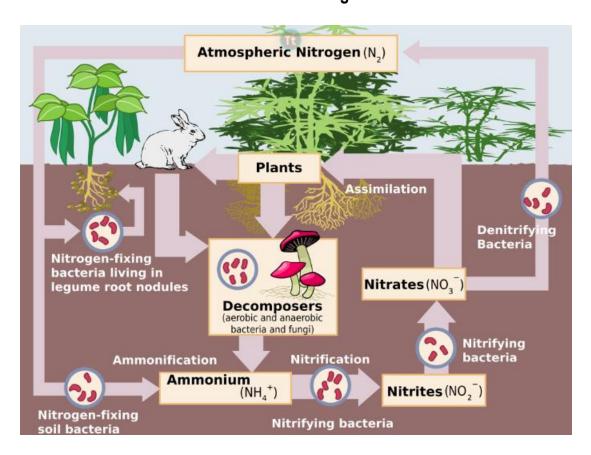


## August 2024 Newsletter

## NITROGEN AND HOW IT IS NATURALLY PROVIDED TO THE PLANT Let's dig in!!



Credit for graphic goes to Elaine Ingham.

There have been many conversations and studies completed over the years that have "peeled back" just how the plant kingdom obtains its nitrogen naturally. I would like to share with you (at a 50,000-foot level) the process so that we can all see how the process works so wonderfully, and how we can assist the process — organically.

Looking at the presentation above will help as we go over what an incredible system God created for our abundance as well as for our health and wellbeing. As we will share, caring for our soil is at the "root" of all our efforts here at EarthGen215.com.

You will note that within the large circle there are multiple other circles that are in process at the same time as the large circle, and they all work together symbiotically. This is what we have come to term the **Symphony and Synchronization** of the treasure, that is the soil system.

As many of us know, roughly 78 percent of the air we breathe is Nitrogen (N2) and 21% is oxygen. The challenge is that the plant kingdom cannot take up Nitrogen in that form. It must be converted to Nitrate (NO3), and oddly enough, the <u>above</u>

ground force that accomplishes this is lightning. Lightening accomplishes many things for our benefit, not the least of which is it also creates Ozone. But let's dive deep into what takes place under our tractor/feet. There we can "tend to the garden."

- 1. Nitrogen is used to form proteins and proteins make up the structure of all organisms and they produce life sustaining functions. You will see a tremendous number of functions taking place in the graphic above.
- 2. Plants decay above and below the ground and this promotes the nitrification of the soil.
- 3. Nitrates (NO3) is formed from this decay and is in a form that plants can use.
- 4. Nitrification is a two-step process whereby ammonia which is found in the soil is turned into nitrates (NO3)
- 5. Nitrification uses bacteria called Nitrosomonas to accomplish the conversion of ammonia (NH3) into nitrogen dioxide (NO2). This bacteria lives in and around the root structures of the plant.
- 6. A symbiotic relationship is also taking place at the roots with a bacteria called Rhizobium. This bacteria causes the roots of the plant to create root nodules. You will see them in the picture as round green circles on the roots.
- 7. These root nodules have a give and take relationship.
- 8. As you follow the bacteria through the picture you will see that they are at work not only converting nitrogen into a usable form for the plant, but they also at the same time convert it back into an atmospheric nitrogen that the plants (and the animal kingdom) can breathe.

This is truly a remarkable circle of life that all living plants and animals participate in and harmonize with. The bacteria which we feed and provide nutrients to are the "workers at the mill" so to speak and the earthworms are the heavy equipment operators that create the channels in the soil that allow the off gassing to take place. This off-gassing travels up the worm channels and feeds the plants via its leaves. Keep in mind that 70% of a plant's uptake is through its leaves!

You will notice that 6 times in the picture above that bacterium is mentioned. We at EarthGen215.com take special interest in this. Our product line has been created to address bacteria's health so they can thrive and do the job they were created to do, and what a job they do for us!!

I have provided a video for this picture below and it is very informative. One thing is for sure and that just as God said in Genesis 2:15, "Adam dress and keep the garden." I am thrilled that God provided billions other workers to help him. Thank God for bacteria and thus the name of our company!!

https://duckduckgo.com/?q=nitrogen+cycle&iax=videos&ia=videos&iai=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D2ifo UXJnS8

Thank you!

Tom

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