Their poor health, their frustrations, and the compensations they offer themselves (VCR, cinema, smoking bidis, cigarettes, and marijuana, etc.). A particularly high degree of frustration and violence was witnessed in one locality where men like to migrate, leaving children with their purdah-bound mothers. **Interestingly, this was the area chosen to set up a bidi factory, as labour is cheap and abundant.**

Meanwhile, children were 2½ times more likely than their parents to be interested in attending school, but [as mentioned above] it is difficult for them to do both. In one sample of girls, working time was 8-16 hours a day, with most being in the range of 11-12 hours.

Exploitation of workers

Bidi factories often choose to establish their production in poor areas. They tap the labour force of disadvantaged populations, the lesser power of children, and the seclusion of women, so that they can pay their workers badly. In some study sites, bidi factories are found in economically depressed zones, and the bidi industry has done little to uplift the socio-economic level of the workers. Although child work boosts the income of families for a few years, it does not seem to have long-term benefits, and it often precludes children from attending school. Many families involved in bidi work for generations acknowledge that “one does not get rich with bidi work”.

Released from work

Some factories have moved to end child labor, though girls continue to work from home. One boy expressed his delight at the change:

“It has been good for us to be dismissed from the factory. Now we can play, we can go to school. Our health has improved. Our parents have to manage without our income. It is difficult, but if there had been no bidi factory in this village, they would never have depended on our income in the first place.”

--11-year-old boy

Diversification efforts of Kerala Dinesh Bidi (India) from tobacco to other consumer products and services: Social and economic outcomes

Shoba John, Tobacco Control Advisor, PATH Canada

Editors note:

While an overall decline in demand for tobacco is unlikely to occur for the next few decades, specific market segments may already be affected. Such is certainly the perception among the managers of the Kerala Dinesh Bidi Workers' Central Cooperative Society Ltd. Established in 1967, the Cooperative has been experiencing declining bidi sales in recent years, and has thus felt the need to diversify into other products in order to sustain its profitability, to the great relief of those able to switch from bidi work to other jobs. This article presents information gathered from interviews with various people involved with Kerala Dinesh Bidi: Mr. Kunjuraman, Chairman; Mr. S. B. Shridharan, Secretary; Mr. Ravindran, Public Relations Officer; and various workers at the Cooperative.

Summary

Prior to the establishment of the Cooperative, workers rolled bidis out of their homes. The Cooperative was intended to create a sense of community and ownership among the bidi workers, and to provide them a place to sell bidis collectively, and to share in the profits. While the cooperative belongs to the workers, it also receives partial support from the Government of Kerala. With 25,000 bidi workers, the cooperative claims to be the biggest industrial workers' endeavor in Asia, with 260 work sheds where bidis are rolled, and 750 staff and other functionaries who run the machinery.

Those interviewed attributed decreasing bidi sales to the following reasons:

1. Health education messages that bidi harms health.
2. Loss of the youth market segment to the more aggressively-promoted cigarettes.
3. Competition with chewing tobacco, which one interviewee claims often contains marijuana to give it added kick and addictive powers.
4. The social taboo against smoking as opposed to chewing.
5. The effective implementation of the High Court ruling in Kerala banning smoking in public places. One interviewee felt that the High Court decision has caused a 25% reduction in bidi smoking.

From its establishment in 1967 until the late 1990s, the only product the Cooperative produced was bidis. Declining bidi sales led to the diversification initiative, under which three new units were launched: Dinesh Foods, Dinesh Umbrella and Dinesh Information Technology Systems.

Dinesh Foods was started in 1997 to produce and market coconut milk, chutney powder, pickles, masala and curry powder, jam, and juices. Launched in 1999, Dinesh Umbrella now produces 16 varieties of umbrellas. Dinesh Information Technology Systems, the latest venture, runs

computer courses, develops software for cooperative banks, and undertakes data entry. This wing has also established a Techno Park, set up with the intention of providing infrastructure for IT ventures.

As part of its socio-economic welfare policy, the government in recent years has resolved to protect traditional sectors of the economy, including bamboo, cashews, handloom products, and bidis. The labour-intensive nature of these traditional economic activities makes them vulnerable in the fiercely competitive globalized and mechanized economy. Given the difficulty of supporting such efforts, the government looked at rehabilitating those engaged in these sectors to alternate employments; the diversification of Dinesh Bidi was part of this effort.

Initially only 400 workers (out of 25,000) have been shifted into the other units away from bidi work. The more educated of the bidi rollers were able to get more skilled jobs, such as machine operating in the food unit, umbrella making, or clerical jobs. Some of the units are earning a profit or breaking even, while others are still operating at a loss.

The workers who have been shifted to the new units are paid at the same rate as they had been paid for bidi-rolling, but the salaries are now secure and are reliably paid each week, as opposed to the unsteady nature of piecemeal bidi work. In addition, the bidi rollers repeatedly reported that their efficiency in rolling bidis decreases with age. They thus worry that they would lose their jobs in the future. While bidi rolling does not offer a future, the other jobs are not particularly affected by age, meaning a longer working life, and thus more net earnings, as well as more job security. Given the perceived decline in bidi consumption, there is also greater job security in the sense that the other units are producing products for which demand is likely to be steady or increase.

In addition, the diversified units demand much less physical labour from the workers. None of them require the workers to stay in the same posture for long periods or to do repetitive work. While bidi workers generally complain of asthma, piles, respiratory infections, and worsening of TB, these problems do not occur in the diversified units. Finally, the workers experience a higher sense of status in the other units. They feel that their educational status is being acknowledged, and that there is now a chance for advancement, which did not exist with bidi work. Workers' children are also gaining from the diversification, with some of them being sent for computer education.

While the diversification process has for the most part been positive, it does face certain hurdles. The market for other goods is highly competitive, and the Dinesh products have not yet all identified niche markets. Since the cooperative attempts to pay a fair wage to its workers, its goods are more expensive than those produced by private bidi companies, which employ workers at exploitative rates. Dinesh bidi pays 75 rupees* for every 1,000 bidis rolled, whereas private companies pay as little as 50 rupees for the same number of bidis. Diversification is a long-term process, and the future viability is difficult to determine at this early stage. But with support from the government and strong marketing efforts, it seems likely to be successful.

