SNS COLLEGE OF TECHNOLOGY

An Autonomous Institution
Coimbatore – 35

Accredited by NBA – AICTE and Accredited by NACC – UGC with 'A+ Grade
Approved by AICTE , New Delhi and Affiliated to Anna University , Chennai.

DEPARTMENT OF AGRICULTURE ENGINEERING

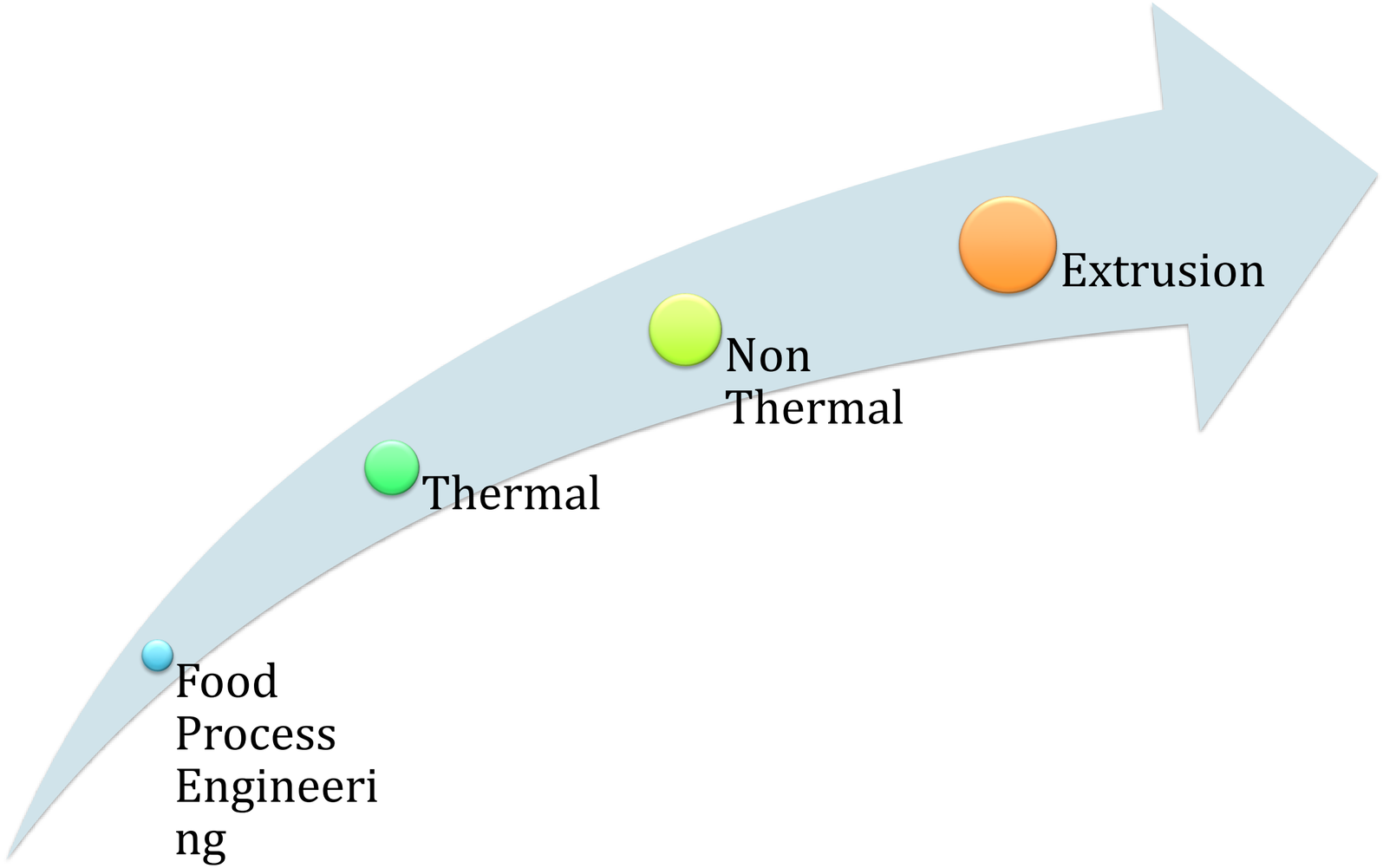
19AGT203 – AUTOMATION TECHNIQUES IN AGRICULTURE ENGINEERING

II – YEAR IV SEMESTER

UNIT 2 – ADVANCED MACHINERY/EQUIPMENT IN AGRICULTURAL ENGINEERING- II

TOPIC 4– BIOCHEMICAL CONVERSION SYSTEM

Last Class Review



Energy sources

- About 70% of India's energy generation capacity is from fossil fuels, with coal accounting for 40% of India's total energy consumption followed by crude oil and natural gas at 24% and 6% respectively.
