



REPUBLIC OF ESTONIA
MINISTRY OF RURAL AFFAIRS

Bioeconomy in Estonia – challenging the status quo in strategic planning

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Polli Horticultural Research Centre



PlantValor - Competence Centre for Knowledge-Based Health Goods and Natural Products

The Competence Centre is unique in Estonia as its main field of activity and niche lies in the research and development of health goods and natural products using modern, high-technology methods, including extraction of bioactive ingredients of plant origin, that are used in functional foods, eco-cosmetics, household chemicals, pharmaceuticals etc.

Bioeconomy potential in Estonia

- 2 times more arable land *per capita* than the EU27 average

2012: 0,69 ha - Estonia; 0,37 ha - EU27 average

- Food self-sufficiency

(fish 462%, grain 199%, milk 184%)

- More than half of Estonia's mainland is woodland

Without proper steering – already 1/3 of economy



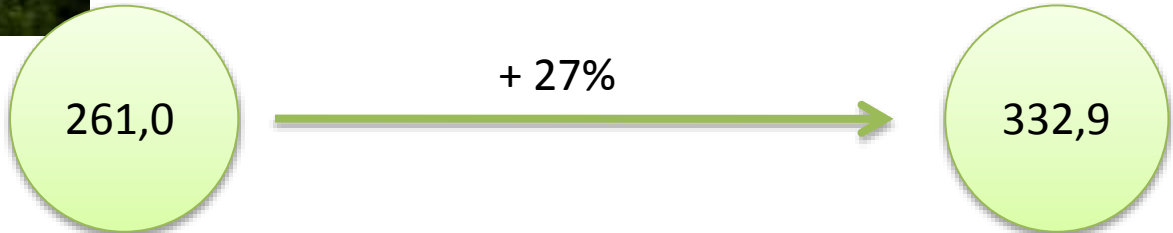
Source: Eesti Arengufond, „Eesti biomajanduse analüüs“, 2015



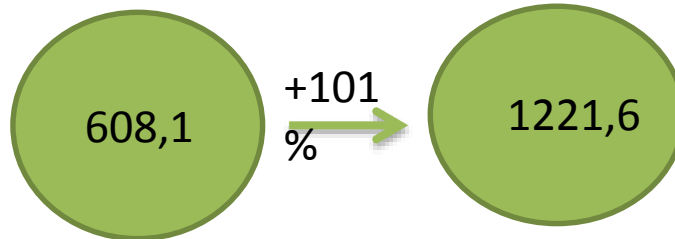
CEREALS

2004  2014

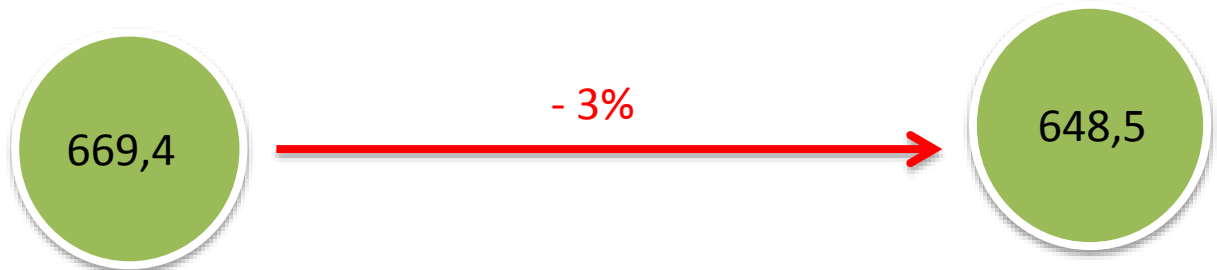
Growing area
thousand/ha



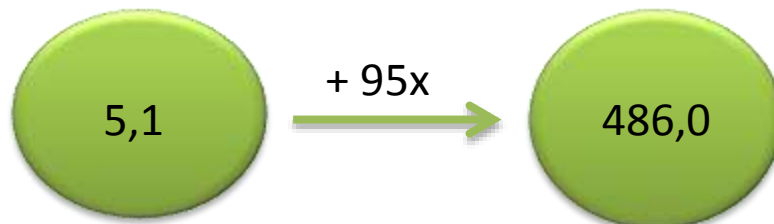
Output
thousand/t



Consumption*
thousand/t (2004/05 vs
2013/14 marketing
year)



Export



Bioeconomy potential in Estonia

What do we lack?

Smart, value-adding and sustainable value-chains
and between their components

a bioeconomy strategy

Towards developing a bioeconomy strategy: how and what to integrate?

(connected strategies – agricultural sector and the Government level)



About half of the Government level strategies are somewhat connected to the concept of bioeconomy.

Why do we need to develop strategic view of bioeconomy?

In 2013 the average value added per person employed in Estonian companies was **24 300 €/per capita** (all sectors combined).

In the EU28 the same indicator, average value added per person employed, was **61 000 €/per capita**, in EU15 up to **71 000 €/per capita** (all sectors combined).

Despite the sector the added value is low
(including bioeconomy)!

The IDEA

The main goal behind the development of Estonia's bioeconomy strategy is to create a strategical framework that would integrate different fields of bioeconomy. Ensuring the growth in welfare, the framework would help to change the production and the use of biomass more effective and environmentally friendly and at the same time to valorise the existing land and water resources to the maximum.

The IDEA: potential goals of the strategy

- Estonia's land and water resources are used more effectively, environmentally friendly and are valorised to the maximum, welfare is increased (due to increase in added value, growth in employment and in number of public goods is ensured, HLY (healthy life years) indicator is improved)
- Reliance on non-renewable energy resources is decreased; Estonia's energy security has grown due to introduction of resources suitable for production of bioenergy, the share of use of renewable energy has increased.

The IDEA: potential goals of the strategy

- Valorisation of waste is increased in waste recycling. Waste storage is decreased due to increase in recycling and decrease in waste production.
- While promoting Estonia's bioeconomy, the newest research and development data is taken into consideration; Estonia plays an important role on European Union level advancing bioeconomy's development directions.
- In enterprises whose field of activity is connected to bioeconomy, conditions are created for halting the growth of greenhouse gas emissions; challenges related to the predicted climate warming are taken into account and risks coming from unstable climate are managed.
- Advancing bioeconomy is accompanied by increase in employment in rural areas that will help regional rebalancing.

The IDEA:

6 value chains under review

- 1) Food and animal feed;
- 2) Wood (construction, paper and cellulose, products);
- 3) Textile and clothing;
- 4) Chemicals, pharmacy and plastic products;
- 5) Fuels and energy;
- 6) Other ecosystem services connected to bioeconomy.

Next steps

- Negotiations
- Submitting the analysis to the Government for approval
- When approved, submitting the proposal to develop the strategy
- Developing

„Estonian Bioeconomy Strategy until 2030“

What is the role of various ministries in the development of the strategy?

- Ministry of Rural Affairs: rural life, agriculture, fisheries, food processing industry, food safety, agricultural sciences (incl. knowledge transfer).
- Ministry of Environment: forest resources, fish stocks, waste management, climate policies, eco-system services, environmentally sound procurements, knowledge transfer.
- Ministry of Economic Affairs and Communications: biotechnology, bioenergy, bioeconomy-related elements of industrial policies, knowledge transfer.
- Ministry of Education and Research: knowledge-based strategic support, education policy, related to various bioeconomy fields, knowledge transfer.
- Ministry of the Interior: nationwide planning.
- Ministry of Social Affairs: eating habits, healthy eating and health, chemical safety (biochemistry), knowledge transfer.
- Ministry of Finance: administration policies.



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Thank You!