

From Wood Fiber to Filling: An Overview of Multiwall Paper Bags

Focused on Sustainability



Renewable

- Replenishing what was consumed. If responsibly managed, generation after generation will still have a natural resource. Therefore, as a member of the Sustainable Forestry Initiative® (SFI), we can trace our paper fiber in our products back to its forest location to ensure relationships with responsible suppliers.



Reduce

- 3 ply natural kraft bags → 2 ply high performance construction, while maintaining bag performance. In turn, increase # bags/pallet = more on a truck = less shipping costs = lower bag costs.
- Lower gauge film constructions

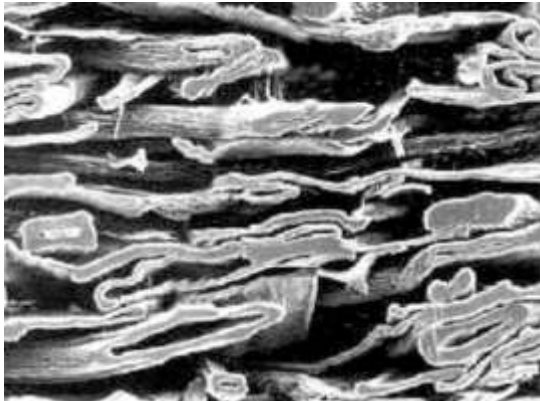
Recycle

- Recycled film components
- Paper bags with no film can be recycled where facilities exist.

