We put carbon circulating

by cultivating land and producing wood

We need carbon for living: food, warmth and shelter

Carbon remover is a plant, produced by us in a productive soil. Sequestrated carbon is essential part of food, energy and raw-material.

In use carbon is released into the atmosphere, and a productive soil captures the carbon and brings it back. We have enough water for carbon sequestration. Besides carbon and water, a growing plant needs 13 other plant nutrients.

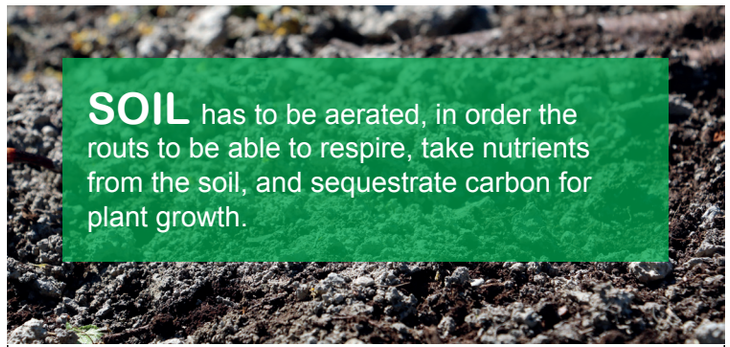
Green biomass contains 20 kg nitrogen and 5 kg phosphor per one tonne of dry substances.

BIOMASS
=
Carbon 45 %
(dry mass)
and water 20 - 90 %
(fresh mass)

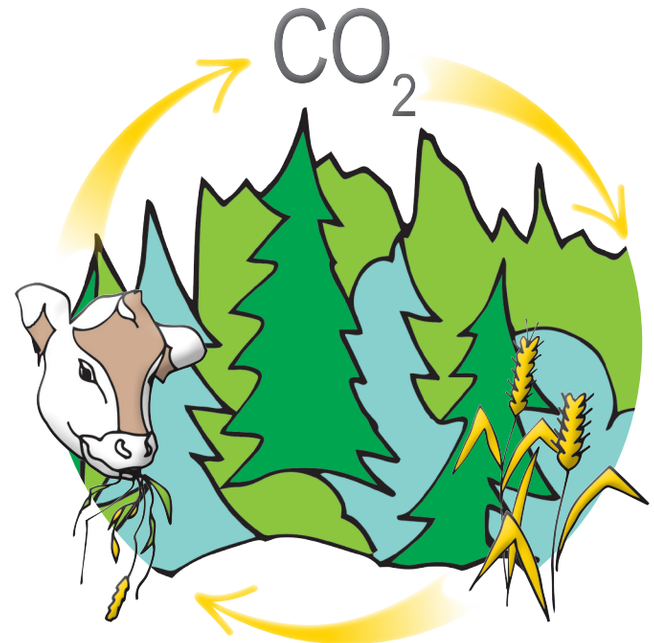
It is important that carbon, used by us for living, comes from a renewable biomass. This way we can capture it and bring back from the atmosphere.

It is a question of photosynthesis. Our farmers cherish photosynthesis, in which the chlorophyll produces sugar from carbon dioxide and water in the atmosphere, with help of solar energy.

A plant respires, in order to produce biomass, or carbon. Respiration consumes oxygen, relieves some carbon dioxide and returns it into the atmosphere. Biomass represents net removal.



SOIL has to be aerated, in order the routs to be able to respire, take nutrients from the soil, and sequestrate carbon for plant growth.



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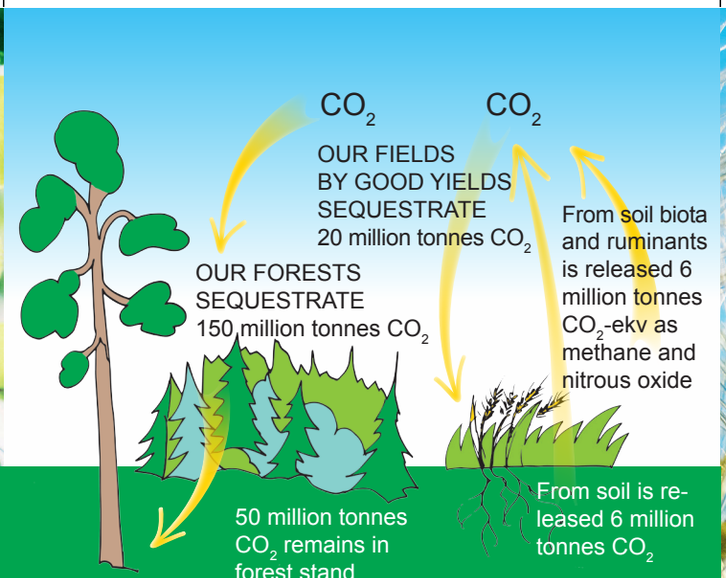


Figures are on annual basis.