* 48.59 rupees = US\$1.

About four years into the process of diversification, of the 32 newly-introduced products, approximately half are earnings profits. The added responsibility of a workers' cooperative to meet its social objectives means that the work is not being run entirely to ensure maximum profit. The social objectives of the Cooperative aim to provide maximum employment and benefits to employees, as well as reasonable wages.

In terms of tobacco control, one down side of diversification is that it allows the Cooperative to advertise its bidis indirectly when promoting its other products. While the Cooperative managers consider this an advantage, and feel they can reach a wider market base (potentially including children), this could be a disaster for tobacco control. The situation further reinforces the need to include "brand stretching" in a comprehensive ban on tobacco promotion.

Table 1. Sales figures from the year of initiation of the diversification process.

<i>Year</i>	<i>Annual Sales (in 100,000 rupees)</i>		
	<i>Overall</i>	<i>Curry powder</i>	<i>Coconut milk</i>
<i>1998-99</i>	<i>24.83</i>	<i>8.05</i>	<i>2.46</i>
<i>1999-00</i>	<i>98.66</i>	<i>34.42</i>	<i>7.55</i>
<i>2000-01</i>	<i>288.00</i>	<i>74.99</i>	<i>11.22</i>
<i>2001-02</i>	<i>332.00</i>	<i>160.00</i>	<i>15.04</i>

Case Studies: From bidis to food processing

1. Karanakaran*

Karunakaran is in his early thirties, married with two toddlers. He had completed Class XII before joining the Dinesh Bidi Co-operative Society. He had rolled bidis for the cooperative for 14 years, rolling up to 1,000 each day.

Three years ago, thanks in large part to his relatively high educational status, he was chosen to join one of the cooperative's diversified units: a food-processing unit, which makes jams, syrups, and sauces. The cooperative managers felt that the better educated would be more adept at learning new skills, and would benefit more from the training.

Initially, Karunakaran's main incentive for switching to another unit was his fear about his future. He explained that as people grow old, their hands begin to tremble, and they can no longer keep a firm grip on the leaf. This means rolling fewer bidis each day, and receiving lower wages. In the food processing unit, he explains that "aging has little role to play, as none of the tasks in the new unit require minute motor coordination skills".

After joining the unit, Karunakaran discovered another benefit: his wages are paid on time, so that he is able to buy the weekly ration of rice and food for his family. In addition, work is shrinking in the bidi units, with the workweek having declined from six to only four days. People must thus seek alternate employment for the other days, but it is almost impossible to get

* All names have been changed in the case studies.

farm work to fill in the extra days. While farm work is seasonal, food processing remains constant throughout the year.

A further benefit is relief from the monotony of bidi rolling. As a fairly educated man, he found the work particularly boring and frustrating. In contrast, the new job involves a variety of movements, and such diverse tasks as operating a machine, and cleaning and filling bottles. The work environment is also better, with well-lit, hygienic rooms. Karunakaran's health has also benefited; he says he is no longer troubled by the tobacco allergies that he suffered when he used to roll bidis.

2. Lalita

Lalita, aged 35, has completed 10th standard. She joined Dinesh Bidi in 1983, and has spent the last three years in the food-processing unit. When given the opportunity to move out of bidi work, she was delighted at the chance to have more variety in her daily work. While bidi work involved many hours in the same position, she is now free to move about during the day, and to carry out various tasks, rather than the one monotonous task of bidi rolling.

Lalita also reports that she was often afflicted with sneezing and coughing while working in the bidi unit. She also used to suffer from shoulder pain and swelling. In the new unit, she finds that the income is steady and sufficient to meet her basic requirements and to purchase food for her family; she also finds more job security than she experienced in bidi work.

3. MiniMini

MiniMini, 28, joined Dinesh Bidi in 1993, and was chosen to be the receptionist at the Central Cooperative in 1999, as part of the diversification process. She has studied up to 12th standard, and has two children who are in school. When rolling bidis, Mini earned around 400 rupees a week. After becoming a receptionist, her salary increased; she now earns 690 rupees a week. In addition to the higher wages, she has improved social status, enjoys an office to work in, and is exposed to a wider world than when she was working in a rolling shed. She is also relieved to escape her previous suffering from tobacco allergies, and feels that her purchasing capacity has increased with her new position.

4. Anita

Anita worked in the bidi unit for 15 years, and is now a clerk in the central cooperative. The change in work has brought her higher status and a more "progressive" work environment, in which she is able to learn new things, and to escape the dreadful monotony of bidi rolling. Like the others, she is pleased to escape bidi work and move into more interesting employment.

Collecting Tendu leaf in Rajasthan State, India: Tribal people dream of decent treatment and a fair wage

Nesar Ahmed, Researcher

Editors note:

In India, bidis are rolled in tendu leaf. Collecting tendu leaf from the forest is thus another form of tobacco-related employment. This article contains information gathered from two districts, Udaipur and Banswara, in the Rajasthan State of India. Rajasthan is located in the northwestern part of India, and is bound on the west and northwest by Pakistan. Rajasthan's economy is mainly agrarian; millet, wheat, maize (corn), and cotton are grown. Banswara district is inhabited mainly by tribals; Udaipur is its neighboring district.

People interviewed include those working for the NGO Astha Sansthan. Astha works with tendu leaf collectors on several issues, particularly in ensuring a decent wage for selling tendu leaves. Other interviewees include workers and office staff in the cooperatives for marketing of tendu leaves established by Astha, and those who sell their leaves to the cooperatives and to private contractors.

Summary

A few issues emerged clearly from this research. In the state of Rajasthan, all of those who collect tendu leaf in the forests are poor, have little education, and are tribal people. They are powerless to defend their rights to decent wages or treatment. In contrast, none of the buyers are tribal people. While some of the buyers sell their leaves to bidi manufacturers, others are bidi manufacturers themselves. Most of the collectors are women and children, and the work is done in the extremely hot season of May-June. If the trees are tall, the people must climb them to pluck the leaves, putting themselves in danger of injuries and even death from falling.

The work is time-consuming, with studies by the Forest Department and NGOs showing that people work for 15-17 hours a day. People go to the forest at 5 a.m. and return with the leaves at 1 p.m. At home they pack the leaves from 1-5 p.m., then go to sell the leaves. The selling takes a good deal of time as there are many others also coming to sell their leaves, so that some people do not return home until 10 p.m.

