Compost & Biochar

Biochar & Compost Work Better Together

Tomato Plants – Ventura County

Control (Soil)	Soil & Biochar 1	Soil & Biochar 2	Soil & Biochar & Compost

USDA, December 2019: compost with biochar as an approved conservation practice standard

United States Department of Agriculture

808-CPS-1

Natural Resources Conservation Service

INTERIM CONSERVATION PRACTICE STANDARD

SOIL CARBON AMENDMENT

Code 808

(Ac)

DEFINITION

Using carbon-based amendments to increase soil carbon and improve the physical, chemical, and biological properties of the soil.

PURPOSES

- Maintain, increase, or improve soil organic matter quantity and quality
- Maintain or improve soil aggregate stability
- Maintain or improve habitat for soil organisms
- Improve plant productivity and health

Carbon Sequestration: Compost & Biochar

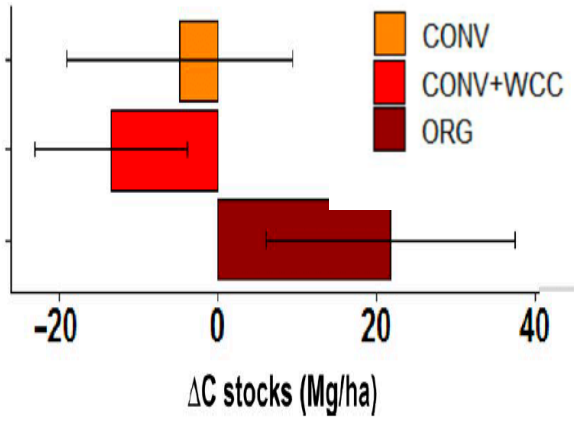
COMPOST

UC Davis, 2019

Soil Carbon Stock

17 years of compost addition

54% Remaining



Corn-Tomato rotation
CONV winter fallow
WCC-winter cover crop
ORG winter cover crop w/compost
Tautges, et al.

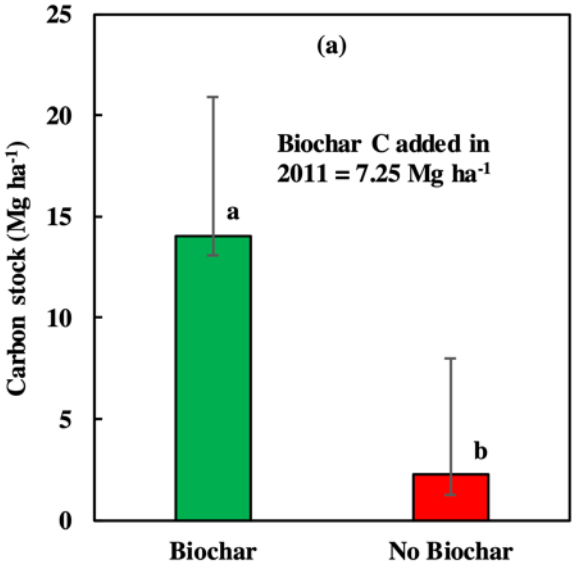
BIOCHAR

Iowa State, 2019

Soil Carbon Stock

6 Years after Biochar Applied

200% Remaining



Average of No-till corn, switchgrass, and low density grass
Blanco, Laird, et al.

