Organic Lawn Care NEWSLETTER

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WHAT WE DO

PJC Organic is the manufacturer of ProHealthy Turf Organic Products & distributor of soil amendments. We provide product and support to landscapers, schools & municipalities that want to transition from a conventional approach to an All-Natural Organic Turf Care program for the maintenance of their lawns & athletic fields.

PRODUCT SNEAK PEAK: ProHealthy Turf BOOST+S3

PJC's newest product! BOOST+S3 is a soil conditioner and biostimulant made from plant proteins and minerals (calcium, sulfur, and iron) plus 2.75% humate. Use throughout the season to improve soil chemistry, soil biology, and soil structure. Available to ship March 1, 2023.

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by Fred Newcombe

A few of our professional (& personal) highlights from the past year...

2022 in Review: PJC's 20th birthday!



TLIGH



APRIL 30 Peter's first gravel bike race: Rasputitsa Dirt in Burke, VT. Freezing, fun, and far-from-flat.

2022 in Review continued...





The NFL Players Association "called for all NFL teams to 'proactively change all field surfaces to natural grass." Read more about this important news at <u>athleticturf.net</u>.

►► Organic Turf Topics ◄

Does Turf Need Mycorrhizal Fungi Applications? by Fred Newcombe

There's a movement in the turf care industry marketing the potential benefits of mycorrhizal fungi applications in turf. Therefore, it's important to ask:

Where are mycorrhizal fungi applications most effective? Do we NEED this product on turf? Are there better alternatives to get similar benefits of mycorrhizal fungi? I'm here to dig into this topic and contend that encouraging azotobacter bacteria is more beneficial to turf growth.

Mycorrhizal Fungi

Mycorrhizal Fungi are found in all soils but thrive in acidic soils (<6pH). There are two major groups of mycorrhizal fungi:

- **1. Endomycorrhiza fungi** —specifically arbuscular mycorrhizal (AM)—fungi are the most prevalent in soils. They attach and form structures within the plant roots.
- 2. Ectomycorrhiza fungi —grow between the plant root cells without penetrating them.

Encouraging, and even introducing mycorrhizal fungi, can benefit the diversity of soil biology in landscapes that include higher orders of plants: trees, shrubs and other herbaceous plants.

Azotobacter Bacteria

Azotobacter bacteria grow best in soils with a 6-7pH, which is more conducive to growing grass. They do not require a symbiotic relationship with superior plants, yet are able to confer many of the same benefits as mycorrhizal fungi.

Qualities of azotobacter bacteria:

- Nitrogen-fixing bacteria with the ability to also provide phosphorous to the plant.
- Azotobacter rely on oxygen, as such they are most prevalent in soils that exhibit good tilth. (Hennig, 2015, p. 116)
- They are attracted to, and colonize fine root hairs of the plant (Hennig, 2015, p. 116). This encourages the development of a healthy root system rather than forced above ground shoot growth that occurs with the application of water-soluble nitrogen through the use of synthetic fertilizers
- Azotobacter are fussy eaters, requiring "easily broken-down substances... and avoid those that are difficult to decompose." (Hennig, 2015, p. 117)

How to Encourage Azotobacter Bacteria:

- Correct pH
- Reduce compaction mechanically aerate when necessary
- Provide easily digestible food sources – high quality <u>organic</u> <u>fertilizer</u>
- Encourage the building of humus in the soil
- Avoid synthetic fertilizers with their water-soluble mineral salts

In Summary

Turf grasses are a rather simple plant and do not have the same needs as trees, shrubs and other herbaceous plants. Turf grass grows best in soil with a pH of 6-7pH and fungi prefer acidic soil.

Therefore, when growing grass, encouraging the proliferation of azotobacter bacteria would create a more suitable environment for both.

Mycorrhizal fungi has its place...but it's not necessarily in turf. To read more about the relationships between soil, plants, and other organisms, check out Hennig's book "Secrets of Fertile Soils".

References

Hennig, E. (2015). "Secrets of Fertile Soils: Humus as the Guardian of the Fundamentals of Natural Life". Acres U.S.A., Greeley, CO.

Healthy Soil Grows Healthy Turf

by Sean Breckin



The PJC Organic Healthy Turf Circle is the keystone to our practical approach. Healthy soil grows healthy turf and each part of the wheel is tantamount to the others. Soil Chemistry, Soil Biology, Soil Structure, and Cultural Practices. We are influencing the structure of soil solids, the mineral make up and bioavailability of minerals, and organic matter content to provide a continual food source for soil biology.

SOIL TESTING

Soil testing is integral to our program and one of our biggest support services. We do the back-end work for you by interpreting

the soil test results and providing you with an easy to understand deliverable to your customer. We often get asked when to do it and the answer is simple... any time of year! Just be sure soil testing is not done within a 4-6 window of any granular application. Since healthy soil grows healthy turf, soil tests give a place to start product and program recommendations for lawns. Tests are objective and scientific – this helps keep the conversation focused on what's best to grow the turf grass by influencing soil conditions.

