

Cutting-edge research for a greener sustainable future

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Bio-based Industry: Current Status and Future Direction

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8509

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สถานะและแนวโน้มดัชนีการส่งออกสินค้า



อัตราการขยายตัว : % yoy (สัดส่วนต่อ GDP)	2556					2557		YTD
	2556	Q1	Q2	Q3	Q4	ม.ค.	ก.พ.	
ปริมาณส่งออกสินค้า ณ ราคาคงที่ (58.0%>>>56.5% ของ GDP)	0.2	3.7	-1.5	-1.4	0.2	-	-	-
มูลค่า \$ term (กรมศุลกา) %yoy	-0.3	3.9	-2.2	-1.7	-1.0	-2.0	2.4	0.2
ราคา \$ term (ก.พาณิชย์) %yoy	-0.4	0.4	-0.4	-0.6	-1.2	-1.6	-1.9	-1.7
ปริมาณ \$ term (สศค.) %yoy	0.2	3.6	-1.8	-1.1	0.1	-0.4	4.4	2.0
สินค้าสำคัญ (สัดส่วนต่อมูลค่าปี 2555>>> ปี 2556)								
เครื่องอิเล็กทรอนิกส์(14.0%>>>13.9%) %yoy	-1.0	0.8	-10.6	2.9	4.0	6.5	9.6	8.0
ปริมาณ \$ term %yoy	-1.8	-3.1	-11.0	3.0	4.8	7.0	10.2	8.6
เครื่องใช้ไฟฟ้า (9.9%>>>10.1%) %yoy	0.9	9.3	-2.7	-2.7	0.9	7.8	7.2	7.5
ปริมาณ \$ term %yoy	0.4	8.0	-3.1	-2.9	0.7	8.3	7.7	8.0
ยานพาหนะ (12.5%>>>13.4%) %yoy	7.1	19.0	10.7	5.5	-4.2	-12.4	17.2	2.3
ปริมาณ \$ term %yoy	6.3	17.2	9.0	4.7	-3.4	-11.3	18.1	3.3
อุตสาหกรรมเกษตร (7.9%>>>7.6%) %yoy	-4.7	-5.6	-3.1	-6.6	-3.5	-7.7	-11.9	-9.8
ปริมาณ \$ term %yoy	-5.2	-5.5	-4.2	-7.3	-3.6	-7.3	-11.3	-9.3
เกษตรกรรม (10.2%>>>9.9%) %yoy	-3.2	0.5	-12.9	-3.6	2.9	-5.3	3.4	-1.2
ปริมาณ \$ term %yoy	-1.2	2.9	-12.0	-3.3	5.9	0.4	13.1	6.4
แร่และเชื้อเพลิง (6.7%>>>6.4%) %yoy	-3.9	-7.5	-20.4	8.4	5.3	-3.1	-28.9	-16.4
ปริมาณ \$ term %yoy	-3.9	-6.1	-19.9	7.3	4.0	-2.0	-27.4	-15.0

The National Bioeconomy Blueprint

US Bioeconomy Plan

Five strategic objectives for a bioeconomy



1. **Support R&D investments** that will provide the foundation for the future U.S. bioeconomy.
2. **Facilitate the transition of bio inventions from research lab to market**, including an increased focus on translational and regulatory sciences.
3. **Develop and reform regulations to reduce barriers**, increase the speed and predictability of regulatory processes, and reduce costs while protecting human and environmental health.
4. **Update training programs** and align academic institution incentives with student training for national workforce needs.
5. **Identify and support opportunities** for the development of public-private partnerships and precompetitive collaborations—where competitors pool resources, knowledge, and expertise to learn from successes and failures.