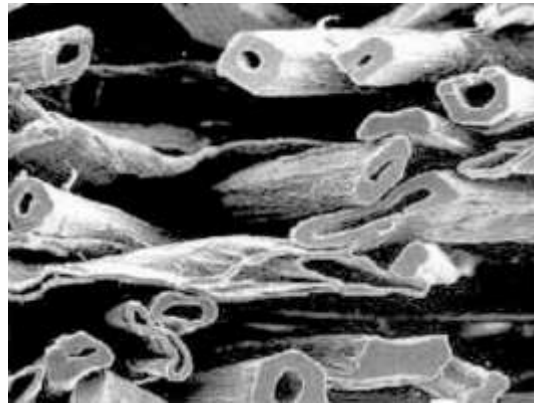
Tree selection and pulp properties



- Cold verses hot climate trees



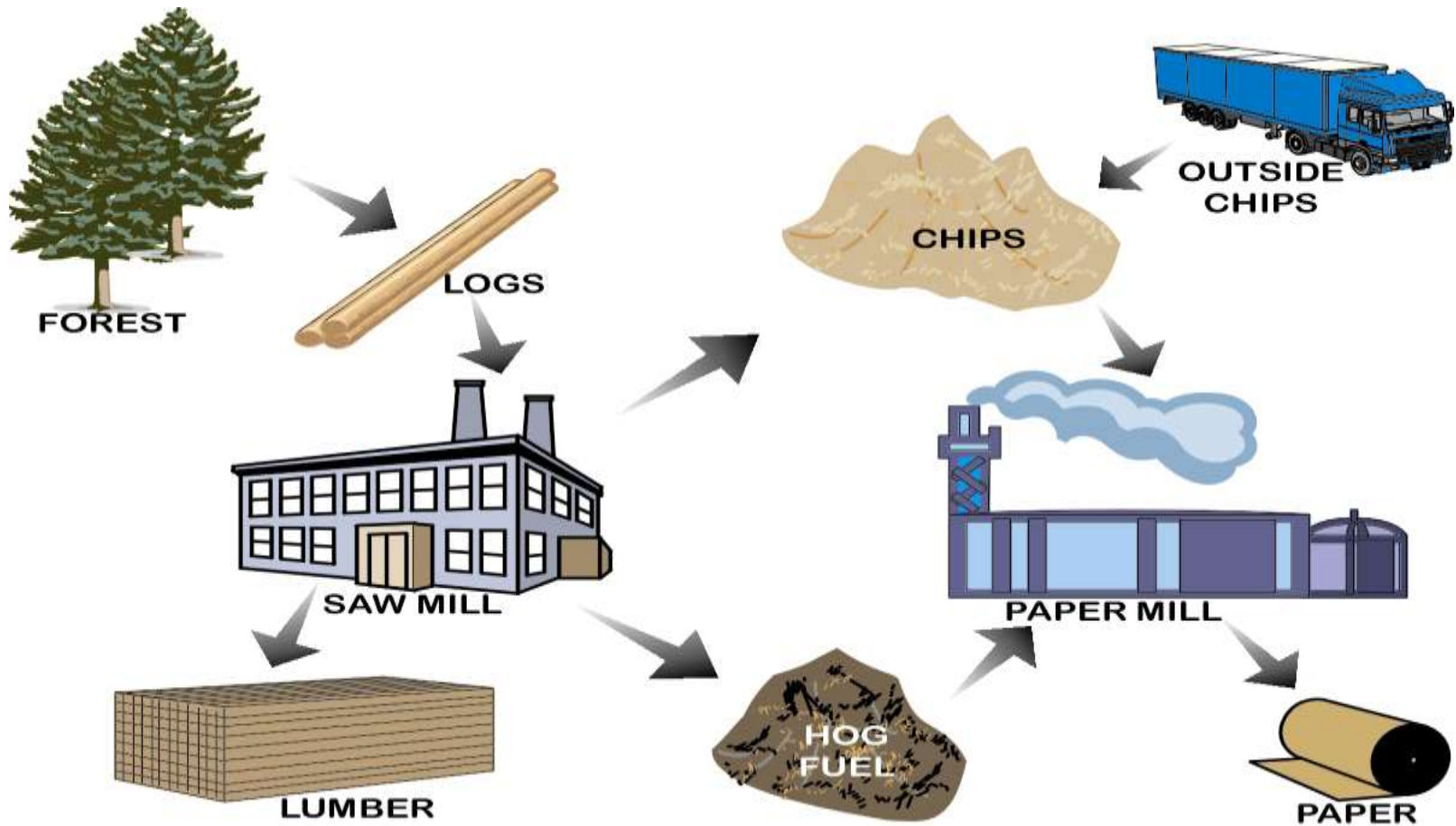
Northern Fibre



Southern Fibre

- Northern fibre trees include lodgepole and jackpine, white and black spruce, and alpine fir.
- Cold climate trees grow slower and create long thin fibres that collapse and create the strongest paper.

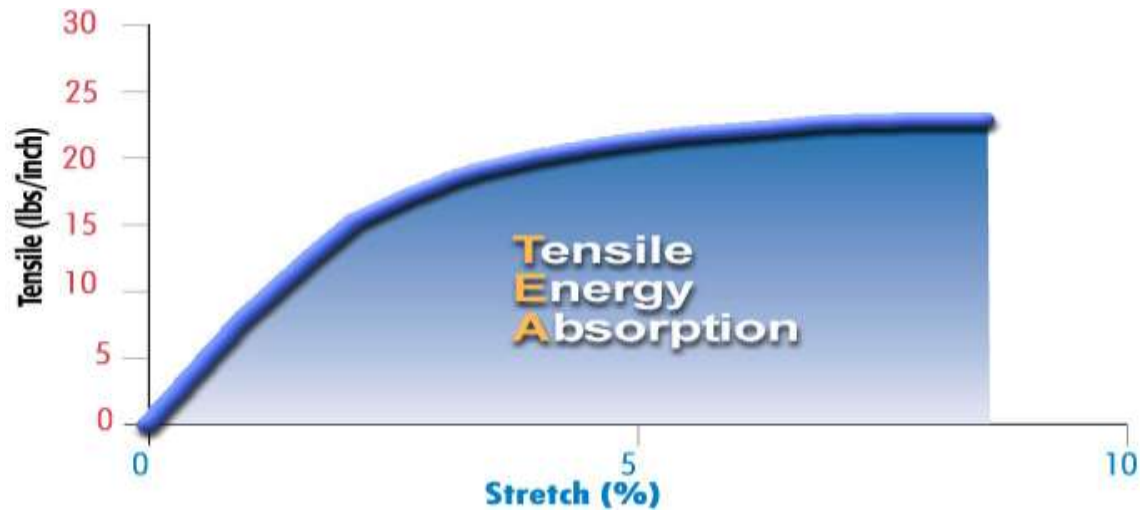
Paper making process



Paper properties



- Tensile strength
- Stretch
- TEA (Total Energy Absorption)
- Tear
- Porosity
- Stiffness



- Cross direction verses Machine direction

Very Strong Paper



Paper grades



- Natural Kraft
- Semi-Extensible
- Extensible (High Performance)
- Bleach grades
- Specialty grades (Clay coated, poly coated, etc)

Paper bag manufacturing 101



Real paper bag manufacturing



Printing



Tubing



Bottoming



Multiwall paper bag types

- PVSE
- PBOM
- SOM
- SOS



PVSE



- Completely fabricated at the bag manufacturing plant
- Highest bag filling rates attainable
- No filled bag closing equipment or materials required (dependant on valve type)
- Provides best palletized loads on the smallest pallet size
- Most popular bag style in the world

PBOM



- Can be made tamper proof with heat sealed closure
- Provides best sift resistance of any multiwall bag
- Provides highest level of barrier protection
- Has pre-applied hot melt that does not require additional closing materials
- Requires precision closing operations

SOM



- Oldest method of open mouth bagging
- Highest bag cost per unit
- Offers cost effective easy open with single thread
- Ends of bags have needle holes and can sift and are not tamper proof
- Slowest filling rates and high amount of closing materials needed

SOS



- Square bottom for standing upright at retail
- Suitable for products with variable densities as sewn closure can be adjusted to height of product in bag
- Forms wedge shape that stacks well forming a stable pallet load
- Various closure methods

Thank you