SOIL CHEMISTRY

Soil Chemistry is the first component of the healthy turf circle – we are looking primarily to influence the pH of the soil. From there we can better influence the soil minerals and their bioavailability to the turf plant. In the Northeast, our native soils tend to be acidic—keep in mind that turfgrass wants to grow in soils with a pH of 6.5-6.7. For turf grass, we consider 6.2-6.9 to be an acceptable range, 6.5-6.7 is ideal. This is important because the bioavailability of plant nutrients increases tremendously when soil pH is in range.

SOIL BIOLOGY

The Soil Food web is a great illustration to represent the life cycles of various 'consumers' within the terrestrial biosphere. For turf grass, we are looking to encourage nitrifying (Nitrobacter) or nitrogen fixing bacteria (azotobacter). The symbiotic relationship of soil of microbes and the plants – they are effectively feeding. Predominantly bacterial soils with balanced fungal populations are what we are looking for in turf grass.

SOIL STRUCTURE

Our goal is to influence the nutrient holding capacity of the soil by addressing organic matter and CEC deficiencies. Soils with higher organic matter and CEC can better hold onto water and nutrients and make them available for the turf plant when it needs them. Humic acids are a tremendous option to help influence soil CEC and are found in soil as "HUMUS". Humic acids can take millennia to develop in a native soil on their own. So, by adding them in a low dose manner, in the form of 'humates' we can encourage healthier soil by presenting the critical component to add more binding sites for cations.

Read about the fourth element of our Healthy Turf Circle — "Cultural Practices" — on our blog —>

FEATURED PJC ORGANIC SUPPORT SERVICES FOR 2023 ——— practical approach // proven products ———

Want to implement an Organic Turf Care (OTC) program but don't know where to start? We've got you. Step by step ...

SOIL TESTING

Take any course on organic lawn care, view an article on the internet or read a book, the first thing you are told to do is take a soil test. So, you dutifully take a soil sample, send it off to a lab; get the results back – then what? If it's not Greek to you, it may be to your clients. PJC Organic can provide you with soil sampling supplies, the report and product recommendations in an easy-to-understand format.

ORGANIC TURF CARE PROGRAMS for LANDSCAPERS



Property maintained by Complete Land Organics using PJC products and Organic Turf Care Program.

Whether you're looking for organic products or you want help developing an organic fertilization program, we offer quality products and business resources to seamlessly integrate organics. Our approach is not a franchise or quasi – franchise. We assist in putting together an All-Natural Organic Turf Care Program that works, is profitable and suited for your business.

- ORGANIC TURF CARE PROGRAM DEVELOPMENT
- · ORGANIC TURF CARE PROGRAM AUDIT
- ADMINISTRATIVE SERVICES
- EMAIL & TELEPHONE SUPPORT!

ORGANIC TURF CARE PROGRAMS for SCHOOLS & MUNICIPALITIES

Schools and municipalities are showing their students and the community the importance of environmental stewardship. How to make the change can be challenging while trying to juggle your other responsibilities. PJC Organic works with your maintenance team and/or service provider to tailor an All-Natural OTC program that is easy to follow, effective, and fits your budget.

- ORGANIC TURF CARE TRANSITION TRIAL (up to 2 fields)
- ORGANIC TURF CARE FULL PROGRAM DEVELOPMENT (up to 10 fields)
- ON DEMAND SERVICES: Site visit & assessment, Operations Guide, Staff Training
- EMAIL & PHONE SUPPORT!



Stamford, CT utilizing PJC products & Organic Turf Care Program.



Jan 25, 2023 MELNA Expo - a business-to-business trade show

Wednesday, Jan. 25, 2023

At the Augusta Civic Center, 76 Community Dr., Augusta, ME 04330

Exhibitors include: Plants, Hardscape, Arborists, Business Management, Affiliated Organizations, Nonprofits, Equipment Suppliers of arborists, landscapers, and nursery professionals. Event Info \rightarrow

Feb 22 – 23, ELA Virtual Winter Conference & Eco Marketplace

Wednesday Feb. 22 @ 12:00 pm EST - Thu, Feb. 23 @ 7:00 pm EST Virtual Event

This year's theme is "Building Relationships". This theme will give the ELA community a chance to hear about the importance of relationships as we interact with our lands, wildlife, plants, and each other. Event Info \rightarrow

NOFA 2023 Winter Conferences

NOFA/MASS Saturday Jan. 14th & Sunday Jan. 15th

Connecting farmers, gardeners, homesteaders, educators, and environmentalists to share resources and ideas to grow our vibrant organic community. Event Info \rightarrow

NOFA-NH Feb. 11, 2023

"The Art of Food and Farming: Skill Sharing For a Brighter Future" Event Info \rightarrow

NOFA-VT Feb. 18, 2023 | University of Vermont, Burlington, VT

A valuable opportunity for farmers, homesteaders, gardeners, land managers, educators, students, policy-makers, and other food-system activists to participate in our vibrant community event by sharing ideas, resources, and skills. Event Info \rightarrow

NOFA-CT March 6-11, 2023

Virtual & In-Person (at Wesleyan University). Live virtual workshops on farming, seed saving, organic land care, community food security, social justice issues, and more. Bonus: Sean will be presenting! Event Info \rightarrow