EU Bioeconomy Plan

A BIOECONOMY STRATEGY FOR EUROPE

Innovating for Sustainable Growth: A Bio-economy for Europe

EUROPEAN COMMISSION
Brussels, 2012

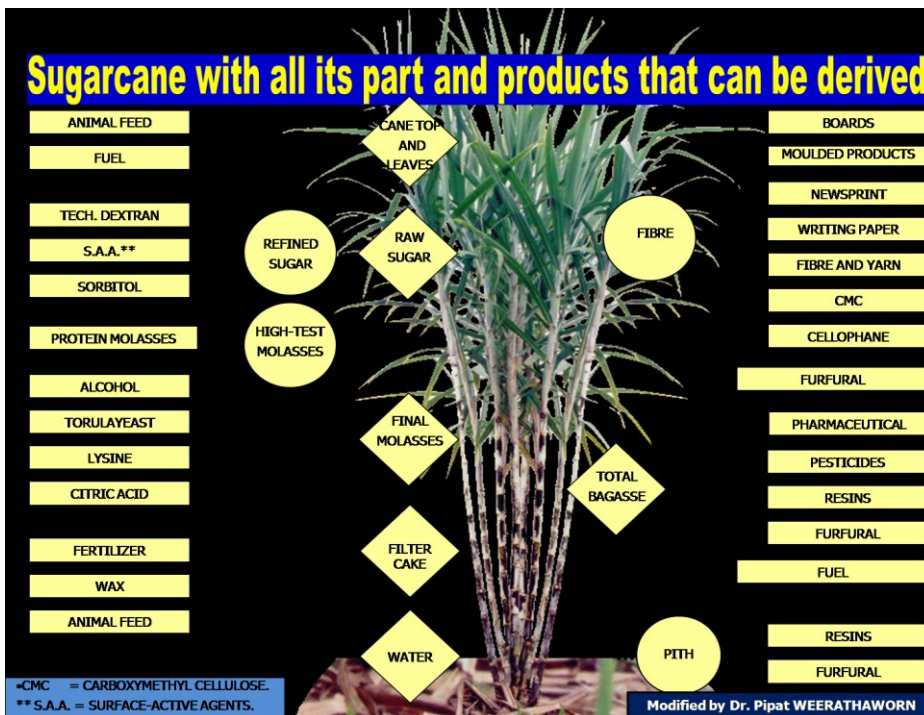
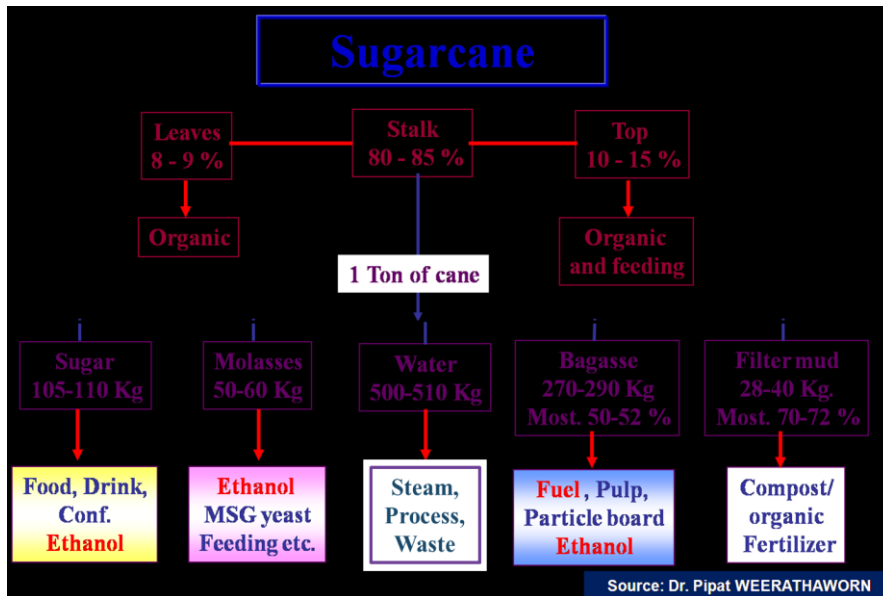
The Europe 2020 Strategy calls for a bio-economy as a key element for smart and green growth in Europe. **Advancements in bio-economy research and innovation uptake will allow Europe to improve the management of its renewable biological resources and to open new and diversified markets in food and bio-based products.**

