The Potential for Non Food Products from Plants: An Overview

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Non food products from plants are not new

But

They are being rediscovered.

Technological advances are helping

To remain in use in the
21st century feedstocks & products
must be sustainable

Sustainability has 3 components

- Economic Viability
- Environmental Acceptability
- Cultural/Social Acceptance

The IENICA projects funded by DG Research of EC

IENICA – 14 Partners

INFO*RRM* IENICA – c. 29 Partners

www.ienica.net

Market sectors for biorenewables: IENICA

Oils

Fibres

Carbohydrates

Speciality Products

OILS

- Overall usage of vegetable oils and animal fats in the non-food sector of EU-15 is approximately 3 million tonnes per annum.
- Bio-lubricants – the potential EU market is approximately 370,000 tonnes/annum.
- Bio-printing inks - the EU market is in excess of 120,000 tonnes/annum.
- Bio-solvents – the EU solvent market is approximately 4 million tonnes
- Linoleum - the EC demand for linoleum is likely to rise to 56 million m^2 by 2003.

FIBRES

- Clothing - no significant opportunities
- Cars/aircraft - about 350,000 tpa fibre
- Low value uses e.g. geotextiles?

CARBOHYDRATES

- Starch markets in EU and elsewhere are well developed and organised.

- 3.7 million tonnes is in the non-food sector, 1.4 million tonnes in paper and cardboard making, 1.1 million tonnes in plastics and detergents and 1.2 million tonnes in fermentation and other technical uses.

SPECIALITY PRODUCTS

Market segments include:

- Essential oils
- Pharmaceuticals
- Popular health products
- Colourants and dyes
- Perfumes
- Personal care/beauty products
- Novel plant protection products
- Intermediates for processing

WOOD

Scandinavia has major strengths in wood and pulp products

BUT prices can be volatile and some markets have been depressed in 2001/02

Trees offer a very wide range of metabolites.

Markets for some are already proven but many are unexplored.

Potential of these metabolites should be investigated: they may add value!

Uptake of biorenewables is slow.

- Germany is most advanced in non energy
- Scandinavia is most advanced in fuel
- Lack of awareness of potential
- Fear of risk
- Fragmented supply chain

Biorenewables can offer environmental benefits

- Reductions in V.o.C's
- GHG savings > 5 million t.p.a
- Energy

EU policy drivers for biorenewable energy

- Energy for the future –
  renewable resources for energy

- Strategy for security of energy supply

The land mass of Eastern European States is enormous!

Hungary 4.5 million ha arable
Poland 14.1 million ha arable
Romania 9.1 million ha arable

In Summary

- Markets for sustainable biorenewables are very large

- EU market structure for biorenewables is poorly developed

- Large Eastern European States accessing EU will create considerable competition in feedstock production

- The Baltic States should focus on those market sectors where they have a skills advantage, a geographical advantage or a policy need

- The true potential of ‘traditional’ crops like trees and cereals should be revisited


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