While the leaf collectors struggle to survive, they noticed that the buyers had given a car to the Divisional Forest Office. Their discontent led to a strike and the formation of cooperatives in 1991, which have somewhat improved the situation, but leaf gathering remains a time-consuming and low-paid job.

Labour unrest began when leaf collectors realized that while in other areas people were paid 50-100 rupees* for 100 packs of leaf, in Rajasthan the collectors were getting only 7 rupees for the

* 48.59 rupees = US\$1.

same quantity. This led to protests and a 16-day strike that caused the buyers to agree to an increase in pay in 1990. One 15-year old labour leader recalls people's angry reaction to her for demanding higher pay for the work. When they asked why she was "misguiding" people, she would reply, "So what if I am a child, you have been exploiting us for generations, and are making hundreds of thousands of rupees from our labour, but are not giving us proper wages. It is our right to be paid properly."

Among those interviewed, problems mentioned include economic exploitation by those purchasing the leaves. The buyers often do not count the leaf packs correctly and reject the leaves, but then later take them without paying. Rather than paying cash, they also often give coupons, asking the leaf collectors to collect the money after 5-7 days. Many people lose their coupons, and thus are never able to collect their wages. One worker reported that the buyers take one pack of leaves free for every 20 packs they buy, "to compensate for the damage in transportation". Given the extremely low prices the buyers pay for the leaves, this represents yet another form of economic exploitation.

While the government each year declares the rate of payment for tendu leaves, the workers feel that it is done in favour of the rich buyers, not the labourers.

The respondents also complained of abusive language, humiliation, terror, and other forms of ill-treatment. For instance, the buyers would shout that the leaves were of poor-quality, and the collectors were too intimidated even to respond. In addition, the long hours of walking and picking leaves under the hot sun cause headache and other ailments. The job becomes more time-consuming over time, as there are fewer trees in the forest, and thus more effort is needed to collect the leaves. Some interviewees expressed concern over the long-term viability of tendu leaf collection in light of the decreasing availability of the leaf.

What are the alternatives?

The possibility exists for the cooperatives to diversify into other areas, such as collecting and marketing custard apples, other fruits, and medicinal herbs. Other possibilities include agricultural work such as maize and pulse. With the infrastructure of the cooperatives, a change to other crops is a possibility, and may well become a necessity, as the availability of tendu leaf is already declining in the forests. Rather than relying on non-tribal people to purchase tendu leaf, the workers would like to see a way that they can benefit more directly, and without abusive treatment, from the utilisation of the forests' renewable resources.

The fact that the work is conducted entirely by tribal people who cannot find alternate employment suggests that, like women, tribal people represent a group easily exploited by the tobacco industry. Since they cannot easily find other work, they are willing to accept wages so low as to be insufficient for one's daily existence. If other employment opportunities became available, the people currently picking tendu leaves would gladly make the switch.

Case Studies – seasonal tendu leaf collectors

1. Bhuma*

At age 22, Bhuma must help support his aging father and four children. As a poorly-educated tribal labourer, his options for wage-earning are few. During the months of April and May, he takes on work collecting tendu leaves. He has been doing the work for the last ten years, despite his complaints that the work is time-consuming, physically dangerous (given the risk of falling from the trees), and very low-paid. He goes to the forest early in the morning with four female relatives, and they return around noon to arrange the leaves and bind them, 50 leaves to one pack. This job continues until the evening, when they take the leaves to sell them. During the leaf collection period, explains Khuma, there is scarcely time for anything else. Fortunately, since he sells his leaves to a cooperative committee, he does not suffer as much exploitation and abuse as those who do not sell to cooperatives, but with a price of 33 rupees per 100 packs of leaves, he is only able to earn about 50 rupees a day. Khuma feels that this income is inadequate given the labour involved and the increasing prices of essential commodities. Given the lack of other employment during that season, people are still willing to do the work, even though it is not economically viable.

2. Bhanvari Bai

Bhanvari Bai, a 35-year-old woman, also collects tendu leaves because of a lack of alternative employment during that season. Since she is both illiterate and tribal, it is difficult for her to find other work; she complains that even the road construction crews will not take her. In addition to the long hours required by the work, which leaves no time for other activities, she complains of the fear of falling from the trees and of being bitten by snakes or attacked by other animals while working in the forest. As she can collect only 100 packs of leaves a day, she earns only 33 rupees daily. She feels she should receive 50 rupees for the 100 packs, but has no choice but to accept the amount that the cooperative pays her.

3. Kali Devi

For an illiterate 50-year-old tribal woman such as Kali Devi, there are few job opportunities available, but perhaps the *least* lucrative is collecting tendu leaves. She lives in an area where there is no cooperative society to purchase the leaf, so she must deal with commercial buyers who do not respect the tribal people with whom they do business.

Kali Devi has been collecting tendu leaves since her early childhood. In the other seasons, she performs agricultural work, and works for a wage when other jobs are available.

Like the others who collect tendu leaves, she complains of the tiring nature of the work, and of the long days required. She worries about being injured or dying if she falls from the trees, and complains that “We don’t even have time to eat properly” during the tendu leaf season. She also complains about the exploitation she suffers at the hands of the buyers, who throw her leaves away, refusing to buy them, then collect them for use after the collectors leave. She also says that the buyers take five packs of tendu leaves for free for every 100 packs they buy. The repeated complaints of the collectors have yielded no result.

* All names have been changed in the case studies.

Kali Devi earns only about 50 rupees a day, but explains that she cannot work daily, as in her area, there are not many leaves on the trees. In a season of 15-30 days, she must stop collecting leaves for 3-4 days. Thus she is only able to earn 400-500 rupees per season, which she says is also the case for the others in her area. With such hard, tiring, and dangerous work bringing such a low profit, she and others would be delighted if other economic opportunities became available to replace the task of collecting tendu leaves.

Choosing tobacco over food: Daily struggles for existence among the street children of Mumbai, India

Salomi Shah and Shailesh Vaite, Consultants

Editors' note:

This survey conducted among street children in Mumbai focuses on their economic conditions and tobacco consumption. As one of the most vulnerable segments of the population, with few resources and significant tobacco use, street children help us to understand the connections between tobacco use and poverty. This study was conducted in collaboration with Shelter Don Bosco; Shelter Don Bosco is one of the organisations which pioneered work with street children in the City of Mumbai.

