

## Comparison between Tobacco and Bamboo

Disadvantages of tobacco	Advantages of bamboo
<ul style="list-style-type: none"> <li>Has very minimal uses most of which are hazardous to human health e.g. smoking and chewing (Kweyuh,1997)</li> </ul>	<ul style="list-style-type: none"> <li>Has over 1500 uses so far recorded in Asia e.g. fencing , shoots for food, making toothpicks, handcrafts (Madhab, 2003); Ongugo et al, 2000)</li> </ul>
<ul style="list-style-type: none"> <li>Low annual yields associated with insufficient returns of Ksh 20,000/acre/ annum (Ochola and Kosura ,2007;Kibwage et al ,2008)</li> </ul>	<ul style="list-style-type: none"> <li>High annual yields of about 17 tons per acre in a well managed plantation, approximately Ksh 83,910 per annum (UNIDO,2006)</li> </ul>
<ul style="list-style-type: none"> <li>High demand for wood fuel e.g. 25 tons per annum per acre during the curing process (Shoba and Vaite,2002)</li> </ul>	<ul style="list-style-type: none"> <li>Less demand for wood fuel during the treatment process. Bamboo residuals alone are sufficient in treatment /curing</li> </ul>
<ul style="list-style-type: none"> <li>Environmental pollution due to increased use of fertilizers and other chemicals that pollute soil and water bodies (Kibwage et al 2005)</li> </ul>	<ul style="list-style-type: none"> <li>Environmental conservation e.g. purification of air and polluted water bodies (Karina, 2006). No farm application of fertilizers and chemicals</li> </ul>
<ul style="list-style-type: none"> <li>Reduces soil fertility because it extracts important plant nutrients from the soil, leaving it almost barren (Kibwage et al,2007)</li> </ul>	<ul style="list-style-type: none"> <li>Ensures bio-remediation and improves soil fertility due to the decomposing leaves and sheaths (UNIDO,2006)</li> </ul>
<ul style="list-style-type: none"> <li>High risks associated with natural calamities like hailstones, diseases and fire out breaks (Kibwage et al 2005)</li> </ul>	<ul style="list-style-type: none"> <li>Fewer risks associated with natural calamities like hailstones, diseases and fire out breaks in well maintained farms</li> </ul>
<ul style="list-style-type: none"> <li>High labour intensive and promotes child labour especially during harvesting and curing periods to avoid damages and losses ascribed to climatic changes when it matures (Marlene et al 2002; Asila, 2004; Kibwage et al ,2005)</li> </ul>	<ul style="list-style-type: none"> <li>Less labour intensives and no child labour requirements during harvesting</li> </ul>
<ul style="list-style-type: none"> <li>Matures in about 6-7 months and requires a lot of capital and labour investments every season (Panchamuki,2000)</li> </ul>	<ul style="list-style-type: none"> <li>Matures in about 3-4 years and can be harvested for up to 80-120 years with very little capital investments (RELMA,2003)</li> </ul>
<ul style="list-style-type: none"> <li>Leads to deforestation hence soil erosion (Geist,1997)</li> </ul>	<ul style="list-style-type: none"> <li>Good in soil stabilization and river bank protection (Bamtek and Kleinhardt,2002)</li> </ul>
<ul style="list-style-type: none"> <li>Minimal local processing activities with limited employment opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>Promotes community based processing and creates employments opportunities</li> </ul>

### The potential of adopting bamboo as an alternative crop to tobacco farming in South Nyanza region, Kenya

<sup>1</sup>\*J. K. Kibwage\*; <sup>2</sup>G. W. Netondo; <sup>3</sup>A. J. Odonde; <sup>4</sup>F. Jinhe and <sup>5</sup>G. M. Momanyi

\*: *corresponding author*..... **1, 2, 3, 5**...Maseno University, School of Environment and Earth Sciences, P.O. Box 333, Maseno, Kenya. *Office Tel: +254 -57-351204/351620/2, Fax: +254 - 57 - 351221/351153, Cell No. +254 722 479061, Email: jkkibwage@yahoo.com*

**4**.....International Network for Bamboo and Rattan (INBAR), Postal Address: PO Box 100102-86, Tel: +86-10-6470 6161, Fax: +86-10-6470 2166/3166, Beijing 100102, P. R. China: Email: *info@inbar.int\** *A paper presented at the WHO-FCTC Second Meeting of the Study Group on Economically Sustainable Alternatives to Tobacco Growing Mexico City, 17-19 June 2008*