Learning Objectives

- Understand public health’s concern with tobacco farming
- Identify health effects and environmental costs of tobacco farming
- Understand structure of the global tobacco leaf market
- Define ways to strengthen a pro-farm families and communities approach to health policy

Conditions on Tobacco Farms

- Long hours of stoop labor
- Harassment in their work
- Abject poverty
- Staggering debt
- Exposure to nicotine & pesticides
- Poor health


Health Risks of Tobacco Farming

- Health threats to tobacco farmers include bladder cancer, allergic or irritant skin disorders (contact eczema), pesticide exposure (e.g. organophosphate) toxicity to the peripheral and central nervous system.
- Injuries include cuts from knives or axes when cutting trees or clearing fields
- Backaches and snakebites when harvesting tobacco
- Broken bones from falling off tobacco sheds
- Headaches and vomiting due to pesticide exposure and chemical ingestion

Source: Schmitt N et al. (2007)

Green Tobacco Sickness

- Green Tobacco Sickness is an illness among tobacco farmers who are poisoned by nicotine through the skin from nicotine absorption during cultivation and harvesting.
- Green tobacco sickness is vomiting or nausea and dizziness or headaches during or after exposure
- The cumulative seasonal exposure to nicotine is equivalent to smoking at least 180 cigarettes.

Source: Schmitt N et al. (2007)
Environmental Costs of Tobacco Growing

- Deforestation
- Chemical contamination of water sources
- Soil erosion
- Depletion of soil nutrients


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Environmental Costs of Tobacco Growing

- One pound of tobacco requires 20 pounds of wood.
- Nearly 600,000 acres cleared for tobacco every year worldwide.

<table>
<thead>
<tr>
<th>Country</th>
<th>Deforestation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Korea</td>
<td>45.0</td>
</tr>
<tr>
<td>Uruguay</td>
<td>30.6</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>29.4</td>
</tr>
<tr>
<td>Malawi</td>
<td>26.1</td>
</tr>
<tr>
<td>India</td>
<td>21.0</td>
</tr>
<tr>
<td>Pakistan</td>
<td>19.0</td>
</tr>
<tr>
<td>Syria</td>
<td>18.2</td>
</tr>
<tr>
<td>China</td>
<td>17.8</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>15.9</td>
</tr>
</tbody>
</table>

Total Tobacco-Related Annual Deforestation in Selected Countries, 1990-1995 (%)

Sources: Esson K. and Leeder S. (2004); Geist HJ. (1999)

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Pesticide and Fertilizer Use

- Up to sixteen applications of pesticides are recommended during one three-month growing period.
- Pesticides cause respiratory, nerve, skin, and kidney damage in tobacco farmers.


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Pesticide and Fertilizer Use

- Once soil fertility is lost tobacco firms move on to new areas.

| Losses of Major Mineral Soil Elements as Removed by Tobacco and Other Crops |
|--------------------------|--------------------------|--------------------------|
|                        | Nitrogen (kg/bc) | Phosphorus (kg/bc) | Potassium (kg/bc) |
| Coffee                  | 103                 | 22                     | 142                  |
| Tobacco                 | 50                  | 14                     | 185                  |
| Tea                     | 45                  | 9                      | 21                   |
| Corn                    | 13                  | 2                      | 3                    |
| Rice                    | 11                  | 2                      | 12                   |

Source: Geist HJ.

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Tobacco Leaf Selling Arrangements

- Tobacco farmers sell crop at auction or on a contract basis.
- A tobacco auction is a marketplace where buyers bid for the tobacco in open competition, in Malawi and Zimbabwe, for example.
- Under contract farming a tobacco farmer agrees to grow tobacco for a buyer who, in turn, provides seeds, pesticides and other inputs on loan, deducting the costs from earnings.

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Tobacco Leaf Selling Arrangements

- In some tobacco growing countries, cigarette manufacturers and leaf companies purchase tobacco directly from farmers.
- Two emergent patterns: auction system is being replaced by the contract system.
- Global leaf companies own tobacco farms and contract with farmers on companies’ farms in India and Brazil, for example.

BAT and Contract Farming

- BAT obtains tobacco from 250,000 tobacco farmers worldwide through contract farming and other arrangements.
- 65% of BAT’s global leaf requirements are sourced from BAT’s own vertically integrated operations, which also play a role as the third global leaf export supplier.
- Worldwide BAT uses $40 million worth of tobacco each week.


Problems with Contract Farming

- Prices for seeds and agricultural chemicals often higher than retail price, increasing the likelihood that tobacco farmers actually lose money.
- Tobacco farmers assume financial and production risks for minimal financial return.
- Contracts are signed by many tobacco farmers who do not understand them.


Tobacco Tenant Farming: The Case of Malawi

- Tenant farmer grows tobacco on land provided by landlord
- Tenant agrees to sell tobacco to landlord
- Landlord agrees to provide inputs on loan (seeds, fertilizer, hoes, watering cans, plastic sheeting)
- Prices for inputs deducted from tobacco earnings
- Landlord sets tobacco prices
- Oral contracts

Problems with Tobacco Tenant System in Malawi

- Oral contracts difficult to enforce
- Landlords inflate prices for inputs
- High indebtedness of tenants to landlords
- Land degradation due to tenant farmers’ concern with meeting basic needs
- Tobacco tenant system disavows tobacco companies from responsibility of problems at tobacco farm level

Tobacco Farming and Child Labor

- Children as young as 5 years old involved in tobacco farming.
- Parents send children to fields instead of school, preventing children from attaining an education.
- Children working in tobacco fields vulnerable to poisoning from pesticides and fertilizers and other injuries.

Child labor in tobacco farming is a human rights issue.


Convention on the Rights of the Child ratified by 192 of 194 countries (unratified by the U.S. and Somalia).

