

Innovative Concepts and Technologies Shaping the Pellet Industry

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About Us

Biomass-Energy and Pellet Characterization Service Center

The work conducted in the biomass-bioenergy and pellet characterization center include:

- ✓ The evaluation of woody biomass materials.
- ✓ Complete assessment of solid fuels such as pellets and briquettes.
- ✓ Particle preparation, material compaction and product testing such as proximate and ultimate analyses and trace element quantification.
- ✓ Tools include: debarker, splitter, grinder, hammermill, pellet mill, briquetter, furnace and moisture meters.

Biomass Pretreatment and Logistics

Ensure that the movements to and from each segment of the **Biomass supply chain** are carried out as efficiently and economically as possible by means of pretreatment processes.



Relevance

Bioenergy is a developing industry without matured markets.

Transportation is a significant portion of the total cost of biomass and it limits the sourcing area.

A **commodity** good is produced/sold by many companies and it is uniform in characteristics. Wood, oil and electricity are considered commodities. Price is determined as a function of the market as a whole.

New Approach?

When he was just 19, Michael Dell started the company that would dominate the industry. The company had \$1,000 and a novel idea:

"I was quite excited about the possibilities for computers and how they could change society. Meanwhile, as a customer, I was disappointed that when I went to a computer store, the salespeople didn't really know about computers. I had this idea to sell the products directly to the user over the phone. The Internet," he adds, "was an unimaginable gift from heaven that came ten years later."

Three years later, the company did a private placement, a stock offering to a small group of investors. "By then," Dell says, "we had already achieved annual sales of about \$150 million. I was 22 years old."

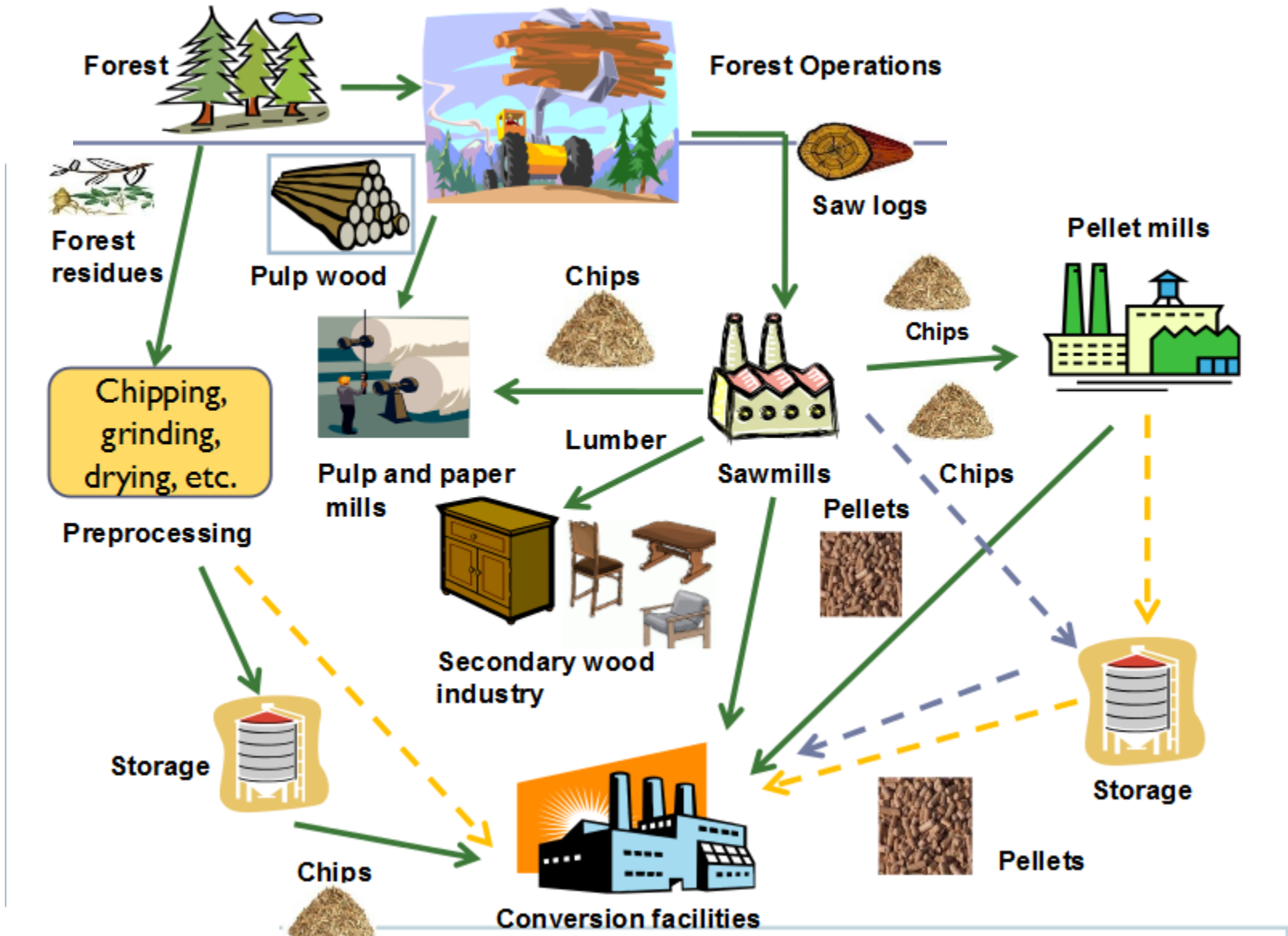
Dell found out soon enough that necessity is the mother of invention. "I learned by doing and by making mistakes. And I got smart people to help," he says. Today Dell is a \$57 billion company, with the leading market share in the United States.

