



## Future developments for the WineGB Carbon Calculator

At WineGB Carbon Calculator we like to be open about what we do and why. We want to be clear about what it doesn't include and why. All these will be researched and our aim would be to include them in the next version.

The development of the Calculator is a continuous process, whereby we periodically review the data, the methodologies and the data sources/latest research. The past 10 years of experience developing the Farm Carbon Calculator (upon which this one is based) has given us a tool that has steadily got more comprehensive, accurate and user-friendly. This process will continue!

Section	Details	Why it's not included now
Materials	Road planings	Lack of scientific data
Inventory	Farm buildings - more detailed calculated footprint for certain buildings	This is quite difficult to calculate and there are many variables. We have a simplified version available for users now.
	Vehicles, tractors and machinery - more user friendly methodology	Accurate data not available
Fertility & cropping	Composts and manures - a more complete list	Lack of consensus in scientific data
	Green manures - no non-leguminous crops	Not needed - only the legumes fix N, and therefore release N <sub>2</sub> O
	Seeds and plants bought in - no emissions factors	Lack of scientific data and very complex to work out
Inputs	Complete list of fertiliser options (inc liquid fertilisers)	Lack of scientific data. Much progress has been made with the latest version though.
	Fertiliser emissions from soil contact	The science is not very well developed and lacks consensus
	Fertiliser options, such as abatement technology, country source, N inhibitors	Limited by scientific data and the multiple variables. User experience needs to be good, but results also meaningful.

	Sprays - more options	This will be done; however the emissions between different sprays is not huge.
	Molluscides, adjuvants and trace elements - no options for data entry	Lack of scientific data. Likely carbon footprints are quite low.
Waste	Waste to energy emissions factors	Lack of scientific data
	Incineration emissions factors	Lack of reliable scientific data
Sequestration	Soil Organic Matter - proxy results	Lack of consensus on scientific data. Our Soil Carbon project will provide meaningful results soon
	Hedgerows - more options	Lack of scientific data
	More generalised options for users	Lack of data/complex methodology to ensure high enough confidence/accuracy
	Biochar	Lack of scientific data
Processing	Adding more products/inputs to winemaking including (but not limited to): Diatomaceous Earth, Caustic soda, Bentonite, SO <sub>2</sub> , Concentrated Grape Must, Peracetic acid, Casein and other fining agents, Yeast Nutrient, Enzymes.	Lack of scientific data
	Other packaging options, including bidules and capsules	Lack of scientific data and complex manufacture process

We welcome thoughts, ideas and feedback. If you would like to get in touch please email Jonathan Smith on [jonathan.smith@farmcarbontoolkit.org.uk](mailto:jonathan.smith@farmcarbontoolkit.org.uk)

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