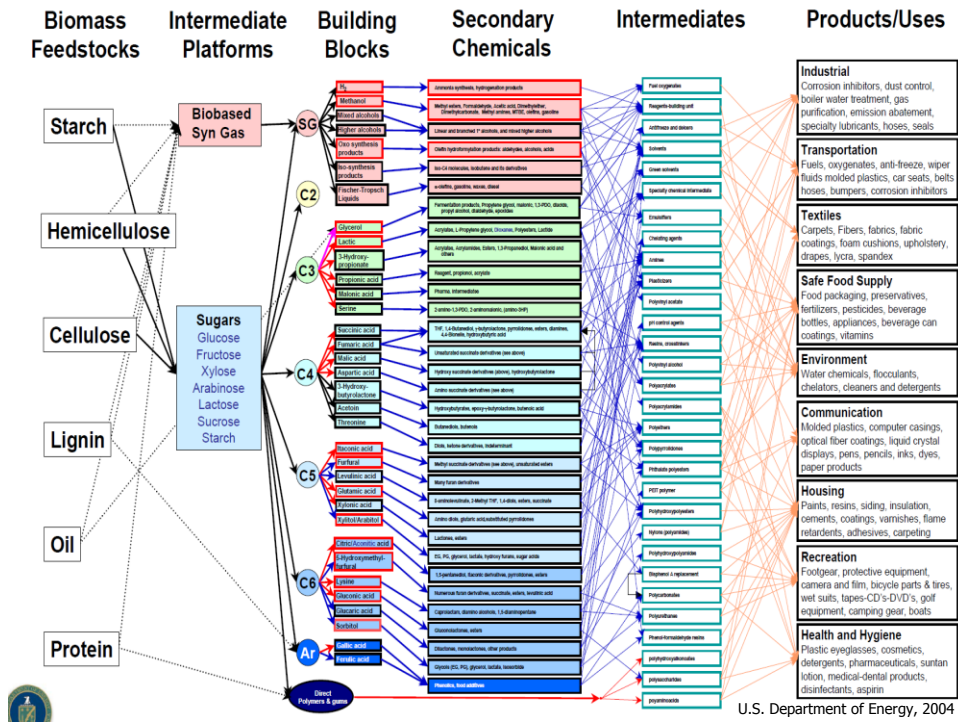
THE BIOECONOMY ACTION PLAN

1. **Investments in research, innovation and skills**
2. Reinforced policy interaction and stakeholder engagement
3. **Enhancement of markets and competitiveness in bio-economy**

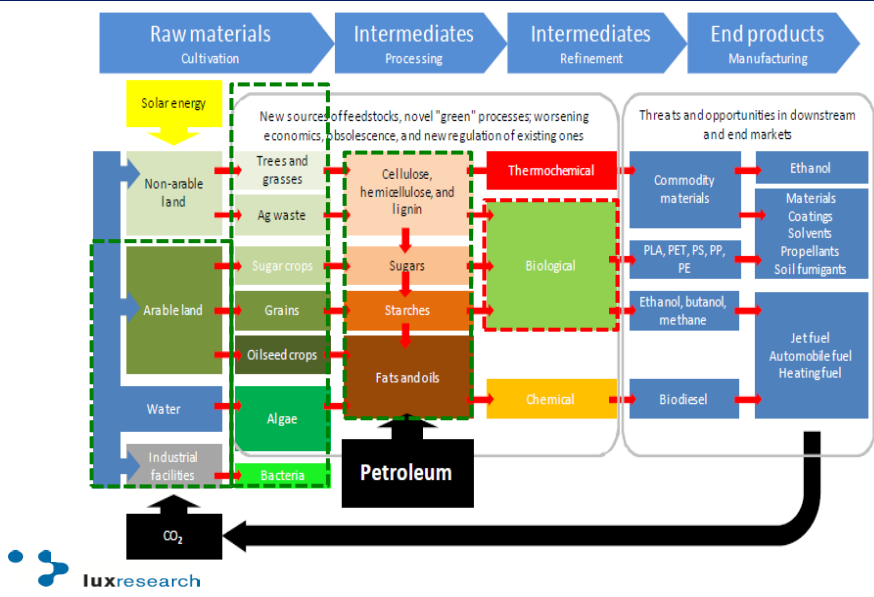
The Bio-economy Strategy and its Action Plan aim to pave the way to a **more innovative, resource efficient and competitive society** that reconciles **food security with the sustainable use of renewable resources for industrial purposes, while ensuring environmental protection.**





