

Bio Polymers : Towards the Future - Sriman

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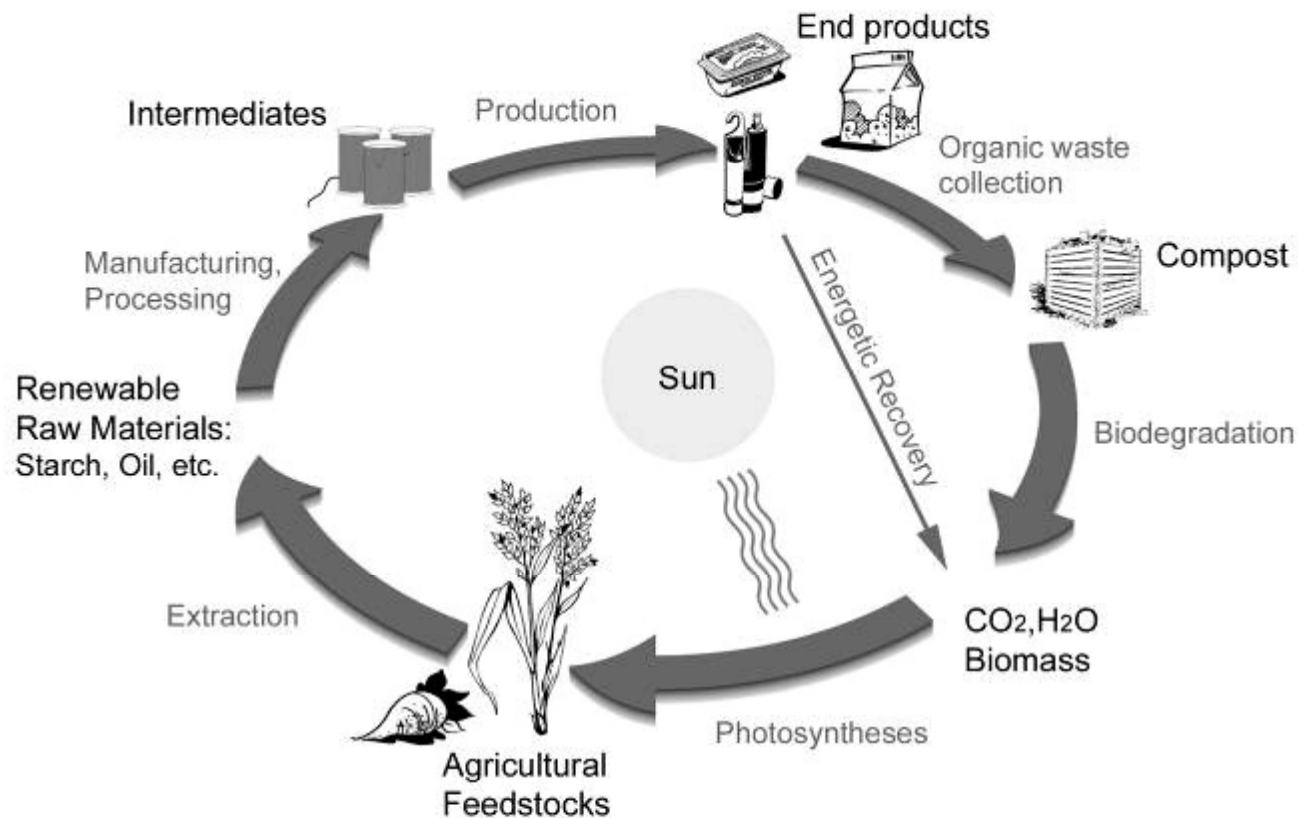


Discussion Points

- What is BioPolymers
- Types of BioPolymers
- Properties comparison between PET & PLA
- Applications
- Perspective of BioPolymers
- Companies into BioPolymers

What is BioPlastics

- Plastics made from renewable resources, e.g. from agricultural crops such as corn, sugar cane etc. (biodegradable or not)



Types of BioPlastics

- PLA (Polylactide): made from starch via a fermentation step (starch- lactic acid-lactide-polyacide)
- PHA (Polyhydroxyalkanoates): a family of polyesters
- Starch- based bioplastics: starch consists of the two polymers amylose and amylopectine and can be modified into plastics

Properties PET Vs PLA

		PET	PLA
density	g/cm ³	1,33	1,24
glass transition temperature	°C	75	55
crystallization temperature	°C	130	100
melting temperature	°C	250	160
O ₂ transmission (500 ml)	cm ³ /p*d	0,06	0,46

Applications



Perspective of BioPolymers

- Sustainability = Co2 as new currency
- Good for me & Good for Environment
- Niche & Premium market
- Positive PR & CSR

Companies into BioPolymers

- DOW
- Dupont
- BASF
- Mirel