Study Background

Research objectives

The overall objective was to examine the impact of tobacco consumption on the well-being and economic status of street children. The specific study objectives evolved through discussions with social workers and street educators working with street children. Specific research objectives were:

1. To explore the extent of tobacco consumption among Mumbai's street children;
2. To assess tobacco-related expenditures among Mumbai's street children;
3. To compare the tobacco expenditure of this group with expenditures on basic necessities such as food and health.

Operational definitions

Agarwal (1999) suggested the following definition of street children: "A street child is one who:

- lives on the streets, wasteland, or public space most of the time;
- works in the streets on jobs of low status and low income;
- lives in exposed conditions on the street;
- has little or no parental supervision or other social protection;
- has either continuous, intermittent or no family contact at all;
- is vulnerable to the hazards of urbanisation and urban living conditions."

Sampling

At the time of the study, there were no reliable data on the number of street children residing in the city of Mumbai. Shelter Don Bosco had drawn up some basic records of street children in Mumbai based on the experiences of their field workers who were regularly in contact with these children. The records had data including names of street children living in specific groups in each area, group location, and history of the group. These records were used to map Mumbai City in terms of the number of children staying in various locations. Care was taken not to over-represent or ignore any location. Through the area mapping technique, 400 street children were drawn from various locations in the city, using accidental sampling.

Accidental sampling refers to a method of selecting respondents who happen to meet the researcher and are willing to be interviewed. This is the only available sampling method for floating populations like street children. The street children were spotted at railway stations and streets, outside temples, and in other areas in different zones of Mumbai.

The criteria for including children in this study were:

- a) the child should reside on the streets of Mumbai,
- b) the child should not be living with his/her own family,
- c) the child should be willing to be interviewed,
- d) the child should not be older than 18 years.

Data collection

An interview schedule was prepared on the basis of the objectives of the study. This was pre-tested and revised before being administered.

After design of a preliminary interview schedule, the data collectors were trained. Data were gathered between 7-19 July 2002 by eight trained data collectors fluent in Hindi, Marathi and English. The data were then scrutinized and incomplete forms were discarded. Data were processed using SPSS software.

Secondary data from various publications were used to supplement the interviews.

Results and Discussion

The study collected quantitative information on the street children in the city of Mumbai, in the context of the children's economic status, consumption of and expenditures on tobacco products, substance abuse, food consumption, and health concerns.

Profile of the Street Children in Mumbai in 2002

Background information

The total number of children interviewed was 400. The mean age of the street child for the study was found to be 14.7 years, with a range from 6-18. Most (69%) of the children were aged 12-17, and most (98%) were males. Half of the children (51.5%) were literate.

Place of residence and the number of years spent in Mumbai

For the purpose of this study, Mumbai was defined to include not only the areas which fall under the Municipal Corporation of Greater Mumbai (MCGM), but also other areas which have developed around the city. Most of the children interviewed lived close to railway stations, particularly the larger ones that serve as railway junctions. These areas are most likely to attract migrants, especially children coming from outside Mumbai in search of economic opportunities in the city. The mean number of years spent by the street children in Mumbai was 4.6, with a range from less than a year to 20 years. Two-thirds (67.8%) of the children had spent five or fewer years in Mumbai.

Economic Profile of the Street Children

Occupation

A quarter of the respondents were involved in *wadi* work, that is, making wedding platforms, cooking and serving at banquets, and other tasks for ceremonies such as marriages (Table 1). Over a fifth of the children earned money through rag picking. Over 13% engaged in begging, and almost 13% worked as porters. One 18-year-old girl was involved in prostitution, earning 250 rupees or more per day. More of the young children (aged 6-12) were involved in unskilled work such as begging and sweeping train compartments, with the older children more likely to be involved in work requiring certain skills (such as *wadi* work, porters, and selling small articles). Occupations such as rag picking and *wadi* work are seasonal and transferable, that is, children switch between them depending on what is available. A few of the children were involved in pickpocketing.

Table 1. Occupation of street children in Mumbai

Occupation	Percent
<i>Wadi</i> work (work at wedding sites)	24.3
Rag picking	22.5
Begging	13.5
Porter (loading and unloading goods)	12.5
Sweeping	10.5
Selling small articles	11.9
Hotel worker	5.8
Pickpocket	4.0
Shoe shiner	2.0
Other (helper, wiremen, carpenter, plumber, washer, parking lot worker, domestic worker, hawker, construction worker, mechanic, prostitute, furniture shop worker, car parker, tailor, painter, unemployed)	7.7

Daily income

The average income of the street children interviewed for this study was found to be about 29 rupees per day, with a range from zero to 500 rupees. Only one child in the sample did not earn any money, whereas more than 80% of those interviewed earned less than 100 rupees a day (Figure 1).

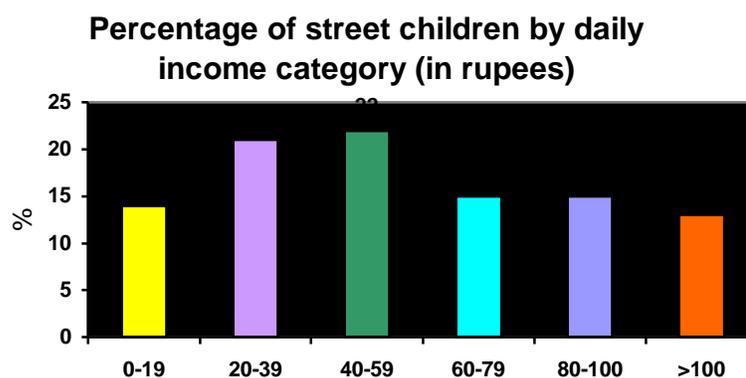


Figure 1

Tobacco consumption

Table 2. Percent of children consuming tobacco, by type

Type of tobacco products consumed	Percent
Gutkha	46.8
Bidi	39.5
Cigarette	28.0
Plain tobacco	14.0
Khaini	6.8
Paan	5.8
Masheri	4.5
Naswar plain	1.3
Mava	1.0
Other Products	0.3

A significant finding was that almost half (46.8%) of the children in the sample use gutkha and 39.5% smoke bidis (Table 2). Cigarettes, which are far more expensive than gutkha and bidis, were consumed by 28% of respondents. (Some children use tobacco in more than one form so the totals are more than 100%.) The children mentioned that they often started by picking up the butts discarded by others, then began purchasing tobacco themselves.



