

Life Cycle Analysis

A Life Cycle Analysis seeks to determine the degree of environmental footprint that results from all aspects of a products existence, from birth to grave. To date, no credible Life Cycle Analysis has been done on kenaf as a raw material for paper. The existing timber industry or its associates have released certain piecemeal statements related to the environmental impacts of kenaf. Some of these statements seem laughable, (we will not have to cut down the forest to make room to grow kenaf) and others, while misguided or misleading, are daunting. The basic argument that forestry, in general, has less impact than agriculture, in general, relies upon the comparison of fuel consumption of annual agricultural field operations as compared to the non-annual nature of growing and cutting trees. It is apparent that other factors need to be considered and weighted in a comprehensive analysis. The following table begins to identify issues for consideration.

Agriculture	Industrial Tree Farms
Required for survival of society	Not required for survival of society
Over 4,000 years experience	Less than 200 years experience
Hundreds of cycles of experience harvesting and planting in same location	3 cycles of experience in cutting and replanting in same location
Sustainability proven	Sustainability unproven
Maintains soil fertility	Depletes soil
Kenaf in Agriculture	Industrial Tree Farms
Promotes crop diversity and rotation	Promote monoculture woodlands
- depends upon natural life cycles	- disrupts natural life cycles
- no insect enemies	- insect imbalance results in chemical use
- fertilizer and herbicides used are lower than for other crops	- fertilizer and herbicide are used at significant rates
Harvesting	Harvesting
- no habitat loss	- results in loss of habitat
- no loss of groundwater protection	- loss of groundwater protection
Other environmental considerations	Other environmental considerations
Absorbs CO2 faster than trees on a per acre per year basis - also allows trees to grow longer and continue providing benefits	Loss of CO2 absorption when cut
Pulping	Pulping
Milder and lower levels of chemicals are required to convert to pulp. No foul smells are generated, and less expensive black liquor processes can be used.	Sulfur based chemistry creates rotten egg smell and requires expensive black liquor processing system to comply with environmental regulations.
Kenaf uses 25% less energy to pulp than trees.	Trees require a higher energy level to pulp.
Social considerations	Social considerations
Farmers stay put and participate in the community for generations	Loggers cut until the trees are gone and then move on to the next work site
Restorative practice	Extractive practice
Land owner typically lives on or near site	Land owner typically not on site