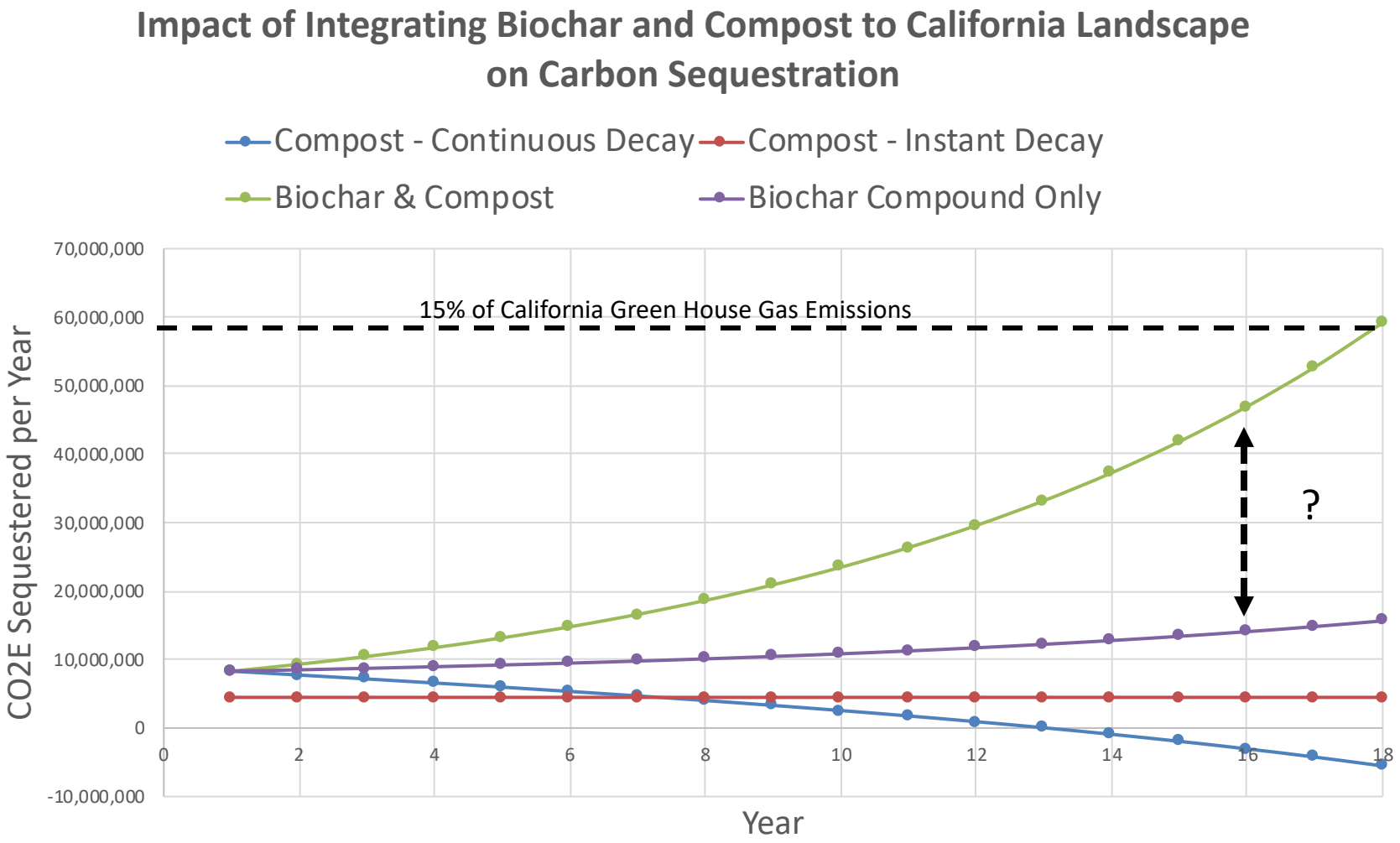
Biochar acts as CATALYST for Carbon Sequestration

Our Own Turf Sequestration Experiments

Compost & 20% Biochar, Aerated, Top Dress, Drug In			
Dry w%, Organic Matter	**Cal Lutheran**	**Sherwood CC**	**Lancaster Soccer**
Before Treatment	6.3%	1.0%	10.1%
After Treatment	8.5%	2.0%	12.4%
9 months			13.0%
16 months	9.8%	2.6%	
28 months	?	?	?
Other Trials: Desert Mountain, Mission Trails, Hacienda			

