

# MACCY BIOCHAR MEMBER BULLETIN

No. 21 - June 2021

Maccy Biochar is a Task Group of the Macclesfield Community Association Inc.

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HELLO ALL.

Welcome to our 21st Member Bulletin.

In this Bulletin we report on production and sales; and some recent events.

## 2021 PRODUCTION

Rain "stopped play" on a few occasions during June but despite that production was satisfactory thanks to special efforts by John A, Dean and Geoff to utilise the maxi kiln regardless of threatening weather. So:

**Biochar production in May & June was 5600 litres.**

**Carbon captured was 889 kg.**

**CO<sub>2</sub> avoided was 3030 kg.**

**Electricity offset was 7.05 MWHrs.**

## TOTAL PRODUCTION SUMMARY

The latest summary of our production and carbon capture is shown below. This year's values are based on:

Dry bulk density of our biochar = 189 kg/m<sup>3</sup>.

Carbon content of our biochar = 84.3%.

SA emissions factor = 0.43 kgCO<sub>2</sub>/kWhr.

MACCYBIOCHAR SCOREBOARD at 30/06/21					
YEAR	2019	2020	2021	TOTAL	Units
BIOCHAR PRODUCED	1720	18451 <sup>2</sup>	5600	25771	Litres
CARBON CAPTURED	222 <sup>1</sup>	2939 <sup>3</sup>	889	4050	Kg
NET CO2 AVOIDED	0.775	10.048	3.030	13.853	Tonnes
ELECTRICITY OFFSET	1.520	23.369 <sup>4</sup>	7.0	31.889	MWHR

1. Re-calculated based on 3rd party biochar analysis dated 19/4/20  
2. Includes 3180L from members.  
3. Re-calculated based on 3rd party biochar analysis dated 28/1/21  
4. Calculated based on Australian National Greenhouse Accounts Factors Oct. 2020  
(SA: 0.43 kgCO<sub>2</sub>/KWh)

At the end of the year we will add in the values provided by members from their home production.

## 2021 SALES

Sales this calendar year so far have been as follows:

Bulk bags: 4000 litres

Other: 550 litres



## MEMBERS IN ACTION



Here is Jürgen making biochar in one of his new kilns on his property at Nangkita. Several of these kilns similar to those that we use have been supplied by our local fabricator in recent months. So that is good. The more people that make biochar this way and use it in the soil will benefit us all.



Here is what I call a full kiln. Almost finished and soon to be quenched. We have found that the char only needs to stay under water for about 20 minutes to cool off and then the water can be drained. We then usually leave it to sit for a day or two before bagging up. That way we can be completely certain that it is safe to bag. Never bag up biochar that has not been completely quenched! On the other hand it is best to not leave biochar soaking in water for days on end; as that will allow it to become saturated with water. And then there will be little or no ability for it to absorb anything else for a considerable time.



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## NEW MEMBER

Welcome to new member **Richard Davidson** who lives just outside Macclesfield having moved here from NSW in 2018 to look after the family property. Richard has shown a keen interest in Maccy Biochar since hearing about us recently via the wood collection team so we look forward to his further involvement.

## EXPANDING MEMBERSHIP

We have seen that membership of Maccy Biochar not only provides a source of volunteers for our activities but also encourages more home production of biochar. So wouldn't it be good if we could double our membership this year to 100? All it needs is for each member to recruit one new member!

## INSTITUTE WALL DISPLAY



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Our new wall display is now mounted in the Macclesfield Institute foyer to promote our activities.

## BIOCHAR NEWS FROM USA

### Daily Camera, Boulder, Colorado.

Jun. 10—Boulder obtained a \$100,000 grant from the Carbon Neutral Cities Alliance Game Changer Fund to support its bioenergy-biochar work.

It also was selected as one of 10 global cities to submit a biochar project proposal to Bloomberg

Philanthropies, an organization that will provide technical assistance and matched funding to assist Boulder as it develops a city-wide project. It will be competing for two years of funding to support the work.

The production of biochar — charcoal that is produced by pyrolysis of biomass in the absence of oxygen — captures carbon from the atmosphere and locks it into the soil, where it provides nutrients to help trees and plants grow, according to a city news release.

"Biochar is one of a small set of carbon drawdown and utilization strategies identified by the Intergovernmental Panel on Climate Change as ready to deploy in our efforts to stabilize climate," Senior Sustainability and Resilience Policy Analyst Brett KenCairn stated in the release.

Boulder received the Carbon Neutral Cities grant alongside Minneapolis, Helsinki, Finland and Stockholm, Sweden. Together, the cities will develop a bioenergy-biochar action strategy focused on urban forestry and biosolids-to-biochar. Biosolids are organic matter recycled from sewage.

According to the release, Boulder must pay to dispose of more than 1,000 tons of woody biomass "waste" generated in the city. The project aims to capture and convert this material into biochar, which can be used in urban forestry expansion and storm water treatment objectives, the release states. The heat emitted in production can be used to displace natural gas use.

## BIOCHAR NEWS FROM AFRICA

On Sun, Jun 13, 2021 at 6:15 AM K McLean wrote: Here is a [training video](#). I'd love your comments. We are about to distribute the training video and tongs to hundreds of thousands of smallholder farm families in Africa.

We are told, surprisingly, that removing embers from open-fire cook-stoves does not increase the amount of firewood needed for cooking. SNV Vietnam and SNV Cambodia confirmed with WBTs.

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By putting [rock beds in their cookstoves](#), fuel efficiency is actually improved by a third even when removing embers.