Carbon is the basic element of life

Finland´s greenhouse gas emissions

60 million tonnes CO_2-ekv. per year

EU greenhouse gas emissions

5 000 million tonnes CO_2-ekv. per year

Global greenhouse gas emissions

50 000 million tonnes CO_2-ekv. per year

Levels of carbon dioxide in the atmosphere have been increased by industrialization and using of fossil fuels. High level of greenhouse gases warms the climate. Besides carbon dioxide, other greenhouse gases are methane and nitrous oxide, which are released from the soil. Methane is also released for instance from seas, and digestion of ruminants.

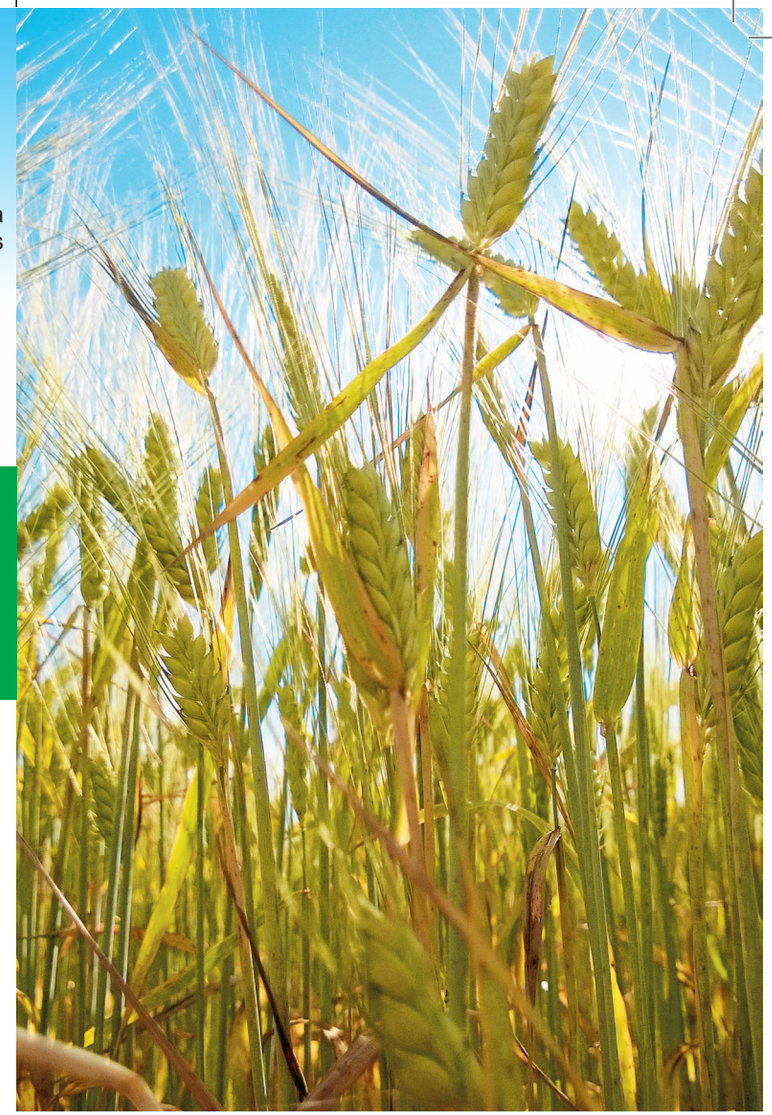
Agriculture and forestry produce carbon, which stays in the carbon cycle, without increasing carbon dioxide content in the atmosphere. Additionally, we substitute of fossil-based materials, which produce harmful gases for the climate.

Carbon dioxide equivalent (CO_2-ekv.) is a standard measure of total greenhouse gas emissions, with which the impact of emissions on strengthening of the greenhouse effect can be calculated.

Finland´s emissions are 0,1 % of the global emissions. Climate warming is a global problem, which Finland cannot solve alone. Finland should, however, take its responsibility for diminishing emissions.

Climate change brings us more rain. It is essential to keep the soil productive, when sequestration of carbon dioxide remains. The carbon storage of soil protects from erosion and loss of nutrients, when climate change goes forward.

Carbon sequestration needs nutrients



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Sources: www.tilastokeskus.fi
Biology: A Global Approach, Pearson 2015

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