



Promoting the penetration of agrobiomass heating in European rural areas

Danish experience on the use of straw for energy



Food & Bio Cluster
Denmark



WBA Webinar Series – Agricultural Residues

Webinar 2: National experiences on feedstock mobilization, policies and regulations

28th January 2020 // 11.00 – 12.30 CET



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- Agriculture in Denmark today. Key figures 2019
- The structure of agriculture in Denmark.
- Straw production: resource or waste
- Danish energy policy
- Burning of straw vs. Carbon in soils
- Straw to Energy Guide



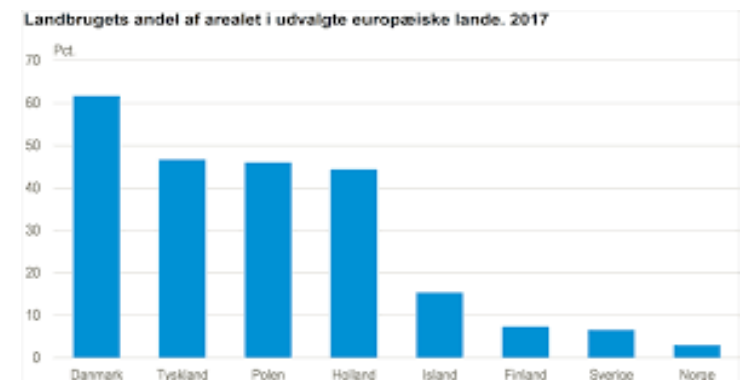
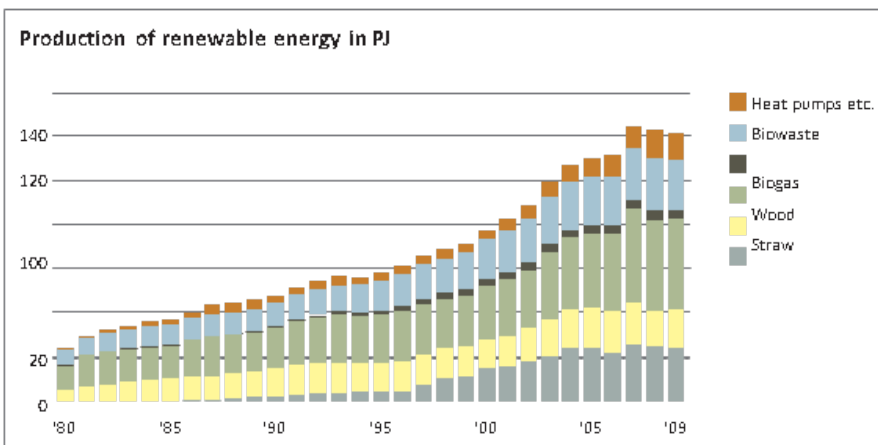
Today

1. Based on research and documentation.

2. We drink groundwater

- 62% of the area is agricultural land 2.662.030 ha. (Holland 50%,
- Cereal production cover 1.444.056 ha. (54%)
- Straw production around 6.000.000 tons of straw per year.
- 50% is used for bedding and energy production, 50% is mulched into the soil.
- 12% of agricultural area is organic production.

OVERSICHT OVER
LANDSFORSØGENE 2018



Straw: Between 5 million tons and 7 million tons dependent of year. 50% is mulched, potential for energy production.

Willow trees: 2921 ha. Yield 5 to 15 tons dry matter per ha. per year

Poplar: 2362 ha. Yield 8 -10 tons dry matter per ha. per year



Energy goal 2012

The long-term goal of Danish energy policy is being independent of coal, oil and gas in 2050, and contribute to reducing of greenhouse gas emissions. The energy supply must be switched to wind, sun, **biomass** and geothermal energy.