Street children smoking

Table 3. Quantity consumed of and daily expense for tobacco products

Tobacco product	Quantity consumed daily (average among users)	Daily expenditure in rupees (average among users)	Monthly expenditure in rupees (average among users)*
Gutkha	6.4 sachets	6.1	184.8
Mava	2.8 times	6.0	182.5
Cigarette	4.1 cigarettes	5.8	175.5
Naswar	1.8 times	5.0	152.1
Paan	1.6 times	3.9	118.9
Bidi	13.5 bidis	3.6	110.0
Khaini	5.6 sachets	2.0	60.8
Other products	4 times	2.0	60.8
Plain tobacco	4.3 times	1.8	53.6
Masheri	2.2 times	1.4	42.2

* Monthly expenditure calculated as daily expenditure times 30.5

Daily expenditure on tobacco was highest for gutkha, at over 6 rupees per day. The amount spent on gutkha also represents a large portion (21%) of the 29 rupees earned on average daily by the children. Some children earning less than 20 rupees a day spent as much as 8.6 rupees daily on bidis (an astounding 43% of their earnings on tobacco). Some children earning less than 60 rupees per day spent 8 rupees per day buying mava (representing 13% of their income). Quantities of tobacco products consumed increased consistently until daily income levels reached 200 rupees, after which they declined. Perhaps as income levels increase, children spent more on gambling, prostitution, partying with friends, and so on, though this trend seems independent of age of the child. The quantity of tobacco consumed (particularly in terms of plain tobacco, cigarettes and gutkha) increased substantially with the age of the child.

Initiation into addiction

Table 4. First addictive substance used by children

Type of drug	% using that product first
Gutkha	28.3
Beedi	24.0
Plain Tobacco	9.3
Solution	7.0
Cigarette	6.3
Marijuana	4.5
Paan	2.5
Khaini	2.3
Masheri	2.0
Alcohol	0.5
Number 10 tablets*	0.3
Others	2.3

* Gynecological drugs readily available over the counter, and frequently used by street children for their stimulating effect.

When comparing the patterns of consuming tobacco and substance abuse products, it was clear that most children started with tobacco products, mainly gutkha, bidis, and plain tobacco (Table 4). This may be due to the high prices and lack of easy affordability of other drugs in the market. Children begin by consuming tobacco in the above-mentioned forms, then start using other drugs.

Food consumption patterns and daily food expenditure

Table 5: Food consumption patterns and daily expenditure for food

Time of day	Sources of meals*	Daily expenditure (average in rupees for those paying for that meal)
Morning	Charity (46.8%)	6.1
	Bought (46%)	
	Picked (4.8%)	
	Do not eat (2.5%)	
Afternoon	Charity (57.3%)	11.2
	Bought (34.8%)	
	Picked (3%)	
	Do not eat (2.8%)	
Evening	Charity (9.3%)	4.1
	Bought (20.5%)	
	Picked (1.3%)	
	Do not eat (68.8%)	
Night	Charity (58.8%)	13.9
	Bought (34.0%)	
	Picked (4%)	
	Do not eat (4%)	

* The sources are used alternatively or simultaneously, and thus do not add up to 100%.

Street children acquire food through three main sources: charitable organizations and individuals; picking up waste from roads and rubbish bins; and purchasing. Most of the children receive food as charity in the morning, afternoon, and at night, but a significant portion also buy food at those times (Table 5). In the evening, the most common way to obtain food is through purchasing.

In comparing the amounts spent on food to those spent on tobacco, we see that the average amount spent on gutkha (6.1 rupees) is the same as that spent on the morning meal.

Table 6. Frequency of consumption of selected food items and average monthly expenditure

Food Items	Source of food ⁺	Frequency of consumption in a month (average among those eating each food)	Monthly expenditure (average in rupees for those purchasing each food)
Fruits	Charity (28.0%)	9.9	48.5
	Bought (37.8%)		
	Picked (8.8%)		
	Do not eat (26.5%)		
Milk	Charity (12.8%)	10.9	62.0
	Bought (20.8%)		
	Picked (0.3%)		
	Do not drink (66.3%)		
Eggs	Charity (23.3%)	11	43.6
	Bought (39.8%)		
	Picked (3.0%)		
	Do not eat (35.0%)		
Mutton/ Chicken/ Beef	Charity (53.3%)	12.3	137.4
	Bought (25.5%)		
	Picked (3.8%)		
	Do not eat (18.0%)		

+ The sources are used alternatively or simultaneously, and thus do not add up to 100%.

With the exception of meat (mutton, chicken and beef), children were most likely to buy rather than be given the nutritious food items listed in Table 6 food items. More than one-third of the children (35%) do not eat eggs, and over one-fourth of the children go without any fruits. A very high proportion, **66%, of the children do not drink milk**. Monthly expenditure on the various food items *for those purchasing them* ranged from 43.6 rupees a month for eggs to 137.4 rupees for meat.

When comparing the amounts spent on food to the amounts spent on tobacco from Table 3, we see that children spend far more on tobacco than on nutritious foods. Children spend more each month on naswar, mava, cigarettes and gutkha than on meat; almost as much for khaini as for milk; and more for all forms of tobacco except masherri than for fruit or eggs. It is clear that a decrease in expenditures for tobacco could mean a tremendous improvement in the diet of these street children.

Health status

More than two-thirds (70.8%) of the street children reported that they fell ill during the year 2001–2002. They spent an average of 55 rupees on their treatment, with a range from zero to 700 rupees. Reasons for not undergoing treatment included financial crises and fear of approaching doctors.

The most common ailments suffered by children who fell ill were cold and fever (33%), cough (18%), and weakness and dizziness (14%). Other ailments included vomiting, diarrhoea, jaundice, TB, and other problems. Reasons for illness would presumably include unhygienic living and working conditions, as well as poor diet and frequent consumption of tobacco and other drugs.

