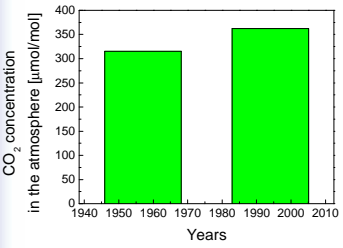




CCS & SEQUESTRATION INTO AGRICULTURE, SOIL & PLANTS

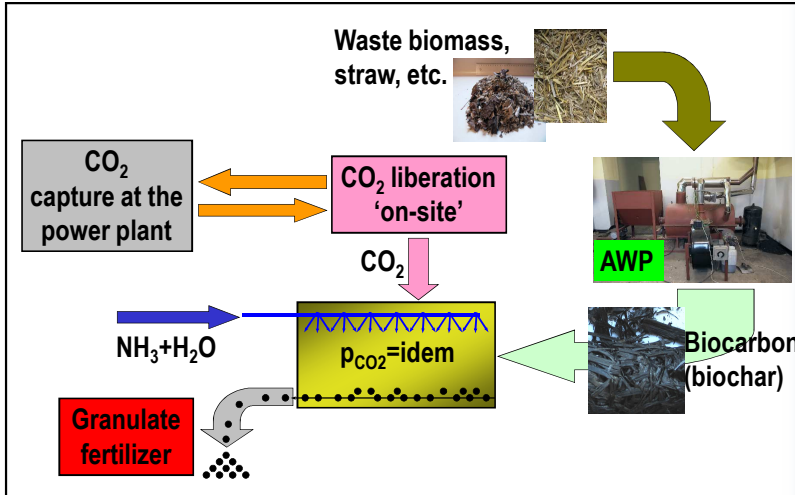
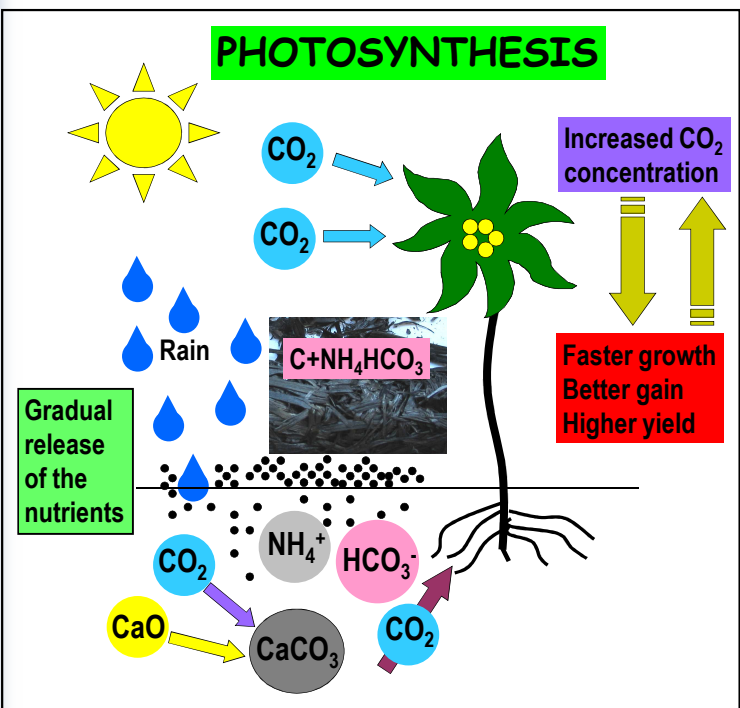
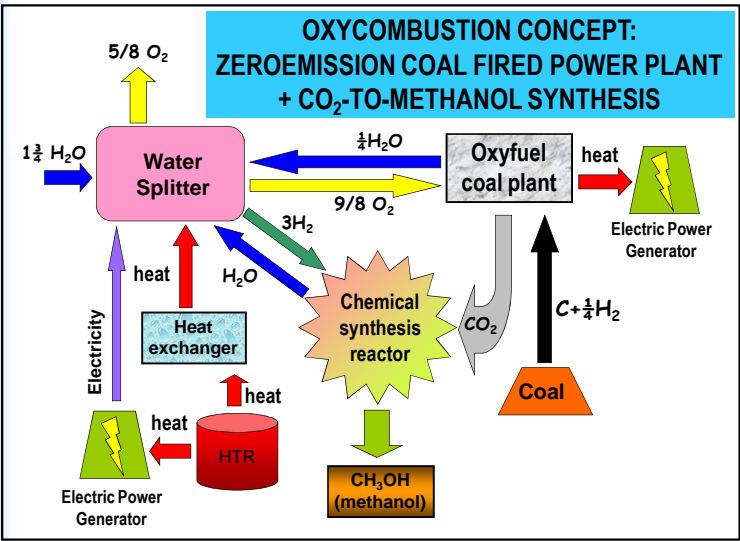
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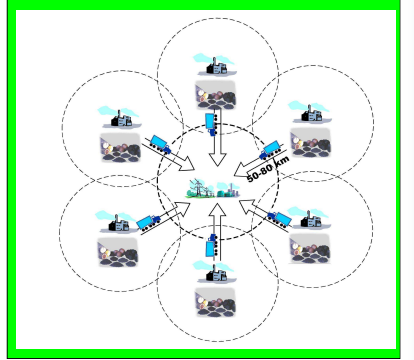
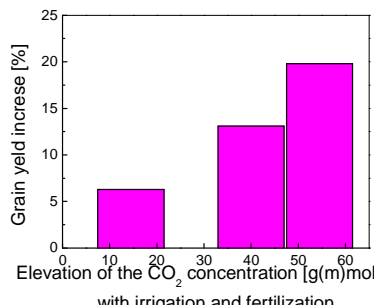
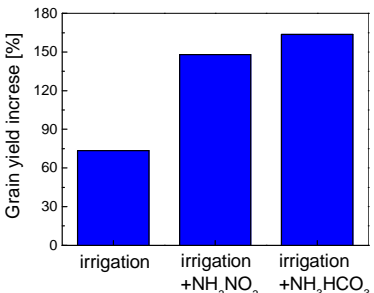
The effects of increased CO₂ concentration in the air:
→ Greenhouse effect, carbon tax, costs & offset
→ Increased plant growth and yield

The main benefits to sequesterate C (the biocarbon) into forest and agricultural soils:

- The biocarbon increases soil fertility (better cation exchange capacity, i.e. the plants can take up nutrient more easily,
- The nutrients are captured by the biocarbon → less of them are washed off from the soil by rains). Both the above mechanisms effectively increase the productivity of fertilizers and reduce the leaching of N into the water table
- a serious problem of intensive agriculture,
- The biocarbon provides an environment for the proliferation of soil micro-organisms → by that action it is believed that the *terra preta* may perpetuate and even regenerate itself,
- The biocarbon improves the aeration and water retention capability of the soil,
- The biocarbon can neutralize acid soils + capture pollutants,
- The biocarbon significantly reduces the release of CH₄ and N₂O from natural decay processes in the soil.



Less than 26 MgC/ha → degradation of the soil → recultivation needed
The majority of agricultural soils in Poland (for the soil of thickness of 25cm) → 26-31 MgC/ha @ 1.5-1.8% humus (0.86-1.04% C)



The need & benefits to replace the 'CUT & BURN' by the 'CUT & CHAR'