

MACCY BIOCHAR MEMBER BULLETIN

No. 22 - July 2021

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

Email: maccybiochar@adam.com.au

Website: www.maccybiochar.com

HELLO ALL.

Welcome to our 22nd Member Bulletin.

In this Bulletin we report on July production; financial report for 2020-21; and some recent developments.

JULY 2021 PRODUCTION

What a lousy month for biochar! Thanks to the rain, wind and Covid lockdown we managed only 2 "burns" in July. So we made only about 600 litres.



Dean & Kelvin hard at work but keeping warm.

TOTAL PRODUCTION SUMMARY

The latest summary of our production and carbon capture as at 30/7/21 is shown below. This year's values are based on:

Dry bulk density of our biochar = 189 kg/m³.

Carbon content of our biochar = 84.3%.

SA emissions factor = 0.43 kgCO₂/kWhr.

MACCYBIOCHAR SCOREBOARD at 30/07/21					
YEAR	2019	2020	2021	TOTAL	Units
BIOCHAR PRODUCED	1720	18451 ²	6720	26891	Litres
CARBON CAPTURED	222 ¹	2939 ³	1066	4227	Kg
NET CO2 REMOVED	0.775	10.048	3.669	14.492	Tonnes
ELECTRICITY OFFSET	1.520	23.369 ⁴	8.5	33.389	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 kgCO₂/KWh)

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

FINANCIAL REPORT:

MACCY BIOCHAR		
PROFIT & LOSS (incl. GST on purchases)		
Financial year	2019-20	2020-21
INCOME	\$	\$
Membership fees	520.00	720.00
Jobs	20.00	0.00
Strawberry Fete	75.00	0.00
Donations	350.00	150.00
Sales	600.00	5,509.80
Drop-off fees	10.00	0.00
Workshops	0.00	425.50
TOTAL INCOME	1,575.00	6,805.30
COST OF GOODS SOLD		
Strawberry Fete	29.13	0.00
Shady Grove road site	233.73	310.91
Bulk bags	56.00	101.00
Crane lift	0.00	50.00
TOTAL COGSS	318.86	461.91
GROSS PROFIT	1,256.14	6,343.39
EXPENSES		
Accident Insurance	0.00	653.40
Analysis	379.50	461.40
Plant & equipment	1,925.00	1,320.00
Website	231.12	329.00
Motor veh. exp.	0.00	25.00
Promotions	0.00	176.95
Volunteer work lunches	0.00	180.50
Rent	0.00	0.00
TOTAL EXPENSES	2,535.62	3,146.25
OPERATING PROFIT	-1,279.48	3,197.14
OTHER INCOME		
Council Grant	2,000.00	0.00
NET PROFIT/LOSS	720.52	3,197.14



MOUNT BARKER
DISTRICT COUNCIL

MACCY BIOCHAR MEMBER BULLETIN

Issue No. 22 – July 2021

MACCY BIOCHAR			
BALANCE SHEET	at	30/06/2020	30/06/2021
ASSETS			
CURRENT ASSETS		\$	\$
Cheque Account		320.52	3,517.66
Cash Management		0.00	0.00
Debtors		400.00	0.00
TOTAL CURRENT ASSETS		720.52	3,517.66
NON-CURRENT ASSETS			
Inventory		2400.00	2,400.00
Plant & Equipment		2088.73	3,492.73
At Cost			
(Accum Depreciation)		0.00	-626.62
Incorporation Exp		0.00	0.00
TOTAL NON-CURRENT ASSETS		4488.73	5,266.11
TOTAL ASSETS		5209.25	8,783.77
LIABILITIES			
CURRENT LIABILITIES			
Creditors		0.00	0.00
TOTAL CURRENT LIABILITIES		0.00	0.00
NON-CURRENT LIABILITIES		0.00	0.00
Contractors		0.00	0.00
TOTAL LIABILITIES		0.00	0.00
NET ASSETS		5209.25	8,783.77

With the conclusion of our second full year of operation I am pleased to advise that Maccy Biochar is progressing well thanks to the work of our Committee and our Volunteer Workers. Our membership continues to grow (now 50) of which about 25% actively support the hands-on work of making biochar. Achievements of the past year have included:

- Produced approx. 20,000 litres of biochar (including member contributions) thereby capturing approx. 10 tonnes of carbon dioxide.
- Sold approx. 14,000 litres of biochar.
- Conducted a Biochar for Beginners training course via the Mt. Barker Community Centre.
- Conducted 4 Biochar Production Workshops (at Goolwa, Victor Harbor, Norton Summit and Yankalilla).
- Commissioned 2 additional kilns made in Macclesfield to our design by Firth Engineering.

- Made a profit of just over \$3000.

Plans for the remainder of this season include achieving our production target; expanding our customer base for bulk biochar; and extending our capability to include on-farm operation.

Brian Lewis
Chair, Steering Committee
Maccy Biochar

LOCAL BIOCHAR NEWS

The following article appeared in
ONKAPARINGA NOW
16 July 2021

Turning feral olive trees into McLaren Vale wine

An innovative pilot project is removing feral olive trees from national parks and turning them into a product which is helping grow grapes at McLaren Vale vineyards.

This is the first time in South Australia that feral olive trees from Onkaparinga River National Park and Glenithorne National Park – Ityamaitpinna Yarta are being used to create biochar, a product which can help retain nutrients, improve soil structure and increase water-holding capacity of soils.

Biochar production is an environmentally friendly carbon recycling process, which in this project is taking the olive trees, putting them in a portable piece of machinery called a Tigercat and burning the trees at temperatures of 500 degrees Celsius to create biochar.

