

## Focus on Tobacco

### Farmworkers Suffer Occupational Nicotine Poisoning

There is much attention paid today to the negative effects tobacco has on consumers. Farmworkers who handle the tobacco plant in the fields are not immune, however, to the harmful effects of the tobacco leaf. Above and beyond the widespread health problems farmworkers face from pesticide exposure, many suffer from a condition unique to the tobacco fields: green tobacco sickness (GTS).

Though not a new problem, green tobacco sickness was first documented in tobacco workers in Florida in 1970. It was found that nicotine, the major active ingredient in tobacco, is a water-soluble chemical which is easily absorbed by cultivators' bodies while they handle wet tobacco leaves. Nicotine enters workers' bodies through their skin, lungs, and gastrointestinal tracts.

The symptoms of green tobacco sickness include nausea, vomiting, dizziness, abdominal cramps, headaches, shortness of breath, weakness, and blood pressure and heart rate fluctuations. While these acute effects of the sickness last only one or two days, there may be

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### What You Need To Know About Tobacco

- ☛ Tobacco is currently grown in more than 120 countries around the world (Goodman, 1993).
- ☛ China, the world's largest producer of tobacco, grows 38% of the world's crop. Growers in the United States account for 10% of the world tobacco crop (Goodman, 1993).
- ☛ Tobacco is responsible for the livelihood of at least 100 million people worldwide, though tobacco accounts for only 0.3% of all cultivated land (Goodman, 1993).
- ☛ In the United States, 48,800 people are employed at 114 tobacco factories in 21 states. 136,000 people farm tobacco in 23 states (California Medical Society).
- ☛ Almost 900 million pounds of flue-cured tobacco were grown and sold in the United States in 1996. In North Carolina, 557 million pounds were grown (NC Cooperative Extension Service, 1997).
- ☛ Seventeen million pounds of pesticides and other chemicals were applied to North Carolina's 280,000 acres of tobacco fields in 1996 (NC Department of Agriculture, 1997).
- ☛ The cost of health care for tobacco-related diseases in 1993 was \$50 billion, or \$2.06 per pack (Center for Disease Control). This does not include the toll of occupational nicotine poisoning or green tobacco sickness.
- ☛ As Washington considers a host of tobacco legislation, growers are speaking out for monetary compensation to offset income loss due to new smoking restraints. Current proposals would give \$28 billion from settlement penalties to growers and farming interests over the next 25 years. Some of this money would help growers explore possible alternatives to tobacco (Raleigh News & Observer, 2/17/98).

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SAF is a 501(c)(3) non-profit organization whose mission is to bring students and farmworkers together to learn about each other's lives, share resources and skills, improve conditions for farmworkers, and build diverse coalitions working for social change.

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SAF is supported by the Z. Smith Reynolds Foundation, the Kathleen Price Bryan Family Fund, NC Humanities Council, NC Arts Council, NC Community Shares, NC Public Allies, the Migrant Health Program, Kate B. Reynolds Charitable Trust, the National Community Service Trust, Church Women United, American Airlines, Duke Chapel Fund, Mary Duke Biddle Foundation, and the Center for Documentary Studies.

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Published by SAF

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# Tobacco Labor and Production: A Brief History

Tobacco has ancient roots as a medicinal and religious substance. Like other calming or hallucinatory substances, it was often used in ancient American cultures in various rituals. Tobacco was prized by its original native American users because its effects are controlled and short lived - qualities also prized by European explorers. Jordan Goodman, author of *Tobacco in History*, writes that "only one century after Columbus's voyage, tobacco was either grown or consumed in most of the known world."

The 1600s were a time when many were searching for panaceas. Tobacco seemed to calm the nerves, cleanse the humors, and even to cure pain when applied topically. Before the cigarette, which now makes up 85% of tobacco consumption worldwide, the leaf was variably and increasingly used as chew, smoked in a pipe, or sniffed. Even in these early years, tobacco was inexorably linked to fashion and social ritual.

