



What's All the Hubub about Civitas™?

By Dr. Jim Kerns, Department of Pathology, University of Wisconsin - Madison

There has been a lot of talk about a new product on the market called Civitas™, since its introduction at GIS last year. The product is owned by Suncor Energy Inc. and is labeled for control of dollar spot, brown patch, anthracnose, gray and pink snow mold. This is an interesting product because it is not a typical fungicide. The product is composed of 98% mineral oil, which is considered the active ingredient. Mineral oil is classified as a horticultural oil, which has been used to control insects and diseases in agricultural settings for many years. The thought was the oil coats the insect and essentially suffocates them. In the case of fungi, the thought was oil coats the leaves, which in turn repels water vital for fungal growth. Typically horticultural oils were only effective against scale insects, powdery mildew and maybe black spot. However, Civitas™ has shown promise against diseases such as dollar spot, anthracnose, brown patch and the snow molds. So what is going on?

Lets talk a little more about the active ingredient, mineral oil. Mineral oil is a petroleum-derived oil that is highly refined with a narrow range of distillation. I really have no idea what that means, but that is the definition. It is a by-product in the distillation of gasoline and other petroleum based products from crude oil. It is a transparent, colorless oil composed of mainly of hydrocarbons. It is widely used in medicine, manufacturing, food preservation and cosmetics because of its low-toxicity and excellent lubrication properties. The key word in that statement is low-toxicity, which makes this product desirable for organic agriculture and the golf course community.

So how does the product work? The actual product of Civitas™ has to be mixed with Harmonizer™, which is also from Suncor Energy Inc. The instructions are clearly marked on the Civitas™ label, so if you are planning on using this product in the future familiarize yourself with the label. Harmonizer™ is a proprietary pigment designed to minimize the appearance of stress. At least this is what the label says. Civitas™ along with Harmonizer™ usually do not provide adequate disease control without the addition of a fungicide. However when these two products are mixed with a half rate of propiconazole, the mixture seems to provide control similar to industry standards.

For example a fairway study conducted in Guelph, Ontario by Dr. Tom Hsiang demonstrated that the mixture of Civitas™ and a half rate of propiconazole worked just as well as a tank mixture of chlorothalonil and iprodione against Microdochium patch or pink snow mold. Dr. Frank

Rossi showed that Civitas™ applied in conjunction with propiconazole provided acceptable levels of dollar spot control in Ithaca, New York. Dr. Rossi also demonstrated that turfgrass quality was improved in every instance, except one, that Civitas™ was applied. The company does claim that the product is an activator of Induced Systemic Resistance (ISR), but that data is currently not published. ISR is a phenomenon in plants where a microorganism or chemical can induce plant defense responses. I think Dr. Hsiang and Dr. Rossi are currently or planning to investigate this observation. Dr. Lane Tredway also found that Civitas™ and Harmonizer™ applied alone every 14 days suppressed dollar spot and brown patch. However, Dr. Tredway did mention that acceptable levels of control were not always achieved, but he did indicate that it is a promising product. If you want to see Lane's actual comments go to our turf diseases blog at <http://turfdiseases.blogspot.com/search/label/Southeast>. The other data I actually gleaned from the Civitas™ homepage, which is www.civitasturf.com.

I know that other turfgrass pathologists and researchers have tested this product before and note its promise. Unfortunately, we have not tested this product in our trials. However, we plan to seek Suncor Energy Inc. out this year so we can gain experience with the product. Civitas™ is a very interesting product and I think may have a future in the golf course management industry, but it is still young. If you are interested in this product then I urge you to test it yourself before putting it into your full fungicide program. Also talk to superintendents throughout the country that have used the product. I am happy to see products like Civitas™ that are more environmentally friendly and show promise. 🌱

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