The biochar produced as part of the project is processed and sold by the project's commercial partners including to local McLaren Vale vineyards. It's expected that any funds raised will be able to go back into the project to fund further olive control and revegetation works.

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Making Biochar for carbon capture and soil improvement*

MACCY BIOCHAR MEMBER BULLETIN

Issue No. 22 – July 2021

Project partners include the Department for Environment and Water's National Parks and Wildlife Service (NPWS), Biodiversity McLaren Vale, Koomilya Vineyard, Peats Soil, City of Onkaparinga, City of Marion, Bio Gro, Green Adelaide and the Hills and Fleurieu Landscape Board.

City of Onkaparinga's support for the project complements [council's work removing woody weeds and protecting Onkaparinga's 1200 kilometres of roadside vegetation](#), helping biodiversity bounce back and reducing bushfire risk across the region in partnership with the Hills and Fleurieu Landscape Board.

[Minister for Environment and Water David Speirs said](#) the biochar project is a first for national parks in South Australia.

“Our national parks conserve vitally important ecosystems, habitats, plants and animals, unique land formations, and culturally significant places,” Minister Speirs said.

“They are essential spaces to enjoy nature in all its forms, and provide South Australians with a wide range of environmental, social and economic benefits.

“This truly exciting project is removing feral olive trees from the Onkaparinga River and Glenithorne national parks in our southern suburbs and turning them into biochar which is then used to help boost our agriculture sector.

“By removing an invasive pest plant species and turning it into a valuable commodity we are not only better protecting our beautiful flora and fauna but we are supporting local industry in a win-win for the environment and our economy.

“I'd like to thank all of our project partners for their support and help in rolling this project out.”

Our Comment on the above article:

In some ways it is great that biochar is getting some headlines, being adopted by large companies and receiving attention from the State government. If the char is made properly it will be of benefit to the soil.

However NOT ALL BIOCHARS ARE EQUAL.

They can differ markedly in carbon content, ash content and contaminants depending on the type of feedstock and the processing method. And they can differ markedly in terms of carbon removal depending on the carbon footprint of:

1. the processing plant and
2. the process itself.

The carbon footprint of the processing plant will determine the carbon payback period. This is the time taken (at a given production rate) before the amount of CO₂ captured by the biochar produced equals the CO₂ emitted by the manufacture, transportation and installation of the processing plant. In our case that is approx. 1 cubic metre per kiln. So for each kiln we have paid back our carbon debt with our first bulk bag of biochar. From then on our biochar is carbon negative.

The CO₂ emissions of the process itself (and to some extent the carbon content of the biochar produced) will determine the amount of CO₂ removed from the atmosphere by a given quantity of biochar. In our case that is approx. 450kg CO₂ per cubic metre of biochar. So the carbon removal rating of a bulk bag of our biochar is CN450.

While biochar made by large scale processing may be beneficial to the soil note that it will not necessarily be carbon negative. So Governments and consumers need to be able to compare the carbon removal rating of all biochars produced or sold in SA.

This needs to be made clear to everyone interested in biochar. And a system developed to assess and rate the carbon removal capability of all biochars sold in SA.

MACCY BIOCHAR MEMBER BULLETIN

Issue No. 22 – July 2021

NEWS FROM YOUR COMMITTEE

Proposal for Climate Action Centre in Macclesfield:

The Committee voted at its July meeting to seek a letter of support from the Macclesfield Community Association for a Development Application to the Mt. Barker District Council to develop the agistment paddocks on Pound Road (part of Lord Robinson Parklands) as a Climate Action Resource Centre. Such a Centre would be a major bonus for Macclesfield with biochar being only a small part of this development. Other featured activities associated with carbon capture and emissions reductions would include tree planting; carbon farming trials; community solar energy; EV chargers; etc. together with the necessary support infrastructure for all these activities (eg. Meeting room; office; educational materials; storage space; analytical equipment; signage; security; toilets; vehicle parking; etc). The preparation of the Development Application will need to be a joint effort between the various interest groups associated with all these activities and be coordinated by the Macclesfield Community Association. If you support this initiative please advise your particular interest group and the Macclesfield Community Association accordingly.

BIOCHAR COMMENTS FROM FRANCE:

An extract from a message from:

Laurent Chabanne

Date: 29/07/2021

Subject: [Biochar] Stability of humus in soil and impact in climate projections.

We have been learning a lot about the interaction between inorganic (minerals) and organic (carbon-based) matter over the last few years. This echoes a discussion we had earlier on biochar/minerals "composite materials".

Note that for storage to happen, we don't necessarily need any carbon material to be permanently stable. As long as it is continuously recycled into biomass and decaying biomass and not mineralised to CO₂, we are happy.

For me, what is the most compelling about biochar is not just that what you put in the ground is locked for a long time, it's also:

- **the fertilizer you don't use** (so less energy to produce is = less GHG, less fertilizer runoff = less algal blooms = less GHG);
- **the water you save** because of it (so less energy to extract and move it = less GHG, less damaging environmental consequences, which includes less GHG produced as a result of soil and biodiversity depletion);
- **the higher yield** (less land use, less resources to use, etc.);
- **the soil depth you build** (the images in the Amazon basin are compelling: it might not be stable carbon, but it's constantly there and is not going in the atmosphere. Think about how much carbon is stored under each m² with terra preta soil vs standard Amazon soil. Not just biochar, but also other organic matter, which presence is favoured by the presence of charcoal).

Of course, it's climate-, soil-, and other things-dependent, but the potential (environmental) value of biochar is way beyond the 3.7 t CO₂ per t C buried in the ground.

Laurent

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 2nd Monday of the month (public holidays excepted) at 7:30 pm. Financial members are welcome to attend.

Enquiries: Brian Lewis Mob: 041 148 0935

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