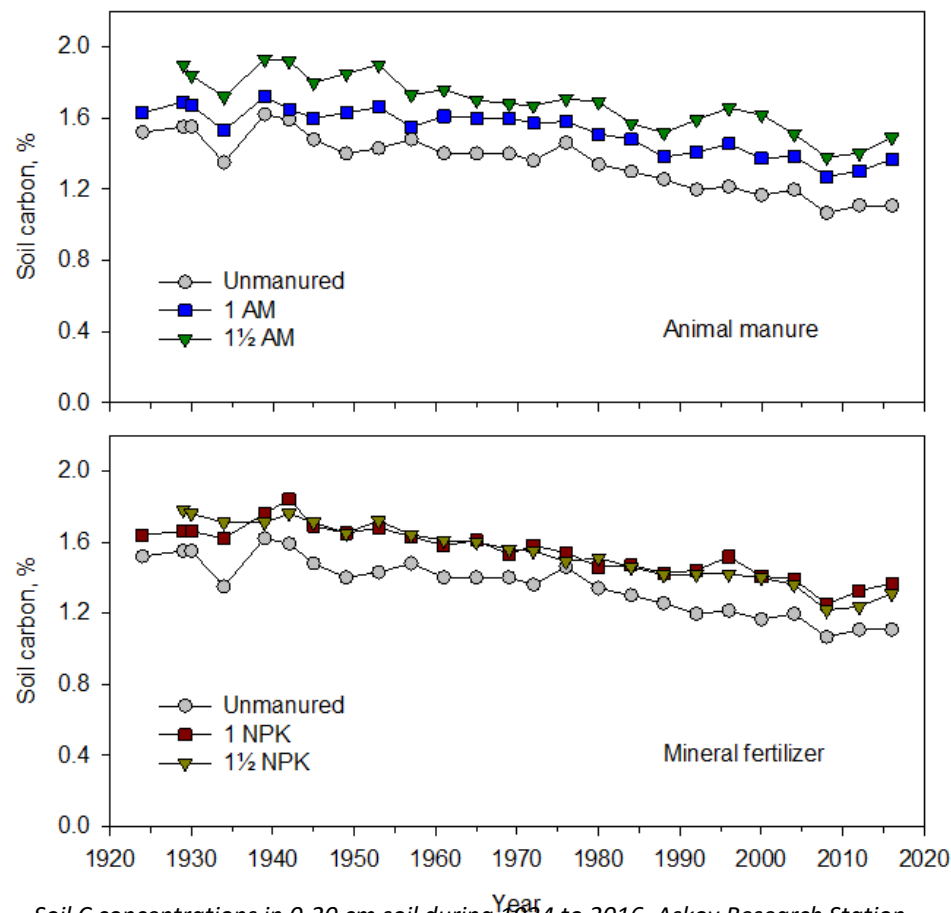
Energy goal 2018

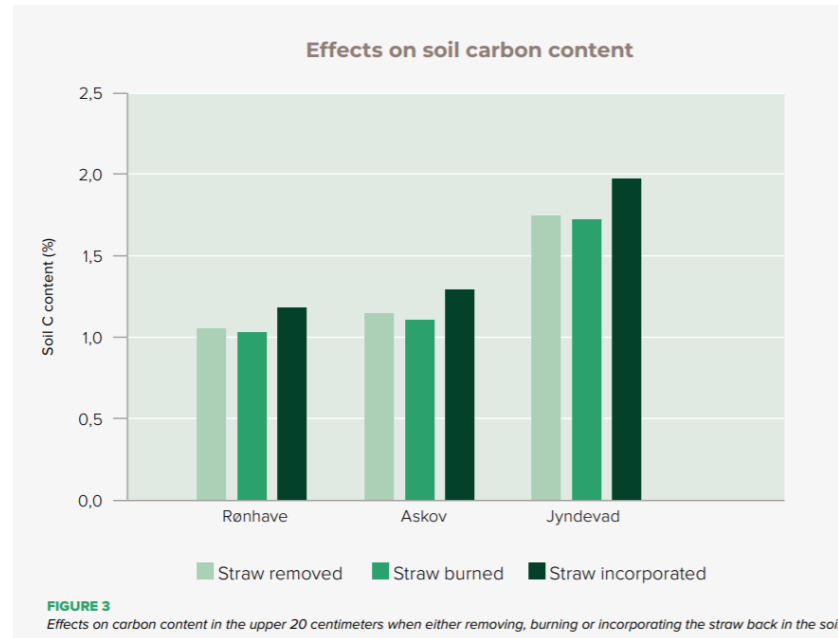
The transition to renewable energy sources must also be seen as a significant contribution to the fulfillment of the EU's ambition to reduce greenhouse gas emissions from the EU by 80-95 per cent. in 2050 compared to 1990.