- India is largely dependent on fossil fuel imports to meet its energy demands — by 2030, India's dependence on energy imports is expected to exceed 53% of the country's total energy consumption.

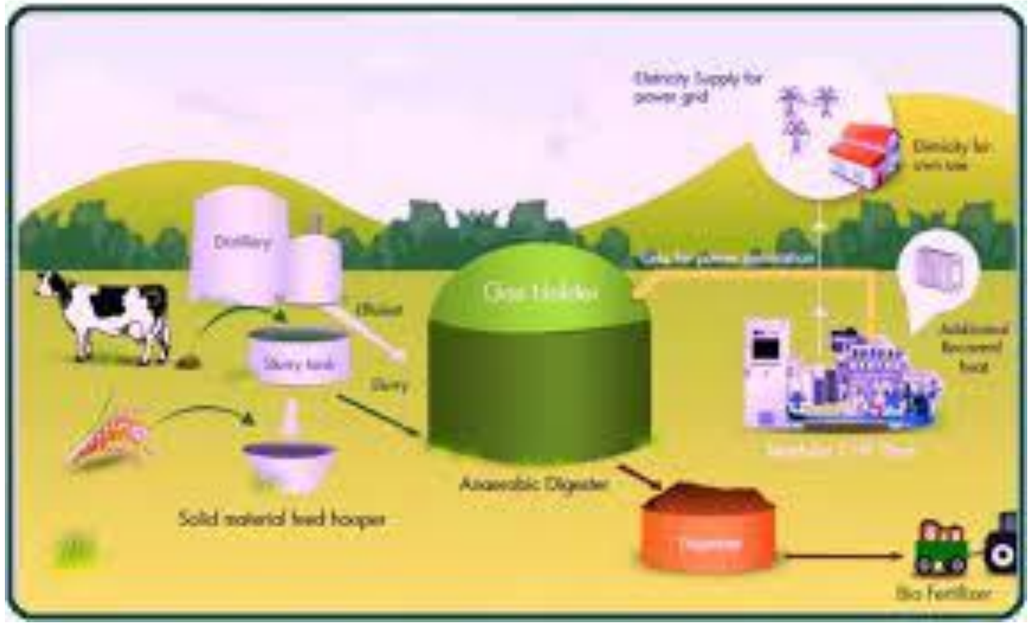
Biochemical conversion method!!!

- Biomass is organic material made from plants and animals. Biomass contains stored energy from the sun.
- Plants absorb the sun's energy in a process called photosynthesis.
- The chemical energy in plants gets passed on to animals and people that eat them.
- Biomass is a renewable energy source because we can always grow more trees and crops, and waste will always exist.
- Some examples of biomass fuels are wood, crops, manure, and some garbage. life

Source!!!