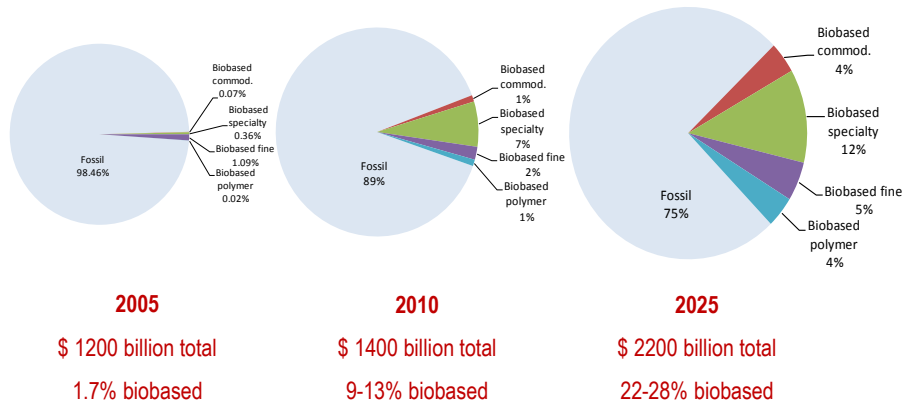


Bio-based Value Chain



Opportunity for Bio-based Chemicals

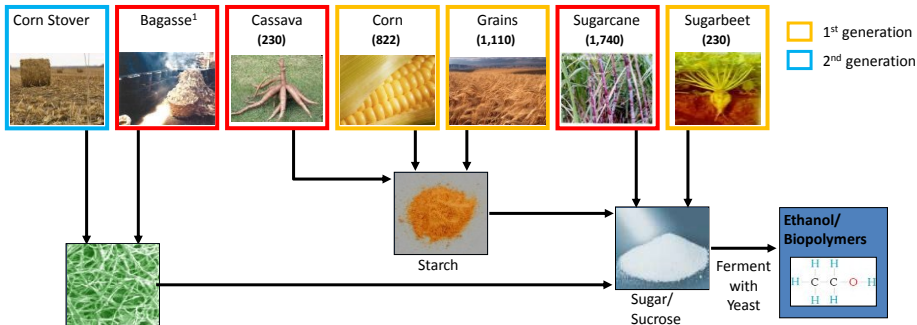
Share of biobased chemicals will grow significantly.



How to balance those usages?