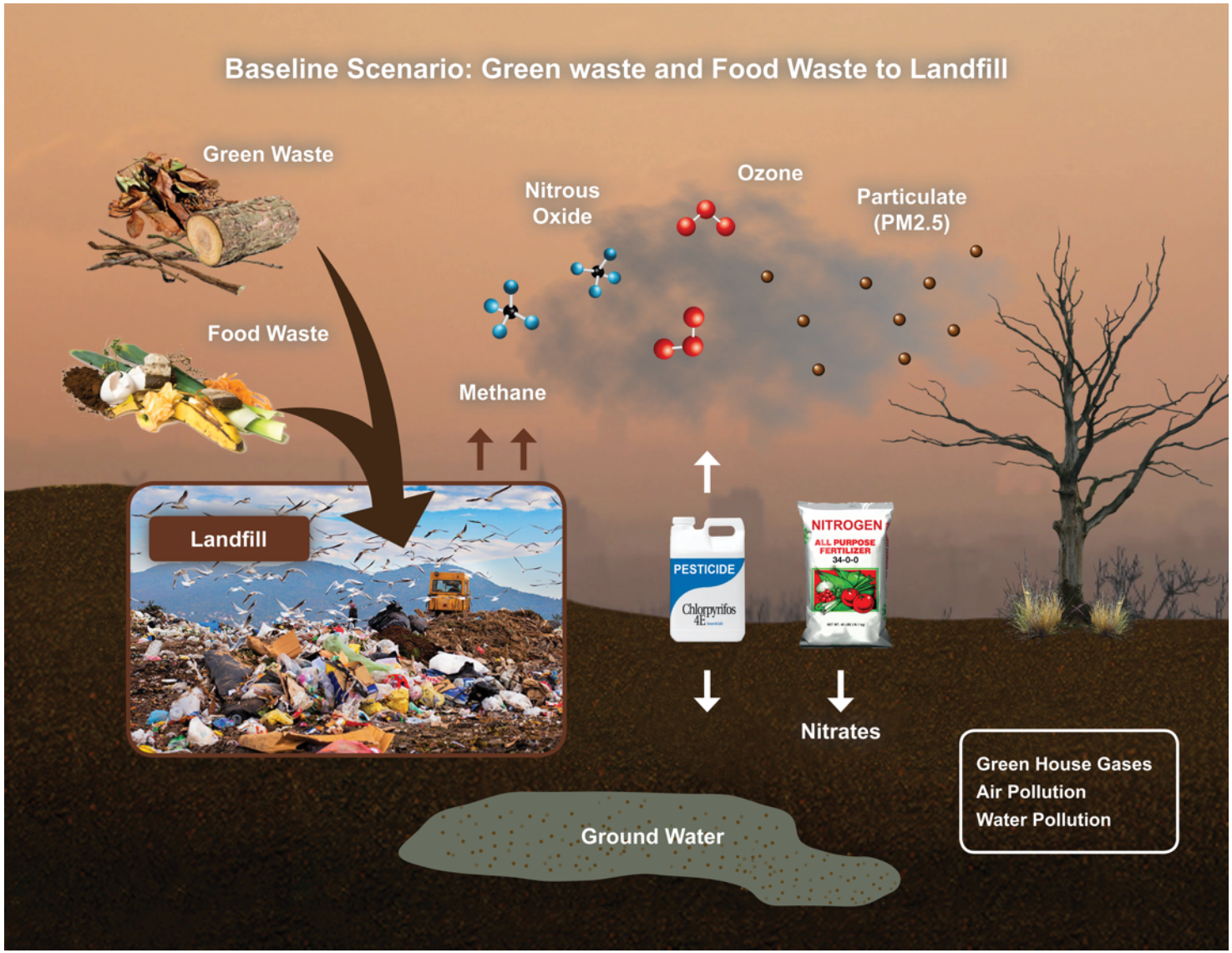
Compounding Carbon Sequestration based on Total Input