Ill effects of tobacco consumption

The respondents were asked whether they had had any ill effects of tobacco consumption on their health. The children reported a variety of problems from using tobacco, as shown in the following table. The most common problems reported were cough (22%), weakness (15%), sores in mouth (14%), and breathing problems (12%).

Table 7. Percent of children reporting ill effects of tobacco

Problem reported	Percent
Cough	21.5
Weakness	15.0
Sores in mouth	14.0
Breathing problems	11.5
Vomiting	7.8
Dizziness	6.8
Difficulty opening mouth	7.3
Other (stomach ache, chest pain, TB, dental problems, headache)	4.5

Monthly expenditures on other items

When asked about other expenditures, the most common items on which money was spent were films (85% of respondents) and clothing (73%). Only 37% reported saving money, the same percent as reported spending money on gambling, and a mere 2% (nine respondents) reported spending money on their business. The average amounts spent per month *among those making the expenditure*, ranged from 105 rupees for clothing and 161 for films, to 522 rupees for the few who invested in their business.

Table 8. Average monthly expenditures on items other than food and tobacco

Area of expenditure (and percent reporting making that expenditure)	Average monthly amount in rupees, for those who make that expenditure
Films (84.8%)	161
Clothing (73.3%)	105
Savings (37.3%)	404
Gambling (37.3%)	138
Parties (30.3%)	160
Visiting prostitutes (10.3%)	229
Bribes (4.5%)	182
Investing in business (2.3%)	522

Again when comparing the figures to tobacco purchases, we see that children tend to spend more on gutkha, bidis, and cigarettes each month than on food and clothing (Figure 2). Given that most children use tobacco and very few save money or invest in business, a shift from tobacco to savings or business could also have a significant effect on building hope for these children's futures.

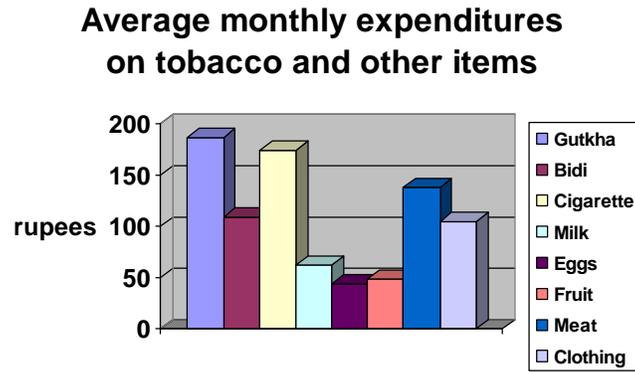


Figure 2

Conclusion

For these four hundred street children in Mumbai, tobacco use is an integral part of life. The children start by picking up discarded butts from cigarettes and bidis, then quickly move on to purchasing tobacco, and spending significant sums of their meagre incomes. While children spend very little each month on nutritious food items, their expenditures for various forms of tobacco are relatively high. Children also report an array of health effects from tobacco use.

While tobacco use is certainly not the most important problem faced by street children, it is one of the contributing factors to their overall misery. Not only does tobacco use represent a daily drain on their scant resources, but it also further lessens their ability to invest their earnings in their futures. It also contributes to the ill health which makes their lives so difficult. Tobacco use is an important aspect of life which keeps these children in poverty.

Pavement dwellers in Mumbai, India: Prioritizing tobacco over basic needs

Salomi Shah and Shailesh Vaite, Consultants

Editors' note:

The following article presents findings from a survey among pavement dwellers in Mumbai, India. The poorest of the poor, these people have no proper dwelling and little by way of income, yet they spend a sizeable portion of their earnings on tobacco, rather than basic needs or efforts to improve their conditions. This study was conducted in collaboration with Shelter Don Bosco, which works closely with vulnerable populations in Mumbai.

Study Background

Research objectives

The overall objective of the study was to learn about the impact of tobacco use on the economic status and well-being of pavement dwellers in Mumbai City, India. The specific objectives of this research defined through discussions with social workers and street educators working with pavement dwellers. The specific research objectives were:

1. To explore the extent of tobacco consumption among pavement dwellers in Mumbai;
2. To assess the tobacco-related expenditure among Mumbai's pavement dwellers;
3. To compare the tobacco expenditure of this group with expenditures on basic necessities such as food and health.

Operational definitions

A pavement dweller is someone who lives with family members on the sidewalk (pavement). A pavement dweller does not have any legal standing as far as residence is concerned. Usually a pavement dweller lives in a *kuchha* house, consisting of a few bamboo poles supporting a roof of plastic sheets, and no walls. These houses are of extremely poor quality and can easily be damaged or destroyed by a sudden gush of wind or by heavy rains.

Sampling

The study group consisted of pavement-dwelling families in Mumbai city residing in Wadala area. From the approximately 983 families residing on the pavements of Wadala¹⁴, a total of 400 people were chosen for this survey.

Data collection

An interview schedule was prepared on the basis of the objectives of the study. The interview schedule was pre-tested and revised prior to data collection. The survey was conducted by eight trained data collectors who were fluent in Hindi and Marathi. The interviews were collected at

¹⁴ Shelter Don Bosco

the home of each respondent. The data were then checked and incomplete forms were discarded. Data were processed using SPSS software.

Secondary data from a number of sources including the internet were used to supplement the data collected in this study.

Results and Discussion

This study gathered information about the working situation, income levels, tobacco use and expenditures, and expenditures on food and other items of pavement dwellers in Mumbai. The study also explored peoples' concerns about the health effects from tobacco use, and other health problems.

Profile of the Pavement Dwellers in Mumbai in 2002

Background information

Most of the 400 pavement dwellers interviewed were males (83%), with an average age of 33. Most (77%) were married, 11% were widowers, 9% had never been married, with very few being separated or divorced.

More than half (53%) of the sample had migrated from rural Maharashtra (the state of which Mumbai is the capital). The rest had come from other parts of India.

Most (74%) of the respondents were Hindus, followed by Muslims (19%), Christians (2.3%), Nav Buddhist (4.3%) and Sikhs (0.5%). There was much heterogeneity in terms of their castes. Over half (53%) of the respondents were illiterate, 11% had basic literacy, 15% completed primary education, and 11% had completed higher primary.