Source: EFIB 2010

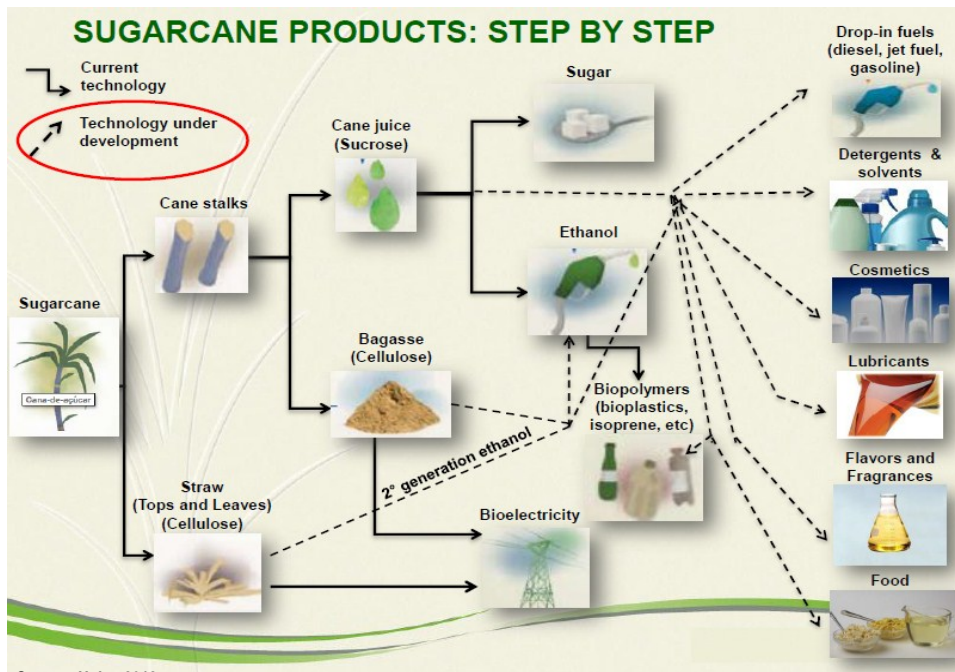
Thailand's opportunity in Green Economy



Many feedstock alternatives possible for today's green products. Renewable resources are "any natural resources that are capable of being regenerated or replaced by ecological processes on a time scale relevant to their use".

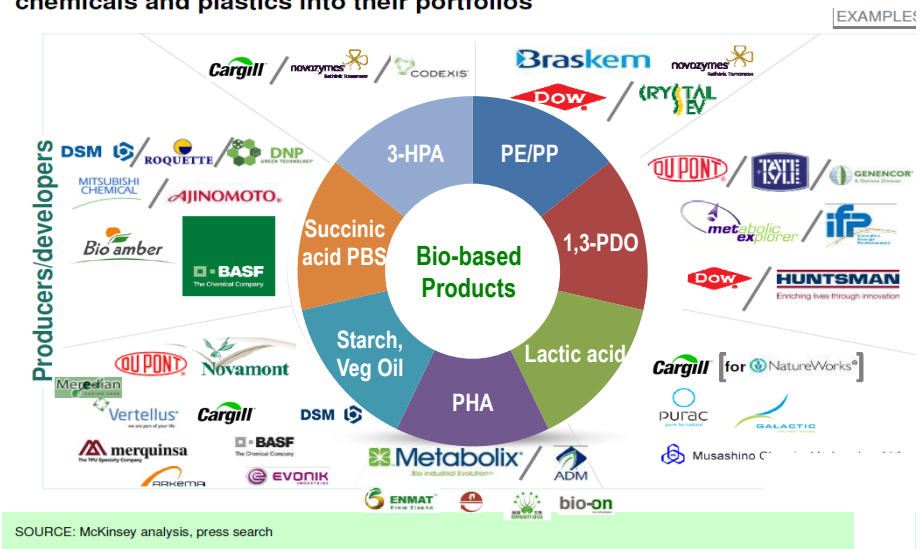
¹ By product from sugar production

SOURCE: IEA; USDA FAS; SRI; press; Foreign Agricultural Service/USDA Office of Global Analysis; US Grain Council; World Agricultural Outlook Board; Statistics Canada 10



Leading Players in Biobased Chemical

Leading chemicals, fuels, and commodities players are building green chemicals and plastics into their portfolios



Leading Players in Biobased Chemical

NOCs and IOCs are also strongly participating and driving green growth



McKinsey & Company | 58

Policy and Direction

- What is Thai market's position?
- Where is the market?
- What should be the bio-products?
- What do we have to develop?
 - Technology
 - Personal Competency
 - Synergy

THAILAND

“BIO-INDUSTRIAL HUB in ASIA”

- Bio-Energy
- Bio-based Chemicals
- Bio-Plastics
- Bio-Medicals

15

Thank you!

Questions & Answers

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