



## CURING TOBACCO – THE ISSUES

**A** CONSISTENT criticism of the tobacco industry is that, in using wood for curing, it behaves in an environmentally irresponsible way. This Issues Paper shows that not only are such accusations unjustified, but that the industry actually deserves far better recognition of its commitment to environmental good-housekeeping. In fact, one leading authority even said on record in 1995: *“The tobacco industry... is in a good position to gain leadership among the environmental friendly industries.”*<sup>1</sup>

Tobacco growers and others in the industry are far from complacent. However, since the tobacco industry uses less than one per cent of all wood consumed in the developing world for all purposes, it is certainly not the arch-villain it is accused of being. Further, this one per cent itself represents the energy source (15.7 per cent) least used in tobacco curing, being involved in the production of less than 10 per cent of all tobaccos.

### FLUE CURING

Most tobaccos (62 per cent in 1993) are flue-cured, for which fuel is required. Tobaccos cured either by air, sun or fire (smoke), require little or no artificial heating. About 80 per cent of flue-curing takes place in conventional barns, constructed from various materials such as wood, burnt brick, cement blocks, bush poles and mud, roofed with corrugated iron, asphalt, clay tiles, cedar shingles or thatch.

The choice of an energy source depends on its availability, its delivered cost, general convenience and labour requirements; it must, of course, be energy-efficient. It is the fuel of necessity, rather than choice, in all growing countries in Africa, except South Africa and Zimbabwe, where coal is important. Coal is the most extensively used fuel in the world for curing (67.1 per cent), particularly in China, Poland, North Korea and Thailand (lignite), while oil and gas (17.2 per cent) are mainly used in metal bulk barns in Europe, North America and Latin America.<sup>2</sup>

A problem with coal is that it is expensive to mine and transport, so in some countries where land is available, it has been more cost effective to replace coal with wood. Grown locally, in well

managed plantations, wood offers major advantages such as renewability, its price largely unaffected by such things as war in oil-producing areas and, when the right species are used, other environmental and economic gains. A great deal of research into ideal tree species and better growing techniques is now taking place.

The burning of fossil fuels or wood for tobacco inevitably contributes to the greenhouse effect and global warming. However, growing trees fix carbon dioxide and, if renewal keeps pace with deforestation and burning, farmers will strike a balance between carbon dioxide production and consumption.

According to the FAO about one-third of the world's tropical land mass has an actual or prospective deficit of fuel-wood and today, all wood-using countries are urged to conserve their existing resources, particularly since much flue-cured tobacco is grown in countries falling into this category.

### TREE PLANTATIONS

Tree plantations permit farmers to draw their wood-fuel requirements without encroaching on native sources, and they provide a much faster return than naturally regenerated forest. For example, in the major Virginia tobacco-producing regions of southern Brazil, wood has always been the most economical and viable curing fuel and, even before they were wrongly accused of destroying forests, local tobacco growers were conscientiously managing their tree resources.

Today, more than ten times the number of trees are planted each year than are consumed.<sup>3</sup> And in Kenya, farmers demand only one-sixth the amount of fuel-wood they would have needed in the mid-seventies.<sup>4</sup> Leading tobacco companies now actively promote reforestation throughout the world with leaf-growing contracts which require them to grow trees. These huge programmes aim at self-sufficiency in the fastest possible time.

The steady increase in world demand for tobacco is also helping to drive the industry's continuing search for more cost effective, energy-efficient uses of oil and gas, as well as improved barn, furnace and flue design.



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Consequent savings in fuel costs make investment an attractive proposition since a fully modified barn is likely to use less than 50 per cent of the fuel used in an unmodified barn.<sup>5</sup>

A recent FAO project found that even simple modifications, such as ensuring an air-tight seal on a furnace door, can improve barn revenue considerably. Malawi, for example, now saves half a million cubic metres of wood a year from furnace and flue improvements. The benefits go even further, with savings in foreign exchange.

Efficient curing goes far beyond the value of the wood saved. The weight and quality of the tobacco are improved, barn turn-round time is reduced, and the life of equipment is extended. Ecological and environmental savings are also significant in that large areas of forest which would have been felled are now being spared, and land which would have been used for plantations is freed for cropping.

If accusations of environmental irresponsibility

were, in effect, a challenge, the industry has unquestionably responded very positively to it by insisting on reforestation projects, and by constantly seeking to improve curing techniques and barn efficiency. A recent definitive study showed that between 4.8 kg and 12.9 kg of wood were required to cure 1 kg of tobacco.<sup>6</sup> In 1995, across 15 African producer countries, specific fuel consumption averaged 4.8 kg/kg – the best performance ever recorded.

### SOURCES

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