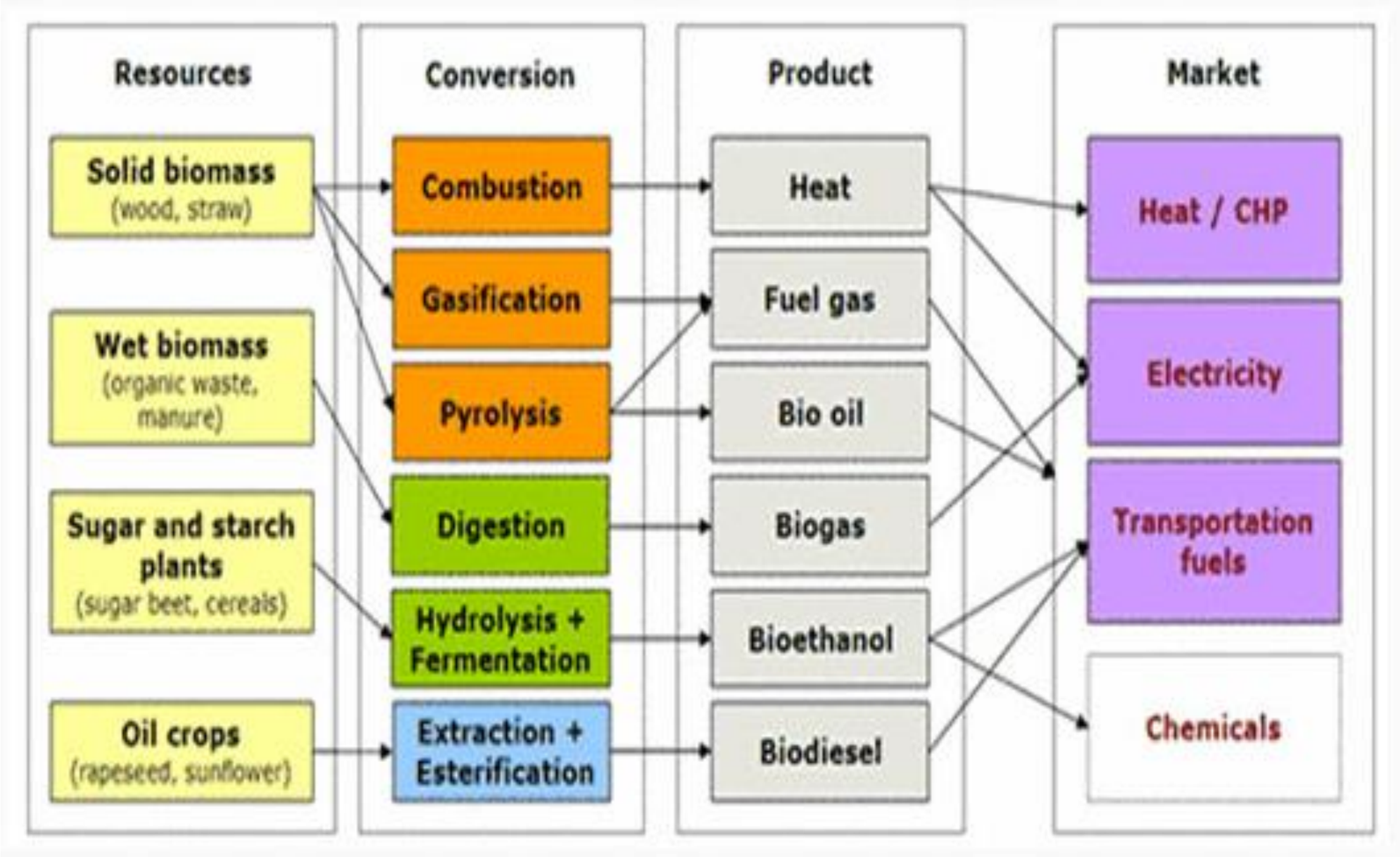
- Woody forest residue, fuelwood, mill residues, short rotation crops
- Non-woody agricultural crops, crop residue, processing residues
- Animal waste such as manure from feed lots and municipal sewage and waste

Uses….

