



MONDOFIN
FINANCIAL ENGINEERING

IWM-Technology for Enzymatic Hydrolysis



Enzymatic Hydrolysis

Goals:

- Industrial development of small towns and settlements
- Stabilisation of demographic situation
- Production of raw materials for industrial chemistry with good prospects for small-scale chemistry and final product production from relevant raw materials
- Creation of a high-protein fodder base for animal breeding and processing
- Ensuring the employment of population (of quite highly-skilled specialists)
- Improving the stability of energy and food security of a region

Strengths:

- Zero environmental load and significant increase in share in the “green economy”
- The products are high-margin and have a stable demand in the market
- Development of associated sectors of the economy: efficient animal breeding, production of polymer materials and polymer based products
- Involvement in the economic turnover of a sizeable raw material base, which contains cellulase-lignin raw materials

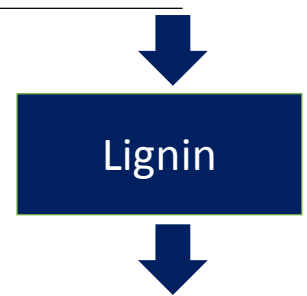
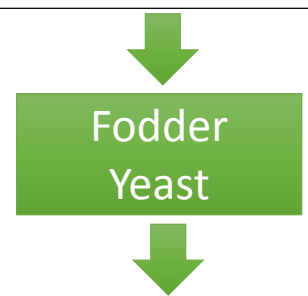
Sources of Raw Materials

IWM TECHNOLOGY ENZYMES



IWM Technology

Enzymatic-Hydrolysis Plant



Fuel

Agriculture

Medicine and Chemical Industry



Selling ethanol to oil-producing companies
Component of ecologically clean petrols

Animal Products
Processed Animal Products



Activated Carbon

Chemical Industry



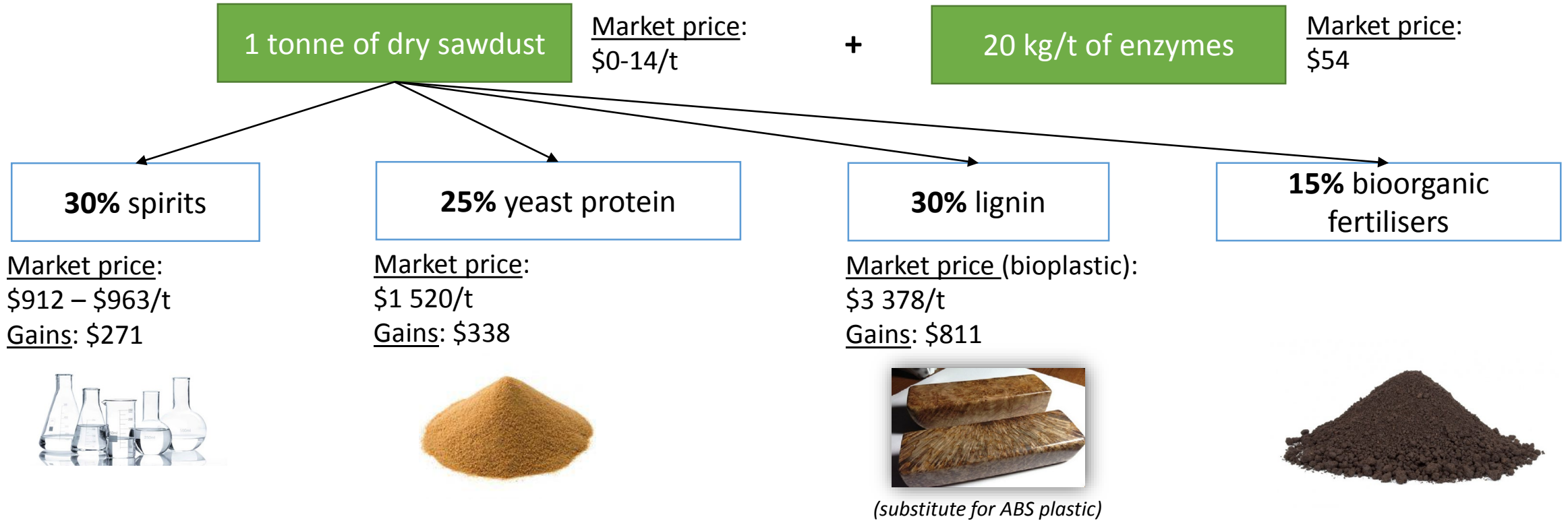
Solvents
Dyes
Acetic Acid



Bioplastic Production

Furniture
Household Utensils
Consumer Electronics

Economic Evaluation



Costs: \$406/t
Profit: \$1 419/t

Enzymatic Hydrolysis

Principal Technological Differences:

Indicators	Conventional Technology (Hydrolysis Plant)	IWM Technology (Enzymatic Plant)
1. Products produced:		
- spirits	+	+
- fodder yeast	+	+
- lignin	Requires additional technological conversion of raw material	No need
2. Level of toxicity of production (ecological load)	High	Low
3. Required level of security	High	Low
4. Capital costs	7	4
5. Technological cycles	Unlimited	Unlimited
6. Sources of raw materials	High	Low
7. Cost of final product	Low	High
8. Speed of process	80%	100%
9. Conversion rate		

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