

# Biomass Pelleting

## Facts

- Pelleting is a low cost densification technology, using roughly 40 KWH of power per ton processed as opposed to briquetting, which uses 60 KWH per ton of production.
- Pelleting systems operate with limited manual labor to run continuously for weeks, with minimal attendance required.
- Pelleting, being a slow extrusion press, most of the more difficult fibrous biomass can be processed. Feedstocks can be conditioned by steam, without the need of a binder.

## Applications of Biomass:

Studies in Indonesia, the Philippines, Thailand, and India have proven densified fuel as an energy source for the textile, pharmaceutical, leather, and chemical industries, as well as brick kiln, tea, dye and rubber factories.

Our market research is currently leading us to the ethanol industry, lumber mills, breweries, municipalities, universities, livestock industries, and forest waste.

## Types of Biomass Processed

There are numerous potential agricultural biomass feedstocks including:

rice husk	bagasse
ground nut shell	peanut shells
DDGS	sugarcane bagasse
sawdust	rice husks
pine needles	coconut
jute	mustard stalk
coffee husk	stalks
oil stalks	corn stover
wheat straw	soybean straw
corn cobs	roadside grass
hay	switchgrass
other grass crops	distillers grains
soybean hulls	oat hulls
oat screenings	sunflower hulls
wheat middlings	corn screenings
manure	sugar beet pulp
glycerol.	

## Government Mandates

For example, in Minnesota, a State statute requires that 25% of the total energy used in the state be derived from renewable energy resources by the year 2025. Neighboring states have also adopted renewable portfolio standards and "good-faith" objectives for renewable energy production. If agricultural biomass pellets prove to be a least-cost renewable energy resource, then one would expect electric utilities to co-fire agricultural biomass pellets with coal in existing power plants.



**HITECH AGRO**  
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# PL Series Pelleting Mills



## Patented Technology

Our patented pellet mill is specially proven for biomass residues. The cellulosic lignin acts as a binder under heat and moisture to form a dense pellet.

## Equipment for Pellet Plant:

- Pellet Mill
- Primary Crusher
- Hammer Mill Grinder
- Air Density Separator
- Rotary Trammel
- Slat Conveyor
- Disc Screen
- Giant Airlock
- Conditioning Screw
- Pellet Cooler Conveyor

## Machine

Our pellet mill has large heavy rollers above a fixed flat die placed horizontally. This machine utilizes brute force and gravity to produce pellets.

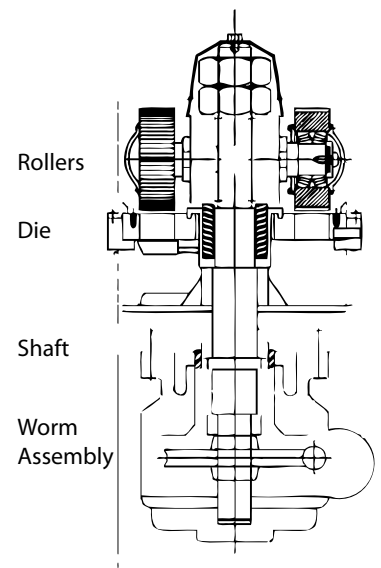
## Operation

Material conditioned by steam is fed to the die below the rollers. Rollers rotating over the die force the feed through holes forming pellets which are cut or broken into shorter pieces by the knife. Pellets are discharged from the pellet mill to the pellet cooler conveyor.

## Specialty

Our pellet mill consists of high quality components. It's worm and worm wheel are of Radicon make, the thrust bearing is of ample design, and the fixed flat die gives stability to the machine. The roller assembly parts are easily interchangeable.

*We have installed over 300 machines world wide; we bring over 30 years of R&D on how to densify various types of biomass and produce fuel.*



Model		PL500	PL600	PL750	PL1000
Die Diameter	mm	500	600	750	1000
Roller Diameter	mm	230	280	350	450
Roller Width	mm	76	102	130	450
No. of Rollers		2	2	4	4
Power	HP	25	40	75	150
Processed	tons	.5	1	2.5	5



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