Carbon Sync Modeling

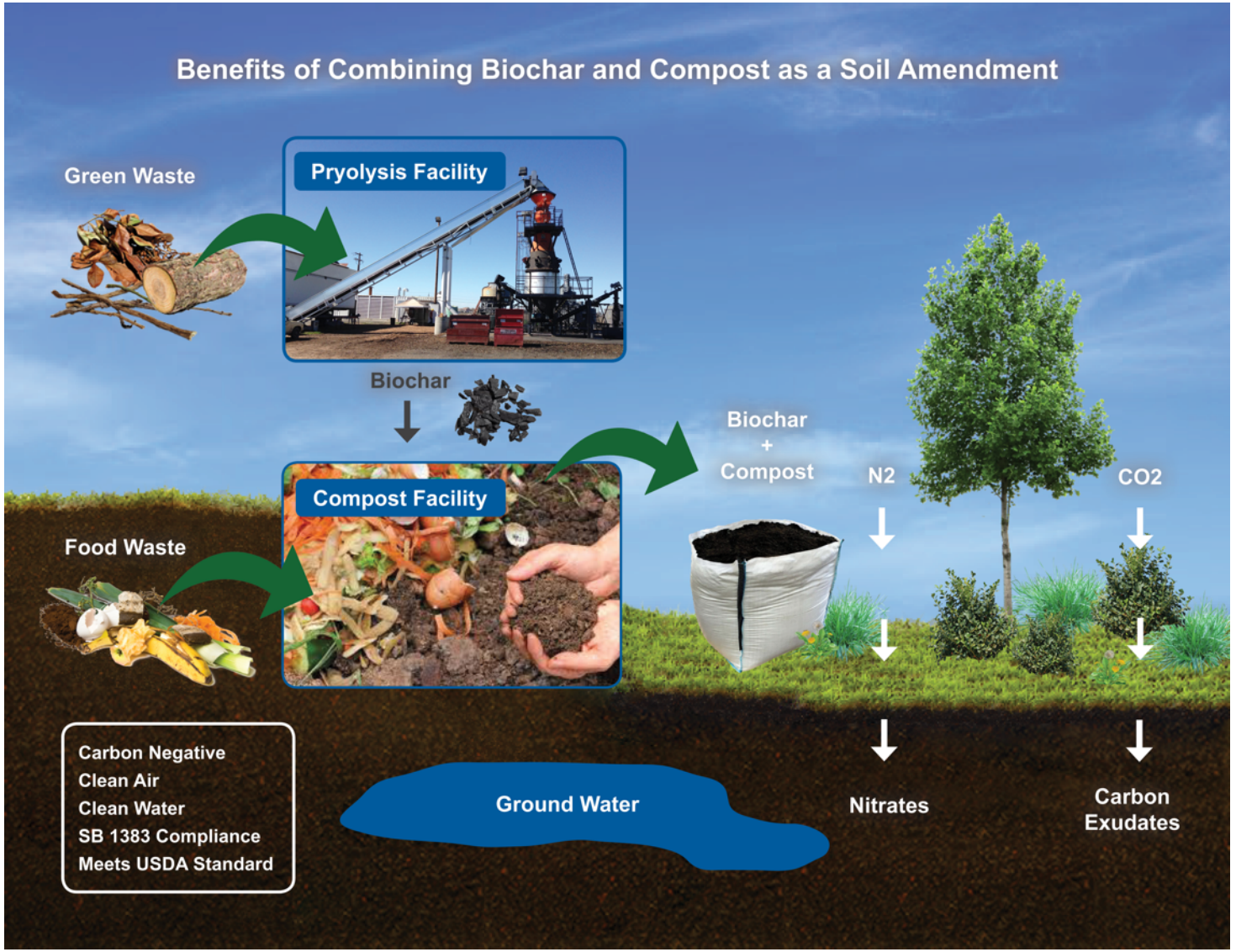


Potential to Offset California Green House Gas Emissions

Baseline Scenario



The Future


Benefits of Combining Biochar and Compost as a Soil Amendment
Green Waste
Pryolysis Facility
Biochar
Biochar
+
Compost
N2
CO2
Food Waste
Compost Facility
Carbon Negative
Clean Air
Clean Water
SB 1383 Compliance
Meets USDA Standard
Ground Water
Nitrates
Carbon
Exudates

Opportunity – Co-composting research program

Commercial-Scale Co-composting of Biochar

Negative Air CASP system

Start: April 2020

Objectives:

- Determine of adding biochar accelerates composting process, time to maturity ($$)?
- Measure positive priming effect (reducing yield of compost – a good thing)?
- Establish how adding biochar improves beneficial microbial count?
- Product for market testing – low cost compost/biochar mixture (1,800 cubic yards product)?

Test Marketing Opportunity (to justify production investment)

BE THE CATALYST
Help Me Prove there is a Market

www.rickwilsonventures.com

Preorders for April-September Deliveries
Landscape & Garden Focus
Application Information on Site

Bulk (40 or 20 cubic yards) $25 per Cubic Yard
Includes 3 pre-paid Lab tests for Carbon
(compare with $115 per cubic yard)
1.5 Cubic Yard Supersack: $52 per CY
Plus delivery

Could you Help me Get the Word Out?


Questions?