

## Ways to reduce smoke

Tue Sep 02, 2008 12:48 am

Forestry does not have to do planned burns. There are other methods they can use that virtually make no smoke at all.

One is to use a SMOKE CURTAIN.

High speed air across the top of the burning chamber keeps smoke to an absolute minimum. The only time a whiff of smoke appears is when the curtain is broken as new logs are fed in.

### **Air Curtain Burner Destructor for Wood Waste Disposal**



*Logs being loaded*

airburnerdestructo1.jpg (9.65 KiB)

### **Air Curtain Burner Destructor for Wood Waste Disposal**



*Inside the air burner.*

airburnerdestructo2.jpg (12.18 KiB)

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Another way is to use a MASTICATOR.

Mastication is one way to reduce fire hazard and brush, at the same time enhancing the soil.

A masticator is a piece of heavy machinery consisting of a backhoe-type vehicle with an articulating arm. On the end of the arm is a device that chops or flails woody vegetation.

It shreds huge trees in a matter of seconds and reduces them to chips. Those chips will eventually break down, passing nutrients into the soil and providing a mulch layer that helps keep in moisture.

The machines come in various sizes for different needs and land characteristics.

The mulch also inhibits the return of shrubs that need bare soil to germinate.

Masticators can be used in many types of terrain and can operate on slopes of up to 35%.

Thinning our overstocked forests is now recognized as one of the best ways to prevent catastrophic wildfires.

And the best part is no slash piles are left behind to deal with later. When the masticator comes in and does its job...that's it.

"You might think that bringing an excavator into the forest would create quite an impact, but these machines are specially designed to tread lightly on the land." "The impact is negligible first and foremost because the ground pressure applied by the machine is only 5.5 pounds per square inch.

Mastication initially appears to be costly but in the long term it's the least expensive method.



masticator1.jpg (12.32 KiB)



masticator2.jpg (9.67 KiB)

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Or Slow Pyrolysis:

Slow Pyrolysis system creates synthesis gas for electrical generation, charcoal (char) and waste heat for re-use in plant and for export to other users.

Synthesis Gas

Syngas can be used to dry the incoming feed material, fuel an engine or a gas turbine.

Syngas can be used as a feedstock for a secondary refining process.

Syngas can be used as a natural gas replacement.

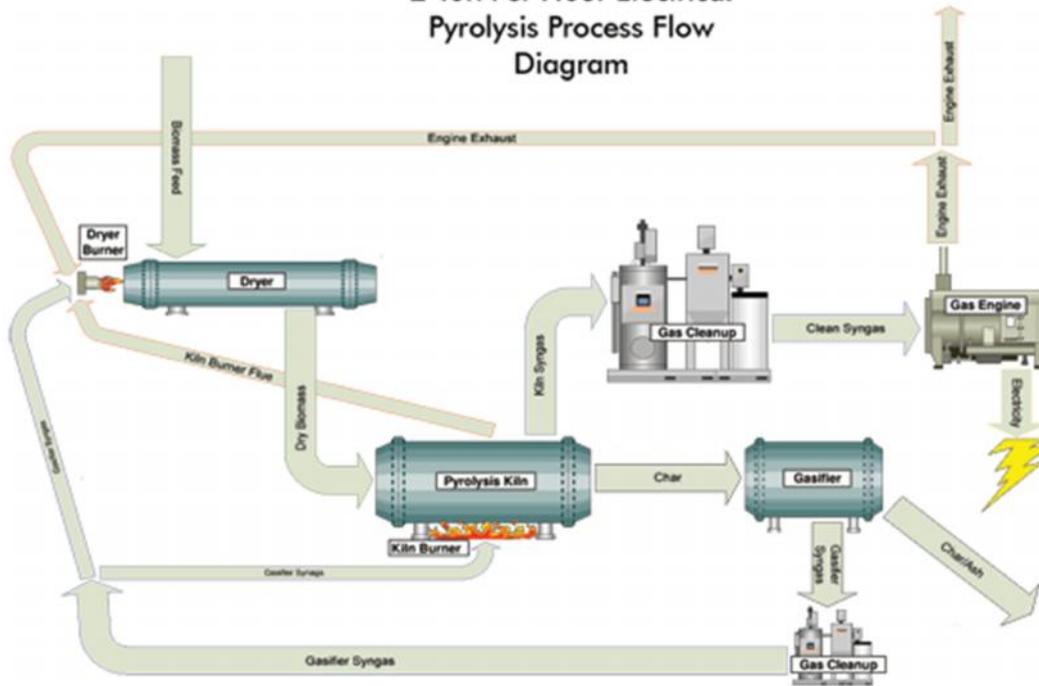
Char can be made into:

Carbon filtration media

Pelletized fuel

Carbon for soil enrichment.

## 2 Ton Per Hour Electrical Pyrolysis Process Flow Diagram



BESTpyrolysis.gif (29.93 KiB)

Clean air is one of our most precious resources,  
essential for our survival and quality of life.

<http://www.cleanairtas.com>

Re: Ways to reduce smoke

Sun Nov 02, 2008 8:25 pm

Here is part of a letter forwarded to me from Dr. Dorothy L. Robinson of the Armidale Air Quality Group...

Thank you Dorothy 😊

I thought of you when I read Bulletin 1294 - 40MW Biomass Power Plant, Manjimup

[http://www.epa.wa.gov.au/article.asp?ID ...](http://www.epa.wa.gov.au/article.asp?ID...) PA+Reports

This report comments on the reduction in air pollution if wood waste is burned for power generation (in a plant equipped with fabric filters) instead of burned in-situ.

I wonder if the politicians would support a call for 'best practice waste management', including banning burning waste in-situ in favour of biomass power?

The introduction of a ban would provide the economic incentive to develop biomass power, a 'win-win' situation because of the income generated from the power and the reduction in air pollution and greenhouse gas emissions.

A similar law could apply to any waste that could be used to make wood pellets. Instead of burning it, the land-owners could be obliged to transport it free of charge to the pellet manufacturers.

Re: Ways to reduce smoke

Thu Nov 20, 2008 2:55 pm

It has come to my attention the pellet factory in Scottsdale is being denied raw materials and therefore having to import pellets from interstate to supply his market!