The share of wind and **biomass** in the energy supply is expected to increase in particular.



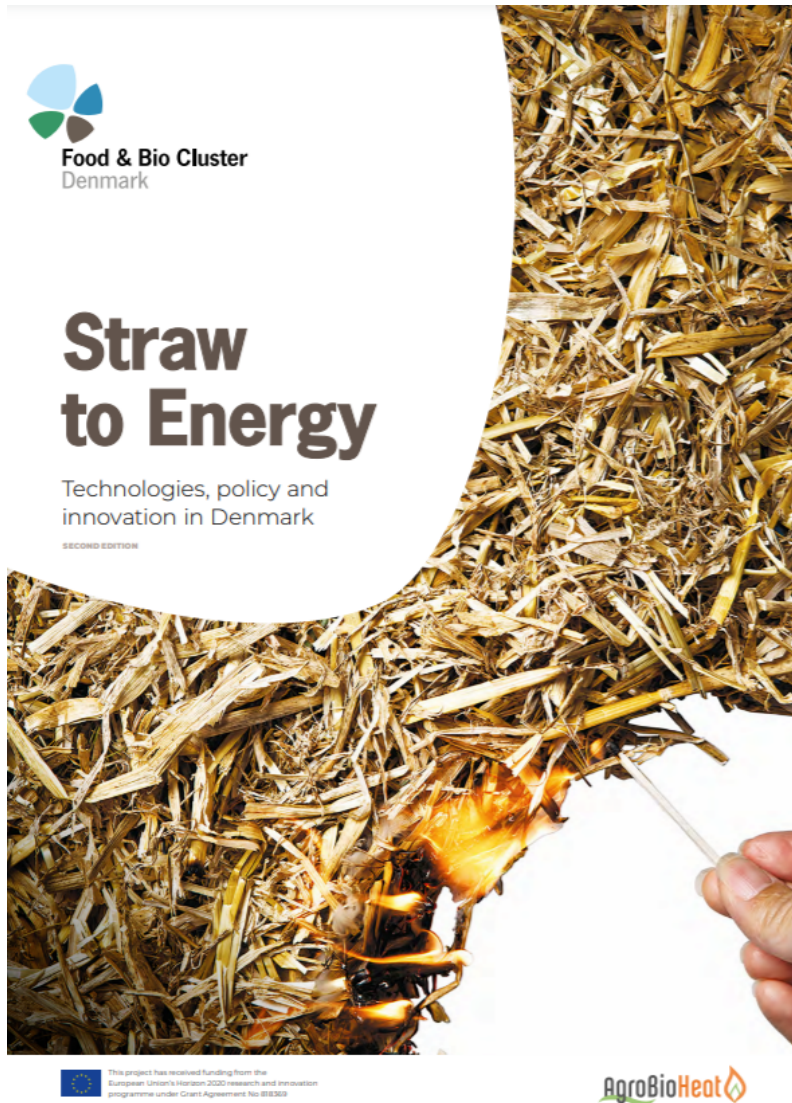
Changes in soil C content (1924-2016)





Conclusion through more than 100 years research

- Carbon content in soils falls at normal farm praxis.
- In mono culture (winter wheat) with incorporation of straw every year. Carbon content raises slightly.



- Update of 2011 edition
- Published in November 2020
- Freely available for download:

www.agrobioheat.eu/agrobiomass-guides



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Thank you for your attention!

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