



For generations, people in Africa have been cooking their meals with charcoal. Biochar is something similar, but is produced with a different method, it has many more uses and a great potential for Africa's development.

Biochar - A Chance for Africa

WHAT IS BIOCHAR?

Biochar is a substance similar to charcoal and is produced by heating biomass such as wood chips, agricultural waste or coffee husks.

The process is known as pyrolysis and takes place at temperatures between 350 and 700 degrees Celsius in a low-oxygen environment. Pyrolysis removes all volatile compounds, resulting in a stable product with a high carbon content.

Thanks to its stability, biochar, when buried in the ground, can safely retain all its carbon for hundreds or even thousands of years without releasing it into the earth's atmosphere.

This means that this simple substance, created from what would otherwise be disposed of as waste, is able to solve several environmental problems while offering numerous benefits, especially for rural populations.

This technology is not actually new. It was already practiced by the inhabitants of the Amazon 3000 years ago.

MANY WAYS OF USING IT

Climate change

One cause of climate change is the ever-increasing amount of carbon dioxide (CO²) in the atmosphere. Biological waste from agriculture and forestry, which releases CO² into the atmosphere when it decomposes, contributes to this. Turning it into biochar binds it forever. If the potential for biochar were fully exploited everywhere, global carbon dioxide emissions could be reduced by 3.4-6.3 billion metric tons. Biochar technology could thus make an important contribution to the attempt to limit the rise in atmospheric temperature.

Higher crop yields

When farmers add biochar to fertilizer, ideal conditions are created in the soil for the growth of microorganisms that promote plant growth and thus increase crop yields. They can reduce the need for expensive chemical fertilizers and reduce farmers' expenses. Biochar also reduces the need to irrigate dry soils.

Waste disposal

The disposal of agricultural and organic waste is a major problem. Biochar offers a sustainable and productive solution to the traditional burning and burying of organic waste, which releases harmful

gases into the atmosphere. The sale of this waste would also provide a new source of income for farmers.

BIOCHAR AND AFRICA

Africa has the lowest carbon dioxide emissions of all continents but is the most affected by climate change. At the same time, the population is expected to double in the coming decades. In order to feed this growing population in the future without destroying the environment, biochar technologies could be of great importance.

Some countries in Africa have a particularly high potential to reduce their CO² emissions through biochar. Studies show that Eswatini could reduce its CO² emissions by 30% and Malawi and Ghana by 20% using biochar technology.

In Kenya, biochar is already being used successfully to reduce the high acidity of ancient soils and thus increase farmers' crop yields.

A huge problem in many African countries is the massive destruction of forests. A rapidly growing population is clearing forests to create farmland. A successful project in the DR Congo showed the land-hungry inhabitants how biochar can increase crop yields without destroying the forest.

BIOCHAR RESEARCH AND MARKETING

The United Nations Environment Program researched the efficiency of biochar in six countries, including Kenya and Ethiopia, and the conditions for a successful introduction of biochar technologies. UNEP

Various internet companies offer a wide range of biochar products.

The production and use of biochar is expected to grow in the future.

Further Info:

IBI provides a platform for fostering stakeholder collaboration, good industry practices, and environmental and ethical standards to support biochar systems that are safe and economically viable. <https://biochar-international.org/>

Promoting biochar in North America for sustainable food security, improved soil fertility, environment, and climate resilience. <https://biochar-us.org/index.php/us-biochar-initiative>
<https://biochar.systems/>

„Biochar has the potential to enrich soils, sequester carbon and create a circular economy with organic waste. Experts refer to it as 'nature's black gold.'“ Rose Williams