Pavement dwellers consuming tobacco

The Economic Profile of the Pavement Dwellers

Occupation

Table 1. Occupation of pavement dwellers

Occupation	Percent
Construction worker	18.8
Selling small articles	11.3
<i>Wadi</i> worker	9.0
Domestic worker	7.8
<i>Chindhi</i> worker	7.0
Other	5.5
Ear cleaner	5.3
<i>Jadibutiwala</i> (selling traditional herbal medicine)	4.3
Porter	4.3
Painting	4.0
Service	3.5
Collect papers	3.0
Car cleaner/garage work	2.8
Coolie	2.8
Catering	2.5
Driver	2.5
Cobbler	1.3
Miscellaneous (making and selling toys, skilled work, fish seller, cleaner, electrician, shoe polisher, barber)	4.3

The most common occupations were those of construction work, selling small articles, *wadi* work (making wedding platforms and other work associated with marriages and other ceremonies), domestic work, and *chindhi* work (piecemeal cloth work for factory use). Almost all were involved in semi-skilled and unskilled work.

Daily income

More than half of the respondents (56%) earned less than 50 rupees per day. Another 34% earned 51 to 100 rupees each day, and over 7% earned 101-150 rupees daily. Only four respondents reported earning over 200 rupees daily (Figure 1).

Percentage of pavement dwellers by daily income category (in rupees)

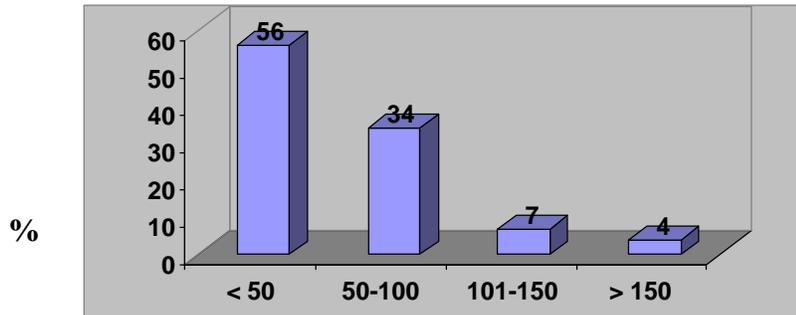


Figure 1

Tobacco Consumption

A vast majority (86%) of the respondents reported using tobacco. Less than 10% of the entire sample did not consume either tobacco or other addictive substances.

Table 2. Percentage of people using different tobacco products

Tobacco product	% using each product	Quantity consumed daily (average among users)	Monthly expenditure in rupees (average among users)*
Cigarettes	8.0	4.9 cigarettes	240.5
Gutkha	20.0	7.5 sachets	209.1
Paan	24.0	3.9 times	197.4
Bidi	30.3	11.5 bidis	90.5
Mava	3.0	3.0 times	88.7
Naswar	0.5	4.0 times	60.8
Khaini	2.3	1.7 sachets	57.5
Plain tobacco	49.3	5.3 times	52.0
Masheri	10.3	1.5 times	17.1
Other	0.5	7.0 times	60.8

* Monthly expenditure calculated as daily expenditure times 30.5

As can be seen from Table 2, the most popular form of tobacco was plain tobacco in its raw form, used by half of those interviewed. People used tobacco on average over five times per day. In addition, over 30% smoked bidis (an average of 11.5 bidis daily), 24% used paan (an average of 3.9 times daily), 20% used gutkha (on average 7.5 packets daily), and over 10% used masheri (on average 1.5 times daily). Only 8% smoked cigarettes, averaging 4.9 cigarettes a day, with the cigarettes smoked being some of the most extensively advertised. While few of the respondents smoke cigarettes, expenditure on cigarettes was the highest, more than four times that for plain tobacco users. Between 0.5% and 3% reported using other forms of tobacco (including mava, khaini, and nashwar).

For those who used each type of tobacco, average monthly expenditures per item ranged from a low of 17.1 rupees for masherī, to a high of almost 241 rupees each month for cigarettes. Respondents reported spending an average of 209 rupees per month for gutkha, and 197 for paan. With over half of respondents earning less than 50 rupees per day, or about 1521 rupees per month, the amounts spent on tobacco are quite sizeable.

Food Consumption Patterns and Daily Food Expenditure

Table 3. Food consumption patterns and daily expenditure for food

Food product	Sources of food	Quantity consumed in a month (average among those consuming each food)	Monthly expenditures (average in rupees for those consuming each food)
Fruits	Charity (7.3%)	4.5 times	55.1
	Bought (74.8%)		
	Picked (0.3%)		
	Do not eat (19.5%)		
Milk	Charity (1.0%)	27.7 times	130.2
	Bought (93.0%)		
	Do not eat (5.7%)		
Eggs	Charity (2.0%)	7.7 eggs	37.0
	Bought (79.3%)		
	Do not eat (18.7%)		
Mutton/ Chicken/Beef	Charity (1.8%)	5.8 times	170.5
	Bought (91.3%)		
	Picked (0.3%)		
	Do not eat (7%)		

A majority (above 80%) consumed all food products mentioned in the table above i.e., fruits, milk, eggs, and mutton/chicken/beef. Milk was consumed more frequently than other products. More was spent on mutton/chicken/beef and milk than on fruits and eggs.

When comparing monthly expenditures on food to those for tobacco, we see that pavement dwellers spend far more per month on paan, gutkha, and cigarettes than on each of the food products above, and more on all types of tobacco except masherī than on eggs. Given that most of the pavement dwellers report buying food rather than receiving it from charity or picking it up, the relatively high figures for tobacco are even more alarming.

Health Status

A majority (70%) of the respondents had been ill in the previous year. The most common illnesses were cold and fever (35.8%), followed by cough (8.8%), other illnesses, weakness, and jaundice.

Of those who were ill, the majority (70.5%) sought treatment, usually with a private doctor and/or hospital. Others sought help from pharmacies, home remedies, medicinal herb salesmen, and NGOs. Cost of treatment ranged from zero to 40,000 rupees, with an average of 811 rupees. Those who did not undergo any form of treatment cited lack of money, fear of approaching the doctors, no time for treatment, and other reasons.

Ill effects of tobacco consumption

Many who consumed tobacco reported that they suffered health effects from its use, including cough (15%), weakness (10%), sores in the mouth (9%), dizziness (8%), breathing problems, difficulty in opening the mouth, vomiting, dental problems, headache, and stomach ache (Table 3).

