

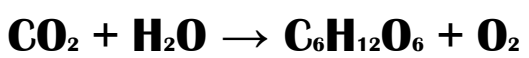


**MINERALS**  
ON A DRY MATTER BASIS,  
WHAT MAKES UP ALL  
PLANTS?

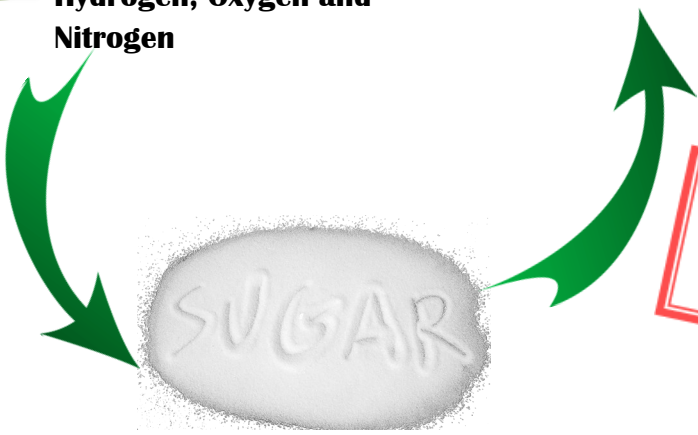
3% is Calcium,  
Phosphorus,  
Potassium, and  
all other minerals

97% of all dry plant  
matter is Carbon,  
Hydrogen, Oxygen and  
Nitrogen

**PHOTOSYNTHESIS**  
PLANTS CONVERT  
CARBON DIOXIDE INTO SUGAR



**HOW DO YOU  
MAKE SUGAR?**



SUGAR IS CARBON HYDROGEN  
AND OXYGEN

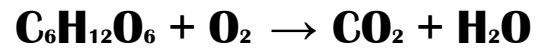


**MOST SOILS ARE DEFICIENT IN  
CARBON OR OXYGEN**



The soil should have thirty  
times as much Carbon as  
Nitrogen. C:N ratio 30:1

**SOIL MICROBES**  
CONVERT SUGAR BACK INTO  
CARBON DIOXIDE



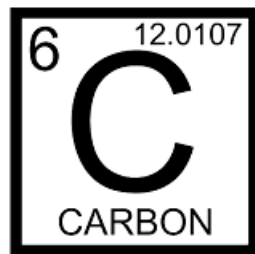
GOOD BUGS NEED  
OXYGEN!



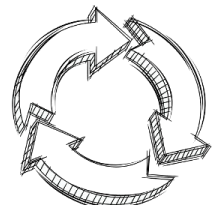
At night, sugar from the leaf  
is pushed down to the roots,  
feeding the microbes.



IT'S PHOTOSYNTHESIS  
IN REVERSE!!

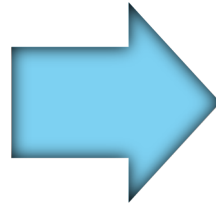


Microbes release CO<sub>2</sub> back into  
the atmosphere for plants to  
make sugar!



HINT:  
IT'S A CYCLE!

# SOIL CARBON

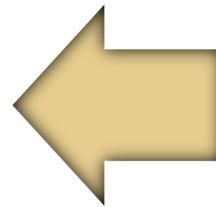


THE LARGEST AMOUNT OF CARBON ON EARTH  
IS FOUND IN THE SOIL

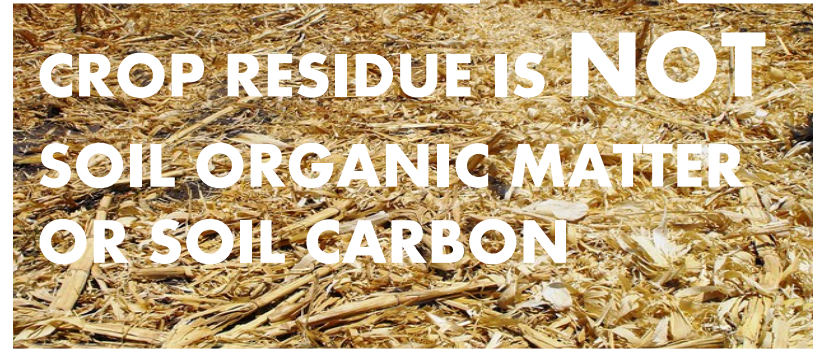


OXYGEN!! →

**AEROBIC MICROBES  
ARE NEEDED TO  
DECOMPOSE CROP  
RESIDUE OR ELSE  
THE RESIDUE WILL  
OXIDIZE RESULTING  
IN A NET LOSS OF  
CARBON**



**CROP RESIDUE IS NOT  
SOIL ORGANIC MATTER  
OR SOIL CARBON**



**DANGEROUS CHEMICALS  
AND SYNTHETIC  
FERTILIZERS CAN KILL  
YOUR SOILS MICROBES  
AND YOUR SOILS CARBON  
STORAGE POTENTIAL**



**MAINTAINING  
YOUR SOILS C:N  
RATIO IS AN  
EFFECTIVE  
MEASUREMENT OF  
YOUR SOILS  
HEALTH AND  
BIOLOGICAL**

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