

maccy biochar

Auspiced by the Macclesfield Community Association Inc.

Email: maccybiochar@adam.com.au

Website: <https://www.maccybiochar.com>

BIOCHAR for the HOUSE & GARDEN

Introduction:

Biochar is a form of charcoal and is good for the soil and combats climate change by sequestering carbon.

Biochar has a very porous structure that facilitates water absorption and adsorption of water-borne nutrients.

So when biochar is mixed into the soil it helps the soil retain water and nutrients thereby reducing water consumption and increasing plant yields.

The porous structure of biochar also encourages micro-organisms to reside within the structure thereby facilitating the exchange of nutrients between plants and such organisms.

Raw v. enhanced biochar:

Raw biochar is pure, unadulterated biochar that has come directly from the kiln. Enhanced biochar is raw biochar that has been allowed to soak up water and nutrients.

When raw biochar is buried in the soil it will absorb water and adsorb nutrients from the soil in its immediate vicinity. This can initially rob plants of some water and nutrients until the roots of the plant "discover" the biochar. This has been termed the **J-curve** referring to the sometimes decreased yield prior to the increased yield of the plants in the vicinity of the biochar.

Handling: Biochar can have fairly sharp edges so best to use gloves when handling it. Also keep it damp to avoid it becoming dusty or wear a dust mask when handling it. And never try to burn biochar; carbon monoxide (a deadly gas) will be emitted and the carbon will be returned to the atmosphere.



Typical flame-capped kiln for garden use

Potting:

Place a handful of raw biochar (approx. 35% by volume) at the bottom of the pot. Use lump biochar in your large pots; and granules in your smaller pots.

Tree Planting:

Mix a handful of granular **enhanced** biochar into the soil where you plan to plant your tree together with a handful of your preferred plant nutrient. Eg. aged chicken manure.

Drainage:

Wherever you need to improve drainage in your garden raw lump biochar can be used. Similarly when installing wicking beds good drainage is essential so raw

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lump biochar can be used there instead of rocks etc.

Food scraps bin:

Throw a handful of raw granular or powder biochar into the bottom of your food scraps bin before use and you will find that the odour of rotting foods is greatly reduced.

Compost heaps:

Add raw granular biochar to your compost heap (either directly or via the contents of your food scraps bin) to improve the water-holding capacity and nutrient level of your compost and to enhance the biochar.

Other: If you have found other uses of biochar in and around your house and garden please tell us about them.

By the way: Some other applications of biochar are not mentioned here as they are more relevant to landowners, businesses and Local Councils. These include water filtration; odour-eaters; land and water de-contamination; road-side tree planting water catchment; animal feed supplements; lawn care; pasture care; concrete colouring; etc. We are planning to publish other pamphlets dealing with these other uses of biochar.

Finally: Remember that biochar is primarily made up of pure carbon and ash. The latter is locked up in the biochar (i.e.

not loose). Typically the percentage carbon content is in the range 70 to 80%. So for every kilogram of biochar made about 750 grams is carbon that has been extracted from atmospheric carbon dioxide by plant photosynthesis. As carbon dioxide is 3.6 times heavier than carbon then each kilogram of biochar represents about 2.75 kilograms of carbon dioxide removed from the atmosphere and sequestered in the soil.

ABOUT US

Maccybiochar is a community-based, not-for-profit group set up to help make Macclesfield carbon neutral. Our primary activity is the production of biochar from woody waste sourced from local households, landowners and businesses. The carbon credits created by making biochar are used to offset the greenhouse gas emissions of local households. We are based in Macclesfield, South Australia.

HOW CAN YOU HELP?

Become a Member!

Use our Drop-off Sites:

FREE for all Macclesfield households and those with a Macclesfield PO box address. Only modest fees apply for other households.

Engage us to make biochar on your property to dispose of tree litter and reduce bushfire risk.

CONTACT DETAILS

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Production of Biochar for
Carbon Capture & Soil Improvement