

# Table of Feedstocks

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The following table of feedstocks shows the most common feedstocks that are known to work, and what feedstocks are known to be problematic.

## Suitability Key

<b>Dark Green</b>	Known to work with minimal operations and maintenance effort
<b>Green</b>	Known to work with increased operations and maintenance effort
<b>Yellow</b>	Maintenance intensive. Will work with increased operations and maintenance effort, may have increased slagging and other downtime impacts.
<b>Red</b>	Not tested or known to not work.
<b>Dark Red</b>	Known fundamental incompatibilities.

## General Requirements For All Feedstocks

- Effective particle size: 1 cm–4 cm (0.5 inch –1.5 inch)
- Moisture content (% by dry weight): <30%
- Ash content <5%

Feedstock	Notes	Processing
<b>Walnut Shells</b>	Shell halves and large pieces work; finely crushed shells do not.	Sifting, drying.
<b>Coconut Shells</b>	See general requirements. Caution: Large pieces may cause auger binding or bridging.	Crushing, sifting, drying.
<b>Hardwood Chips - Oak, Beech</b>	See general requirements. Caution: Thick chips may cause auger binding.	Chipping, sifting, drying.
<b>Softwood Chips - Douglas Fir, Pine</b>	See general requirements.	Chipping, sifting, drying.
<b>Corn Cobs</b>	Must not contain husks. Caution: Increased chance of slagging.	Needs to be chopped to correct size.

<b>Palm Kernel Shells</b>	Caution: Risk of high temperatures	May work if blended with feedstocks that burn at lower temperatures
<b>Wood Pellets</b>	Larger pellets have better void spaces Caution: Pellets crumble due to humidity on shutdown.	
<b>Saw Dust</b>	Caution: Too fine, not physically compatible.	
<b>Manure - Cow, Pig, Chicken, etc</b>	Caution: High slag, low energy density.	
<b>Coffee Grounds</b>	Pellets of grounds prone to disintegration.	
<b>Macadamia Nut Shells</b>	Not enough testing to validate performance; excellent physical compatibility when sifted.	
<b>Bamboo</b>	Processing into chips difficult.	
<b>Grassses - Switchgrass, Miscanthus, etc.</b>	High silica and low bulk density.	
<b>Paper Waste</b>	Not physically compatible in paper form; same risks as pellets when pelletized. High ash content.	
<b>Sugarcane Bagasse</b>	Stringy material - not physically compatible; certain fuel jams.	
<b>Corn stover</b>	High ash content; silica content leads to slag.	
<b>Oil Palm Pressings</b>		
<b>Rice Husk</b>	High silica content leads to slagging.	
<b>Coconut Husk</b>	Not physically compatible	

<b>Municipal Solid Waste / Trash</b>	Slag risk; heavy metals; plastic content not suitable, especially PVC.	
<b>Coal</b>	Burns too hot; processes not designed to handle sulfur and other contaminants.	
<b>Plastics</b>	Melts and fouls auger/reactor; does not have good fixed carbon content. May contain or create toxic compounds	
<b>Tires</b>	Not chemically compatible.	