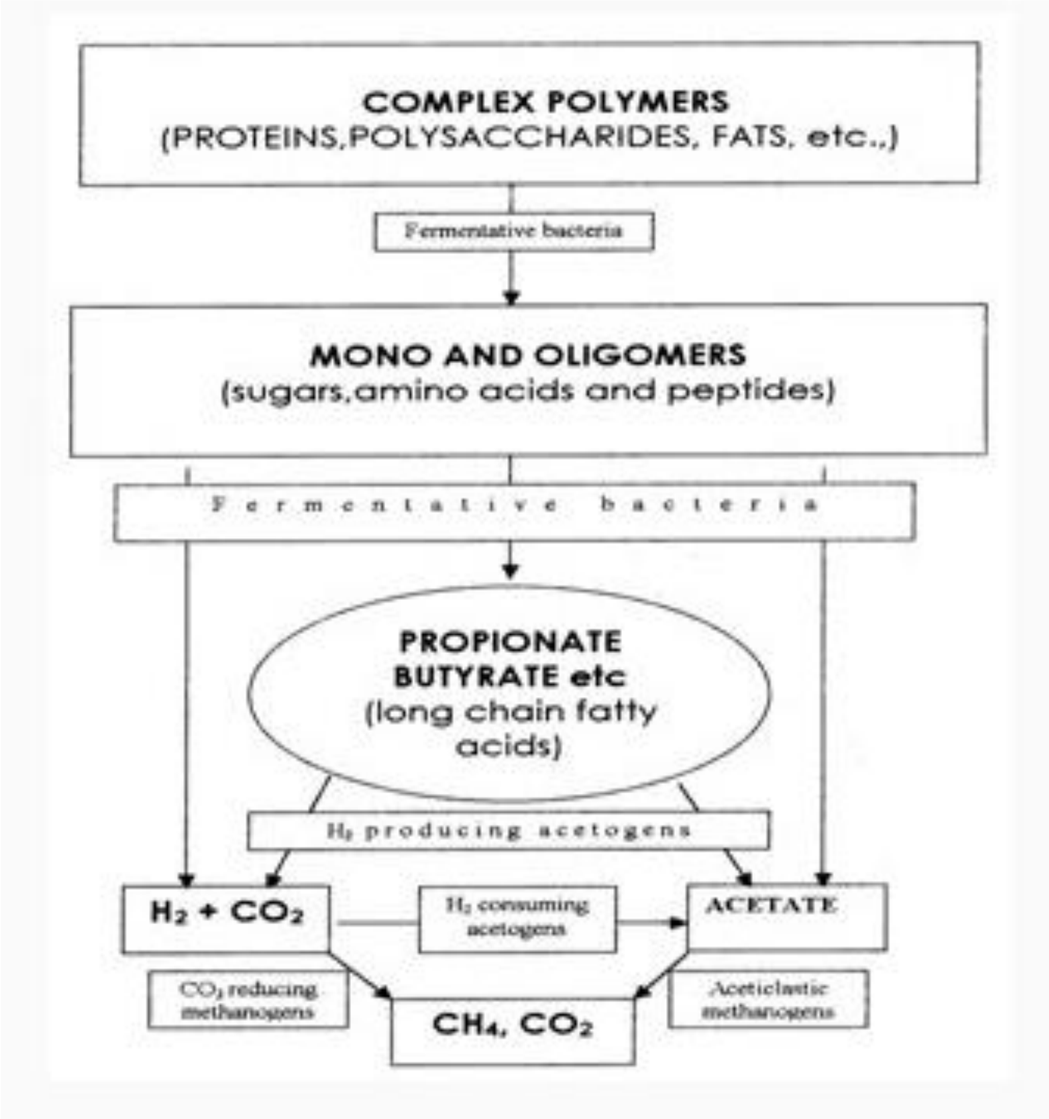


- Biomass energy can be used directly or indirectly.
- Firewood is a common example of direct use by combustion.
- But biomass energy can be transformed into other forms of fuel.
- Ethanol from agricultural crops such as sugar cane and methane from manure and sewage are examples of indirect use fuel.

Biomass energy – conversion



Microbial Groups



Benefits

- On-Site Farm Energy
- Reduced Odors
- High Quality Fertilizer
- Reduced Surface and Groundwater Contamination
- Pathogen Reduction

See You at Next Class!!!!