We have tested removing embers with hundreds of families. Women like the improved efficiency and they make 0.5 to 2 kg of ember biochar a day. We've found that maize production improves significantly. If a family applies 1 kg of biochar to their field every day, that is the equivalent of about one tonne of CO<sub>2</sub> mitigated per year by sequestering the carbon. With hundreds of millions of families cooking with open fires, the potential is enormous.

We are making the training videos as small files in 3gp format so they can be shared between basic/feature phones using bluetooth. Smart phones are not needed.

We are going to add a section on using the trench method to turn crop waste to biochar. And we are translating the video into many languages. It is open-source.

All comments, suggestions are welcome.

Thanks,  
Kevin McLean, President  
Sun24

## BIOCHAR NEWS FROM GERMANY

### Biochar in the Coalition Agreement of German State Baden-Württemberg

15/03/2021 by [Harald Bier](#)

“...On state-owned land, the state lives up to its exemplary function for [#climate](#) protection and the preservation of [#biodiversity](#). Ecologically valuable areas in the state's ownership are secured and maintained. The purchase of areas important for nature conservation and climate protection will be continued (moorland acquisition concept and others). When purchasing land, we ensure that there is no additional competition with agricultural land. [#Peatlands](#) are being renaturalised and other state-

owned areas are being used as carbon reservoirs through [#humus](#) build-up and the use of [#biochar](#). In addition, land is used for open space PV (agri-photovoltaics).” Find the agreement [HERE](#)

## LOCAL BIOCHAR NEWS

### Tigercat 6050 – Does it make biochar?



Demonstrations of the Tigercat 6050 were carried out recently at McLaren Vale and at Willunga. Two of our members attended the Willunga demonstration at the invitation of a local company whose waste stream was being trialled on the Tigercat. **The main objective of the Tigercat is to reduce the volume of waste streams.** The residual material from the process may be beneficial to the soil provided the input material does not contain pollutants. **This residual material is not biochar by our definition.** Remember that 100 litres of our biochar typically diverts 40 to 50 kg CO<sub>2</sub> from the atmosphere because our process is carbon negative. We draw down carbon. Our process is carbon negative because it is low tech and we emit very little CO<sub>2</sub> in the process. Whatever CO<sub>2</sub> we do emit by using petrol to pump water or drive our cars to and from site is calculated and deducted from the gross amount of CO<sub>2</sub> our biochar has diverted.

The problem with trying to scale up the production of “biochar” using technology is that the carbon pay-back period blows out (so it takes perhaps years for the process to actually start drawing down carbon) and even after that the carbon drawdown capability is compromised by the on-going CO<sub>2</sub> emissions generated by the process.

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That is why we think the best way to scale up the production of biochar is to use many, many, many small scale low tech kilns distributed widely throughout the country wherever there is an abundant supply of “waste” biomass.

## NEWS FROM YOUR COMMITTEE

### New Honorary Member:

The Committee voted at its June meeting that “Brian Lewis be granted Honorary Membership in recognition of the amount of work he undertakes on behalf of the group”. This was most unexpected but I think I managed to accept graciously! I certainly appreciate the gesture but more than that I continue to be grateful to the many people who agree with our group’s objectives, particularly those who have become members, and even more grateful to those who volunteer to take part in the activities of the group and actually ‘capture carbon’ on behalf of the group, whether at home or at our job site.

### Biochar in Schools:

John Agnew has volunteered to be our liaison person with secondary schools. John is a recently retired Ag Science school teacher and is very well qualified to help bring biochar to the attention of more schools around the State. We already have an introductory application note on “Biochar for Schools” on our website; but now we want to encourage secondary schools to make their own biochar from school grounds tree litter and then use it around the school in various ways. If anyone would like to assist John with this objective please call me and I will pass it on to John (who is currently travelling interstate).

## NEW GROUP BROCHURE

An updated group brochure summarising our aspirations and achievements as at June 2021 has been issued. Please forward to friends and relatives to help spread the news and promote our objectives.

One of the things we want to happen next is:

**More of the same:** We want to inspire other local communities to set up their own biochar centres using a similar business model to ours so that together we can capture more carbon from the atmosphere and build a viable biochar industry. So let us know if your local community wants to start a biochar group and we would

be delighted to help them get started.

## BIOCHAR MEMBER ARTICLES

Articles by members for describing their experience with using biochar are more than welcome.

As more members use their own home-made biochar on their land it would be very helpful if we could compile a collection of articles each of which describes the processes used to make, condition, and apply the biochar to the soil along with any other relevant information that could influence crop outcomes.

Please email them to me as a pdf file.

## LETTERS TO THE EDITOR

Comments and questions relating to biochar are also invited for possible publication in this Bulletin if considered of sufficient interest to the membership. This could be quite helpful to new members just starting to use biochar. All questions are welcome! Try us out. We will try to obtain an authoritative answer.

## COMMITTEE MEMBERS at present are:

**Brian Lewis** – Chairman, Treasurer & Newsletter.

**Kelvin Williams** – Deputy Chair.

**Fiona Williams** – Membership Secretary.

**Geoff Brockhouse** – Wood collection Team Leader.

**John Agnew** – Schools Liaison.

**Stephen Heading, Ivars Eglitis and Dean Hewlett.**

## EX-OFFICIO ADVISORS are:

**Greg Marlu** – Operations

**Meegan Semple** – Horticulture.

**Tony Huppatz** – Carbon credits.

Meetings are normally held on the 2<sup>nd</sup> Monday of the month (public holidays excepted) at 7:30 pm. Financial members are welcome to attend.

**Enquiries: Brian Lewis Mob: 041 148 0935**

## LATE NEWS!

**We now have our own trailer!** Thanks to local wood supplier Paul Thomas we only have to transfer the registration and it’s ours. Thankyou Paul for your support. Ed.

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