

# Retain moisture and get rid of compaction

By Paul Schneider Jr., AG-USA

When Mark in Nebraska used MycorrPlus (formerly called GroPal Balance) in 2016, his corn yielded 20% more and his sunflowers yielded 25% more. Numerous individuals like Mark have seen that MycorrPlus works well on irrigated land.

Unfortunately, for the dryland farmer it is less likely to have an abundance of moisture throughout the growing season. Recently a farmer told me that if a rain would just last an extra week it would help a lot. Perhaps some of you can relate with this.

Is there anything that farmers can do to retain moisture while at the same time get rid of compaction? Yes! Let's take a look at a possible solution.

## PUT FUNGI TO WORK

Last year I traveled to Albertville, Alabama to attend the South Poll Cattle Association meeting. One of the speakers stated that it's best to have a ratio of 50% bacteria to 50% fungi in the soil. In fact, fungi are key to helping us get rid of compaction and to highly structure the soil. Structuring it magnifies the soil's ability to retain moisture.

The bad news is, fungi don't normally thrive in farm land; they thrive in soils in wooded areas, where there is plenty of decaying wood to feed on. So, how can we get fungi to thrive where we farm? Easy! Just arrange for the plant to feed the fungi.

But how do we accomplish this?

- Remove toxins and salts that inhibit beneficial fungi.
- Bring nutrient balance to the soil.
- Empower the plant to sequester large amounts of sugars in order to feed mycorrhizal fungi.

MycorrPlus is a product designed to do all of these things, and more. It is a bio-stimulant that can:

- Help to empower microbes to gobble up toxins.
- Help to flush salts from the root zone.
- Help to balance soil nutrients.
- Help to maximize the amount of sugars sequestered by the plant.

In short, MycorrPlus can help to create a friendly environment in the soil where mycorrhizal fungi can feel at home.

## SEQUESTER MORE CARBON, RETAIN MORE MOISTURE

Aerobic microbes require oxygen and moisture to thrive. With the right help, they will build incredible structure into the soil, one where oxygen circulates freely and moisture is stored efficiently. Because this is the same environment needed by plants, plants love to form a partnership with mycorrhizae.

Can our microbes aerate the soil? Yes! As plants sequester sugars to feed the microbes, the microbes use the residues of these sugars as gums and glues to bind soil particles together, creating air compartments about 1/4" to 3/8" in size (see picture above).

As soil is highly structured, rain will soak deeply into the soil instead of just water-logging the surface, making it possible for a farmer to more quickly get back into the field.

In the picture, in the soil on the left, can you see the small air pockets?

- ◇ The soil on the left is what soil can look like when it has been highly structured by MycorrPlus. It is aerated and crumbly.
- In the soil on the right, the dirt is tight and clumped together.



- ◇ In highly structured soil, when it rains, water soaks down into the air pockets and is stored until it is needed.
- In tight soil, the top 6" or so of the soil becomes water-logged and you will see water standing in the field. When the water evaporates, it leaves the soil dry and hard.
- ◇ In the highly structured soil, the microbes have created a moist, oxygen-rich environment where they feel right at home.
- In the soil on the right, aerobic microbes don't have enough air to survive, and anaerobic bacteria dominate the soil.

Plants are more than happy to feed the aerobic bacteria and mycorrhizal fungi, because plants have a lot to gain from doing so.

MycorrPlus is amazing. By helping to switch on carbon sequestration, the soil will act like a sponge, soaking in rain and irrigation water.

## BUILD ORGANIC MATTER

When the right conditions are created in the soil, the plant is capable of

sequestering enough sugars to build an inch of brand new topsoil each year.

How? Around 90% of the ingredients that the plant needs to manufacture sugars are in the air, including carbon, oxygen, hydrogen and nitrogen.

Carbon is organic matter, and organic matter is carbon. When MycorrPlus empowers the plant to sequester huge amounts of sugars, (actually liquid carbon), organic matter in the soil can increase as much as 0.5% a year!

For instance, in just 8 years, the soil building component in MycorrPlus has helped a farm in Oregon to go from 0.4% organic matter to 4.7%. Carbon sequestration is by far the most effective way to build organic matter in the soil.

## UNLOCK SOIL NUTRIENTS

Mycorrhizal fungi have the ability to help unlock P, K, Ca and numerous trace minerals that are bound up in the soil. As microbes digest these soil nutrients, they break chemical bonds and make nutrients available to the plant.

Up to 97% of the nutrients in the soil are tied up. MycorrPlus can help

to unlock this gold mine of nutrients. It's fun to watch as these nutrients start showing on soil tests!

Added to all this, the anionically charged microbes in MycorrPlus respire H<sub>2</sub>O in the same way we do to fog up our glasses. They leave a trail of moisture in the soil. Let MycorrPlus help you to retain moisture and get rid of compaction.

Please call us today at: 1-888-588-3139 and request a free information packet!

Or learn more at: [www.AG-USA.net](http://www.AG-USA.net)

Conquer Nature by Cooperating with it

# MycorrPlus™

## Like a center pivot for dryland farmers!

*Reduces the need for LIME and other fertilizers*

Call AG-USA now at (888) 588-3139 for more information, or go to: [www.AG-USA.net](http://www.AG-USA.net) Organic? Use MycorrPlus-O.

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