Wood Industry

Help someone move?



Biomass



Focus on

Recognize the value of each material and focus on transporting the right product.

Increase bulk density to reduce transportation costs per unit of weight.

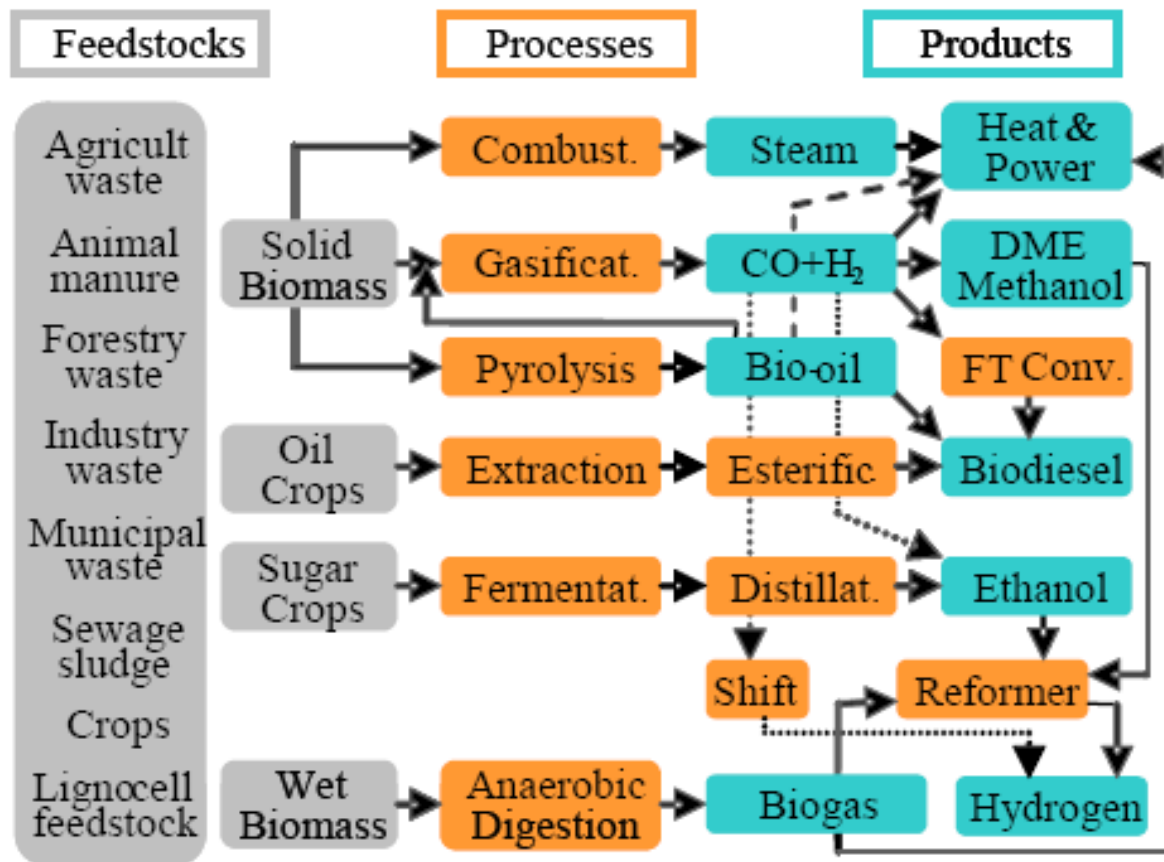
Increase energy content to increase output per unit of weight.

Expand the supply region at competitive levels.

Gain a competitive advantage.

The Big Picture

Not a single approach



Biomass Conversion Paths

Feasibility

Maybe,
It Depends

Conclusions

- There is an opportunity to improve the supply chain of the industry and continuous improvement is the right approach
- The path to follow will vary depending on each unique situation
- The analysis is centered on value
- It is not always about money but in most cases it is
- Other variables should be included in the analysis such as energy
- Let's not forget about incentives

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Questions