Table 3. Problems people reported from tobacco use

Problem	Percent
Cough	15.3
Weakness	9.5
Sores in mouth	9.0
Dizziness	7.5
Breathing problems	4.8
Difficulty opening mouth	2.3
Vomiting	2.0
Other (stomach ache, chest pain, TB, dental problems, headache)	1.8

Monthly expenditure on other items

On average, there were 4.6 members in the family, of whom 1.5 were wage earners. Most families contained least one child aged 5-14. While most men used tobacco, most women did not. Many of the children were attending school, and the families spent about 160 rupees each month on children's education, with a range from zero to 5,000.

Average monthly expenditure per family for food was 1,334 rupees; among those spending money on the following items, the average for household repairs and rent was a mere 76 rupees, and for savings, just 96 rupees. The expenditures for specific food items and for other necessities are dwarfed by the spending for tobacco products such as paan, gutkha, and cigarettes (Figure 2).

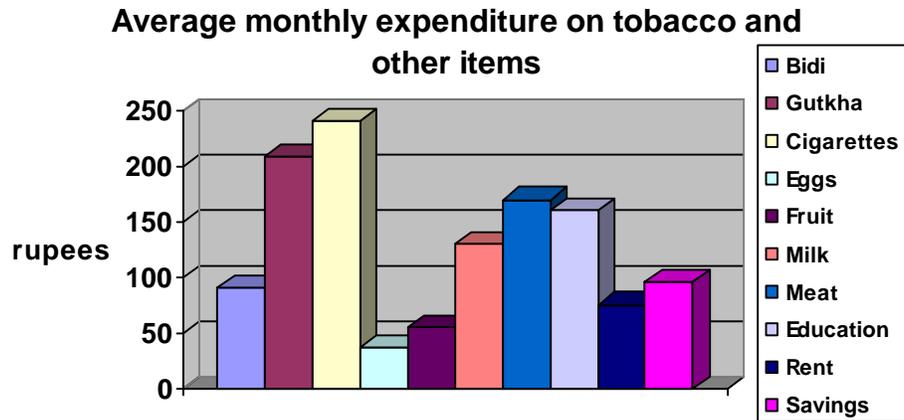


Figure 2

Conclusion

Despite their low incomes, pavement dwellers spend large amounts of money each day on a variety of tobacco products, and comparatively little on nutritious foods, on education for their children, on rent and repair of their simple dwellings, and on savings. For the poorest of the poor, who can ill afford life's basic necessities, it is a tragedy that tobacco expenditures are usurping their much-needed resources, leaving them even less than otherwise for the items that might help them to improve their conditions.

The life of pavement dwellers in Mumbai, as in other cities, is obviously an arduous one. People find different ways to earn some money, but are unable to improve their conditions sufficiently to move to more stable dwellings. While tobacco use is not the *cause* of their suffering, it certainly contributes, through its health effects, and through the displacement of money used for its purchase.



Pavement dwellers' homes

List of Definitions

Tobacco products

Bidi: A popular form of smoked tobacco in India, which ranges in length from 5 to 8 cms, made up of 0.25 to 0.5 gm of locally grown tobacco. Sun dried and flaked tobacco is rolled in dried tendu leaves and secured with a thread. Bidis are generally sold in bundles of 8-24 bidis, but can also be purchased loose. In Bangladesh, bidis are rolled in paper, and sold in packets of 25. This traditional form of smoking is practised in many countries (e.g., India, Bangladesh, Nepal) and a similar smoking material is used in other countries (e.g., Indonesia, Thailand).

Khaini: A mixture of tobacco and lime prepared in the palm, formed into a ball and placed in the mouth, usually in the groove between the cheek and gums.

Masheri: Roasted or half-burnt tobacco prepared by baking on a hot metal plate, powdered and used primarily for cleaning teeth; sometimes placed in the mouth as an alternative for chewing tobacco. Also known as **mishri** or **misheri**.

Mava: A mixture of small pieces of raw areca nut, tobacco and lime water, wrapped in a piece of cellophane paper, and rubbed against the palm.

Naswar: A mixture of sun- and heat-dried tobacco leaves, slaked lime, ashes of tree barks, some flavouring agents and sometimes colouring agents such as indigo. Some amount of water is added and the material is rolled into balls which are placed in the labial groove behind the lower lip. The material is spat out after it has been chewed for 10-15 minutes. It is used in Afghanistan and Pakistan as well as India.

Paan (betel quid) with tobacco: Paan is usually prepared by applying slaked lime and catechu to a betel leaf, to which small pieces of areca nut are added. Condiments and sweetening agents may be added. Tobacco is the most important ingredient of paan for regular users. The ingredients are folded in the betel leaf and chewed.

Other definitions

Curing: Treating tobacco leaves in heat conditions of 90-200 centigrade for three days followed by a day of conditioning in large barns. The leaves are tied to wooden sticks and hung up in the barn for drying while wooden logs are burnt below to facilitate the curing process. About 700 wooden sticks are required for tying tobacco grown on 4 – 5 acres of land. Heating for each round of barn use takes 2 to 3 cart-loads of wood. Each cartload is about 1 tonne.

Pavement Dwellers: Families residing on pavements/footpaths in fragile housing, generally consisting of plastic sheets supported by bamboo, with no legal housing status. They generally are migrants belonging to socially and economically deprived sections in the society.

Street Children (in this report): Children aged 18 years and below belonging to the lower socio-economic strata, residing on the streets without parental or adult care and supervision; homeless, migrant or vagrant.

Tendu Leaf (*alias Temburni*): Derived from the plant *Diospyros melanoxylon*. In India, bidis are most commonly rolled in these leaves, presumably for the slow combustibility feature which keeps the fire burning at the tip of the lighted bidi.

Tobacco Board: Set up by the Government of India under the Tobacco Board Act, 1975. The Board is concerned with improving tobacco production, sale and marketing practices. Licensing of tobacco farmers and tobacco barn owners comes under the purview of this Board.

Tobacco Nurseries: Tilled beds where tobacco saplings are grown and regularly watered and weeded, with frequent application of fertilizers, insecticides and pesticides.

Useful documents

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