

AGRO AGPE CO.,LTD provides Biofertilizer with enhances soil carbon-nitrogen microbial pools and CO2 sequestration instead of chemical fertilizer. The difference in impact is calculated per year and the total impact of AGRO AGPE CO.,LTD per year is calculated for 5000 times 1 ton biochar contain 350kg carbon and biochar mix with biofertilizer 1 bag 50kg= 14,5kg carbon .

Production	Biofertilizer is recycling from agriculture waste and using to replace chemical. So when we produce the products, we will increase more waste management around 350-500 tons per year.
Transport	We are transport the products from one place to other place and try to reduce of using the transportation through sharing space with other business to reduce time of using transportation.
Use	We use less energy because in our processing we install solar energy
Recycling	The biofertilizer mixed biochar with animal manure and compost waste from grow mushrooms that use coffee waste as a substrate for the production of the edible mushroom <i>Pleurotus pulmonarius</i> , a high protein content product (17.8% ± 0.84%). The spent mushroom substrate (SMS) resulting from fungus production showed a decrease in lignin (49.7% ± 12%), cellulose (33.7% ± 10.8%), and phenolic compound (87% ± 2%) content, which avoids contamination of soil and water bodies by them. Since the SMS still contains N (2.45%), P (0.20%), K (0.112%), Ca (0.320%), and Mg (0.106%), it has the potential to be used as a raw material in the production of a biofertilizer. This model reduces the environmental impact of the byproducts generated by small coffee growers and builds a sustainable agro-ecosystem.
Waste	The cow manure kwon as high methane which increase high CH4 to environment. So, the biofertilizer is increase waste treatment and reduce CH4 and CO2

Production				
+ 	DMC (50%) waste combustion, clean tech, without	1.36 per kg	5 kg	6.8
+ 	Boiling (1.1 MJe per kg product)	0.1033 per kg	10 kg	1.033
Transport				
- 	Diesel low-sulphur including combustion CO2, per l	0.08512 per MJ	100 MJ	-8.512
Use				
- 	Energy gas, condensing, low NOx (=heat)	0.08212 per MJ	100 MJ	-8.212
- 	Fertilizer-N	4.239 per kg	3350 kg	-14200
- 	Fertilizer-P	1.208 per kg	3350 kg	-4046
- 	Fertilizer-K	0.7737 per kg	3350 kg	-2592
Recycling				
- 	landfill organic waste without CH4 emission preven	2.241 per kg	500 kg	-1120
- 	CH4, Methane emission	28 per kg	500 kg	-14000
- 	CO2, Carbon dioxide emission	1 per kg	14.5 kg	-14.5
- 	N2O, Nitrous oxide emission	273 per kg	14.5 kg	-3958
- 	Fertilizer-N	4.239 per kg	5000 kg	-21194
- 	Fertilizer-P	1.208 per kg	5000 kg	-6038
- 	Fertilizer-K	0.7737 per kg	5000 kg	-3869
Waste				
+ 	landfill organic waste without CH4 emission preven	2.241 per kg	10 kg	22.41
+ 	Linseed produced in region	0.2856 per kg	1 kg	0.2856
- 	Electricity General Industry	0.1368 per MJ	10 MJ	-1.368

AGRO AGPE CO.,LTD's total impact per year			Carbon footprint CO ₂ eq
eco-costs of human health euro	unknown	Impact per 1 ton biochar contain 350kg carbon and biochar mix with biofertilizer 1 bag 50kg= 14,5kg carbon.	-71019 kg
eco-costs of eco-toxicity euro	unknown	Impact of 5000 times 1 ton biochar contain 350kg carbon and biochar mix with biofertilizer 1 bag 50kg= 14,5kg carbon.	-355Kt
eco-costs of resource depletion euro	unknown		
eco-costs of carbon footprint euro	unknown		

Equivalent to



16140661 trees

51462 average World citizens

					
43914	358346	689703	149245	71019	64050
times driving a car around the world	passengers flying London-New York	barrels of oil burnt	EU households annual electricity	elephants mass (5) of CO ₂	hot air balloons (2800 m ³) of CO ₂