Early European production of tobacco was notable because there were no economies of scale. In other words, an increase in production of tobacco led to an equal increase in costs. Thus, there was a large variation in farm sizes and high demand for tobacco labor. As European settlers came to the Americas, they often chose to grow tobacco as it was very profitable even for a small grower. When looking for labor, they did not turn first to Africa, but relied on a system of indentured servitude. Workers would labor for four to seven years on a tobacco farm to pay off their passage to the Americas. Often, indentured servants would accumulate enough wealth to start their own tobacco production and to hire their own indentured servants from Europe.

Early settlers, who in the 1600s were concentrated in the Chesapeake region, lived in the age of the small planter. However, production techniques were largely the same as they are today — minus chemical applications. Growers would plant the seed in a seedbed and then transplant it to the field. There, the plants would be cared for - weeded and topped to ensure large yields. It is said that a one day delay in removing the flowers from a tobacco crop can decrease production by 15 pounds per acre. It was also an important decision when to cut the leaves. Cutting too early could make the tobacco unusable, while waiting too long could subject the crop to frost. Once cut, the tobacco was dried, processed, packed and then

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sold. While most of this process has changed little, the labor force employed has changed over the years.

Starting in 1650 and lasting until the 1700s, a shift occurred away from indentured servitude and toward slave labor. Large growers like William Byrd and Thomas Jefferson were increasingly wealthy and relied primarily on slave labor to work in their tobacco fields.

Soon, smaller farms, including those in North Carolina and Virginia, began to rely on slave labor. After the Civil War, this agrarian plantation system continued with free labor. The post-war system relied on a tenant/landlord division of land ownership.

Tobacco entered a new era around 1880 with the gradual introduction of the machine-made cigarette. By 1941 in the United States cigarettes accounted for 50% of tobacco consumption, and in 1950 they accounted for 72% (Goodman, 1993). The cigarette ushered in a new, industrial method of tobacco production, distribution, and consumption. Modern techniques, including multi-branding, advertising, and sales gimmicks were spearheaded by North Carolina businessmen W.T. Blackwell, Julian Carr, and James Duke. Advertisements and packaging emphasized fashion, social acceptability, and gender specificity in cigarette consumption.

Both tenants and landlords

suffered in the 1920s as tobacco prices crashed. Price drops were in part caused by overproduction. Farmers cultivating tobacco were hit hard (while manufacturers of tobacco products saw their profits soar due to low material costs).

Consequently, tobacco was the only non-essential commodity included in the Agricultural Recovery Program as part of the New Deal. In 1933, the Agricultural Adjustment Act was passed, promoting institutions, mechanization, and output controls to help tobacco growers. Output controls included acreage quotas, price controls, and financial support provided by a tax paid by manufacturers. This program was designed to favor tenants over landlords.

Because of acreage quotas, growers turned to techniques that could increase yields, including fertilization, pesticides, irrigation, and close planting. The average yield per acre in 1940 was 1,000 pounds of tobacco. The average yield in 1964 was 2,000 pounds.

In the 1950s landowners began to dismiss sharecroppers as technology made it feasible to farm larger plots of land. Because of decreased labor needs resulting from technological advances, growers turned to a seasonal workforce to assist in harvesting.

In the 1960s, changes in the federal allotment system allowed farms to amass acreage in individual counties, and also changed the quota system to one based upon poundage rather than acreage. This allowed for farm consolidations which decreased the need to maintain high tobacco yields. Both of these developments opened the door for mechanization.

The tobacco harvester, used on farms over 40 acres, was invented in the 1970s. Though it creates a 15% leaf loss, this is less relevant as quotas are now based upon poundage. In 1972, 1% of flue-cured tobacco was harvested mechanically. In 1980, machines harvested 46% of the North Carolina tobacco crop.

#### **For more information about tobacco:**

*Tobacco in History, The cultures of dependence.* Details the history, politics, economics, and culture of tobacco consumption and production through the ages. By John Goodman, published by Routledge, Inc., 1993.

*Ashes to Ashes: America's hundred-year cigarette war, the public health, and the unabashed triumph of Philip Morris.* A survey of the politics of the tobacco industry. By Richard Kluger, published by Alfred A. Knopf, 1996.

Tobacco industry information on the web: <http://www.tobacco.org/>

"Green Tobacco Sickness." Study of GTS cases in Kentucky and extensive GTS bibliography. *Archives of Environmental Health*, Sept-Oct, 1995, v. 50, no. 5 page 384(6).

