Bamboo Charcoal Manufacturing Business

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<tbody>
<tr>
<td>Capacity:</td>
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<td>Plant and machinery cost:</td>
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<td>Working Capital:</td>
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<td>Rate of return(ROR):</td>
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<td>Break Even Point (BEP):</td>
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<tr>
<td>TCI:</td>
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<td>Cost of Project:</td>
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Bamboo Charcoal Manufacturing Business. Production of Activated Charcoal from Bamboo

Bamboo charcoal powder consists of pieces of bamboo plants, which are harvested after a minimum of five years. It is manufactured using the pyrolysis or carbonization process, which usually consists of heat treatment at the temperature of 800°C to 1200°C. The process imparts high adsorption properties to the bamboo charcoal powder, thus making it useful for a wide range of applications. Bamboo charcoal powder can attract and hold a variety of materials, minerals, chemicals, humidity, radio waves, odors, and other substances. Thus, it provides these materials with healing and detoxification characteristics. The use of bamboo charcoal powder is also popular because it is an environmentally-friendly product.

Bamboo charcoal can be used as household fuel for heating and cooking, as well as in a range of purification and absorption applications, such as purifying drinking water, in air filters, in mattresses and pillows as a deodorizer, and for certain industrial purification uses. Bamboo vinegar, a by-product of the manufacturing process, is also used as an ingredient in health products.

Bamboo is an excellent resource for charcoal because of its high surface area (up to 385 m2/g) and the ability to reach high temperatures (the surface temperature of bamboo charcoal can reach 700°C). Bamboo grows naturally because of the country’s largely undisturbed forests and the limited agriculture practiced in areas where bamboo proliferates. Four dzongkhags have a significant production of bamboos. These are Samtse, Samdrup Jongkhar, Tsirang and Zemgang.

Bamboo charcoal can be used for a wide range of different purification and absorption application.

Reduce Indoor Air Pollution - Bamboo charcoal absorbs harmful chemicals in the air. It is especially useful for absorbing formaldehyde, ammonia, benzene from paints and strong adhesives, or when antifreeze is kept indoors. It also reduces smog as it absorbs carbonic oxide, ammonia, formaldehyde, benzopyrene, nicotine, and tar.

Purifying Drinking Water - As bamboo is naturally anti-bacterial and anti-fungal, bamboo charcoal also possesses similar properties. Bamboo charcoal also absorbs 2, 4-dichloro-hydroxybenzene, a major harmful pollutant in drinking water. Bamboo charcoal also eliminates harmful substances such as surplus chlorine, chloroform, and contains rich natural mineral, like, potassium, magnesium, sodium, calcium etc. Water quality is improved when bamboo charcoal is used in cooking and boiling.

Adjusting Humidity - Bamboo charcoal is both an effective natural humidifier and dehumidifier, a result of the pores present in its substructure which can trap and release moisture.

Promote Metabolism and Blood Circulation - As bamboo charcoal absorbs and emit far infrared rays, it promotes blood circulation. Bamboo charcoal in mattresses, cushions and comforters help to warm the body faster. Due to its absorbent properties, bamboo charcoal is often used in refrigerators, trash cans, shoe insoles, etc. to absorb odor. Bamboo charcoal products are not only functionally sound, but also good for protecting the environment.

Market Outlook

Based on the raw material required for manufacturing bamboo charcoal, bamboo charcoal market is categorized into raw bamboo charcoal and bamboo briquette charcoal. Raw bamboo charcoal and bamboo briquette charcoal are prepared from branches, roots, and culms of bamboo plants. Different manufacturing method for preparation of bamboo charcoal powder include the brick kiln process and mechanical process. The bamboo charcoal market is broadly categorized into three major segments based on the application type such as food industry, textile industry and cosmetics industry. Cosmetics industry segment is growing rapidly in the bamboo charcoal market with substantial revenue generation in the last few years. Growing popularity of bamboo charcoal in cosmetics industry segment is attributed to the increasing product penetration in newer market and increasing use in household applications.

The global charcoal market is estimated to value $5,813.2 million in 2017 and is projected to grow at a
CAGR of 2.0% during the forecast period. The growing demand for charcoal as a metallurgical fuel in the metal and mining industries is driving the growth of the market.

On the basis of type, the charcoal market is segmented into lump charcoal, charcoal briquettes, Japanese charcoal, sugar charcoal, and others. Others include various forms of activated charcoal. In terms of value, lump charcoal is estimated to contribute the largest share, of more than 67.0%, to the market in 2017. Lump charcoal burns quickly and produces a high amount of heat on burning. Owing to these properties, the demand for lump charcoal is growing for barbecue cooking purposes.

Charcoal is increasingly being used in the production of steel, ferroalloys, aluminum, lead, cast iron, tin, copper, lanthanides, nickel, and some rare metals. It is also employed in the smelting of certain types of brass and bronze. The demand for charcoal is increasing due to technological developments and growing inclination toward the use of clean and renewable resources. Charcoal briquettes compressed from biomass materials produce less ash and reduce greenhouse gas emissions. They are therefore more preferred than traditional fuels. Such environmental sustainability benefits are fueling their demand among users, which, in turn, is driving the growth of the charcoal market.

Asia-Pacific region is estimated to hold a major share in the bamboo charcoal market with massive growth in forecast period. Countries such as India, China and Singapore are leading the Asia-Pacific market with strong economic growth, rapid industrialization, rising demand from end-use industries, and significant investment by leading industry players considering potential growth opportunities in the region.


Tags
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NIIR PROJECT CONSULTANCY SERVICES
106-E, Kamla Nagar, New Delhi-110007, India.
Tel: 91-11-23843955, 23845654, 23845886, +918800733955
Mobile: +91-9811043595
Email: npcs.ei@gmail.com, info@entrepreneurindia.co
Website: www.entrepreneurIndia.co