

ACT alternative charcoal tool

A Decision Support System for Eco-friendly Charcoal Production from Alternative Feedstocks

At least 80% of the African population depends on traditional biomass resources such as charcoal and firewood for household energy use. Most charcoal is produced in forests near urban areas, where most charcoal consumption takes place. Charcoal production from wood is an important cause of deforestation, one of the most urgent environmental problems of Africa. One of the solutions to prevent deforestation is to promote the use of alternative feedstocks for wood charcoal.

The ACT Alternative Charcoal Tool gives small and medium enterprises, trade organisations and policy makers in developing countries insight in the potential of charcoal production from alternative feedstocks. Examples are charcoal dust, harvest residues like cotton stalks, processing residues and invasive species. Besides feedstock selection insight is given in the available carbonisation and briquetting technologies and sales opportunities in the charcoal market.

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Modules

Feedstock Selection

Information on which feedstocks are more likely to become an alternative to wood charcoal.

1. Assessment of the alternative feedstocks for charcoal production to determine the feedstocks suitability.

2. Comparison of alternative feedstocks based on their availability on a national level. Data from FAO and residue-to-crop factors are used for a rough calculation.

Market Selection

Definition of the market and main quality of the charcoal substitute.

Besides household use, charcoal is also used in the industrial and service market for space and water heating, burning fuel and as barbecue fuel.

1. Definition of market and main quality of charcoal substitutes.

2. Selection of additional user requirements.

Technology Selection

Recommends the technical concept for charcoal production. Short videos show practical example of carbonization and densification technologies.

1. Recommendation for technical concept for charcoal production.

2. Selection of carbonisation technology.

3. Selection of densification technology.

Production Costs

Establishes an overview of the production costs based on user-defined supply chains, and provides an insight to the main cost determinators.

1. Determination of production costs for alternative charcoal production.

2. Comparison of fuel prices (traditional versus alternative charcoal.)

Make Charcoal Usage Sustainable

The ACT offers:

- Four different modules providing production costs determination, feedstock, market and technology selection
- Quick guidance to assess business case opportunities
- Supports the design and implementation of programmes and projects
- Ideal for small and medium enterprises, policy makers, NGOs and donor organisations in developing countries

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[www.energypedia.info/wiki/Alternative_Charcoal_Tool_\(ACT\)](http://www.energypedia.info/wiki/Alternative_Charcoal_Tool_(ACT))
www.btgworld.com/en/references/publications/act-final2010.xlsm

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