

Worm Power Turf

Digging deep ...



Hans de Kort explains why a new vermicomposted liquid fertiliser is different from other tea-based products on the market, and how the product benefits root system development to create a stronger, healthier strand of turf and healthier roots

What exactly is it?

Worm Power Turf is a vermicomposted liquid fertiliser. It's made strictly from the company's OMRI-listed vermicompost (which is produced on site in our facility) and water, which are the only two ingredients. This sets it apart from a lot of other vermicompost products, and we refer to the product as a liquid extract. You'll hear in the industry, the jargon is compost tea. For us, we view that as kind of a pejorative.

With other teas and products like it, the big goal seems to be that, if billions of microbes are a good thing, then trillions are better. So people want microbial blooms in their products. In our opinion, that's really not the important thing. The numbers aren't important. The important thing is the broad spectrum of colonies that we achieve, and the viability of those colonies once they hit the soil.

How does it work?

What the liquid really is, is a vector for thousands of microbial communities that will essentially colonise the rootzone of any plant they're applied



to. It has a particularly beneficial effect on turf, in that it creates very strong root systems without any undue top growth. That's really been one of the things that's been a boon to golf course superintendents. It doesn't do them any good to have a good root system, but then have to go out and double their labour costs by mowing twice as much as they used to. It's really an effective tool in terms of solely focusing on the increased root mass and increased development that helps promote a stronger plant, but not overly vigorous growth.

These benefits accrue to the soil through the product, but really, these benefits come from the worm.

But why not just use compost?

After the composting process, you have achieved a level of microbial inoculation that is specific to the high temperature ranges that occur in composting, what we call thermophilic microbes that operate above 50°C. Worms, however, live in the rhizosphere of the plant and all the microbes that are both in the worm and on the worm are imparted to the vermicompost. These microbes are the ones that live and thrive in the middle temperature ranges, the mesophilic microbial communities. Once the product goes into the soil, they are in an environment in which they are able to thrive.

What kinds of rates are effective?

The most effective application rate is 50 litres per hectare per month. Whether it be greens or fairways or tees, if you're going to do that, the application rate breaks down to two things; either 25 litres every two weeks, or 50 litres every four weeks. Really, which way the course manager chooses to do it is dependent on a couple of different factors. The effectiveness of the product for thatch reduction is more clearly visible when you do the 50 litres rate every four weeks. At the same time, if what they're really after is increased root mass and density, then we've found that 25 litres every two weeks will promote better root development. Both are effective rates, and certainly outperform other applications and any control in testing.

Can it be mixed with other products?

We've had great success when it's being mixed with surfactants, especially with the notion that

Look below the surface and you'll find the benefits. Don't think you're going to see it manifest itself in a physical plant response above the surface. The top growth is not going to change a lot

the material is supposed to work in the rootzone. Anything that helps with that soil penetration is fantastic. We are seeing great results with a number of products tank-mixed with Worm Power Turf.

There's also work that's been done with North Carolina State University. One of our early recommendations was not to tank-mix with fungicides. That becomes a labour issue if it requires another pass. Over multiple facilities throughout the US over the past two years, agronomic programmes have mixed fungicides with it and have seen zero negative effects. This real-world research, along with the statistical counts we have proven through university research in multiple trials, shows that the product can be mixed with any others that have to be incorporated into a soil-drench programme.

What should course managers keep in mind when using it?

In the summer of 2015, I was responsible for travelling to golf courses in our course trials, and interestingly, as I was following up with them, I heard, "I'm not seeing anything. Nothing's happening." And I knew why they were saying that, because they weren't looking below the surface. Anyone who tries this, if they don't do a cup cut and pull some plugs, they're not going to see what's happening. Look below the surface and you'll find the benefits. Don't think you're going to see it manifest itself in a physical plant response above the surface. The top growth is not going to change a lot. You'll find that the top growth responds over time by being more drought-tolerant and standing up to traffic better and things like that, but you just don't get that visible response on the top growth.

The main thing is that you want it to be used as a soil spray. It can be effective as a foliar application, but it works in the rootzone. We want it working in the soil.

Watch the rootzone

That's where you're going to see the benefits and, over time, you'll realise the benefits of a healthier rootzone. Don't expect to see a growth explosion right under your eyes. Get a cup cutter out and start taking some cuts; you'll see the benefits pretty quickly.

About the author:
Hans de Kort is a
director of AQUA-AID
EU.