Abolition of Child Labor, International Labor Organization Conventions 182. Worst Forms of Child Labor (U.S. is a ratifying member).

Child labor persists due to the lack of enforcement mechanisms and weak national labor laws.


Global Tobacco Production

- Three sets of activities in the global production of cigarettes: tobacco leaf production, distribution, and consumption.
- Tobacco farming involves planting, weeding, harvesting, drying and baling.
- Ancillary businesses include manufacturers of aromatics and flavors, cigarette packaging, adhesives, freight forwarders, customs brokers, tobacco processing machinery

The Global Tobacco Leaf Market

- From 1970 to 2000, tobacco leaf production decreased by 36% in developed countries but more than doubled in developing countries.
- Farmers in developing countries will produce 87% of the world’s tobacco by 2010.
- China’s government owns the monopoly the Chinese National Tobacco Company and grows 35% of world’s tobacco leaf.


The Global Tobacco Leaf Market

- Key players are tobacco farmers, governments, cigarette manufacturers, and leaf buying companies
  - Philip Morris and British American Tobacco (cigarette manufacturers)
  - US-based Universal Corporation and Alliance One International (leaf buying companies)

The Global Tobacco Leaf Market

<table>
<thead>
<tr>
<th>CIGARETTE MANUFACTURERS AND LEAF BUYING COMPANIES, 2005</th>
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</thead>
<tbody>
<tr>
<td><strong>Cigarette Manufacturers</strong></td>
</tr>
<tr>
<td>Philip Morris</td>
</tr>
<tr>
<td>British American Tobacco</td>
</tr>
<tr>
<td>Japan Tobacco</td>
</tr>
<tr>
<td><strong>Leaf Buying Companies</strong></td>
</tr>
<tr>
<td>Universal Corporation</td>
</tr>
<tr>
<td>Alliance One INT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Revenues (US $ Billion) Number of Markets Number of Factories Cigarette Production in Billions Share of Global Cig Market (%)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Philip Morris</td>
</tr>
<tr>
<td>85.5</td>
</tr>
<tr>
<td>180+</td>
</tr>
<tr>
<td>50+</td>
</tr>
<tr>
<td>1,014.8</td>
</tr>
<tr>
<td>25.7</td>
</tr>
</tbody>
</table>

* Over, NA, Not applicable

Source: 2006 Annual Reports from Philip Morris, BAT, Japan Tobacco (2005).
### Crop Diversification and Alternative Livelihoods

- Mix of crops, not one crop, is key in crop diversification discussions.
- Alternative crops and non-tobacco employment are necessary to reduce the reliance of tobacco growing countries on tobacco.
- The replacement of tobacco with healthy food crops could feed up to 20 million people, reducing the world's current 28 million undernourished people to 8 million.


### Industry Behavior to Obstruct Crop Diversification

- Lobbied governments and published reports that exaggerate the economic benefits of tobacco growing.
- Overtly and covertly funded research on tobacco crops to draw attention to the economic benefits of tobacco.
- Funded the few existing studies on alternative crops to tobacco to show that no crop can replace tobacco.


### Industry Behavior to Obstruct Crop Diversification

- Exaggerated the employment and revenue losses to governments in tobacco growing countries.
- Created a climate of fear of diversification claiming that unemployment from crop substitution would increase rural to urban migration of unemployed workers and increase political instability.
- Tobacco companies may resist sustainable and organic farming methods because companies would lose profits from pesticide and fertilizer sales.


### A Pro-Farm Families and Communities Approach

- Beginning in 1985, public health advocates established a partnership with tobacco farmers in the U.S.
- In 2001, President Bill Clinton’s presidential report “Tobacco at a Crossroad” presents main public health community and tobacco farmer issues: reduce tobacco farmers’ economic dependence on tobacco and improve economic opportunities in tobacco growing communities.
- The Alliance for Health Economic and Agriculture Development in Washington, D.C. promotes a pro-farm families and communities approach to tobacco control (2002-today).

Source: The President’s Commission on Improving Economic Opportunity in Communities Dependent on Tobacco Production While Protecting Public Health (2001)

### Tobacco Farming and the FCTC

- Key FCTC articles that address tobacco farming:
  - Article 4. “Guiding Principles” states the importance of assistance to aid the economic transition of tobacco growers.
  - Article 17. “Provision of Support for economically viable alternative activities.”
  - Article 22. “Cooperation in the scientific, technical, and legal fields and provision of related expertise,” states the importance of assisting “tobacco growers in shifting agriculture production to alternative crops in an economically viable manner.”

Source: National Cancer Institute of Brazil (2000)

### Tobacco Farming and the FCTC

- The FCTC offers farmers conditions to grow products which promote health.
- The implementation of the FCTC is not compulsory and will not impose restrictions to production, or to tobacco consumption and sale.

Source: National Cancer Institute of Brazil (2008)
Recommendations

- Implement FCTC articles on crop diversification and alternative livelihoods.
- Devise and support global, national, and local funding mechanisms to assist tobacco farmers to reduce their economic reliance on tobacco.
- Understand tobacco industry activities to undermine crop diversification and alternative livelihood efforts.

Source: Farm Labor Organizing Committee (2007); The President’s Commission on Improving Economic Opportunity in Communities Dependent on Tobacco Production While Protecting Public Health (2001).

Recommendations

- Integrate pro-farm families and communities approach in public health and tobacco control policymaking.
- Support direct voice of farm workers through trade unions and legally binding contracts to improve wages and working conditions.
- Emphasize human rights as the standard and self-determination as the process for strengthening tobacco farm worker rights.

Additional Sources

- The President’s Commission on Improving Economic Opportunity in Communities Dependent on Tobacco Production While Protecting Public Health, Tobacco at a Crossroad: A Call for Action 2001