

## FREQUENTLY ASKED QUESTIONS

### What is CIVITAS TURF DEFENSE™?

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CIVITAS TURF DEFENSE is a pigmented product that contains an isoparaffinic oil similar to the natural paraffins found on the surface of leaves. This similarity in chemical structure allows the synthetic isoparaffin in CIVITAS TURF DEFENSE to provide maximum turf quality benefits. When used preventively, CIVITAS TURF DEFENSE helps to deliver turf that's as strong at the end of the season as it was at the start. Use CIVITAS TURF DEFENSE on your sports and athletic fields to save the time, effort and resources it takes to treat damaged turf.

### How does CIVITAS TURF DEFENSE work?

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CIVITAS TURF DEFENSE smothers insects and provides a barrier that helps prevent insects and pathogens from accepting or using the host plant. In addition, CIVITAS TURF DEFENSE works to prevent diseases from taking hold in the first place by boosting the plants internal defenses, helping the turf to become healthier and therefore less prone to stress.

### Can CIVITAS TURF DEFENSE be used in a tank mix?

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CIVITAS TURF DEFENSE can improve the performance of certain tank mix partners, which can allow you to decrease to their lowest label rate and/or extend spray intervals while maintaining a high level of disease control. CIVITAS TURF DEFENSE enhances the effects of iron applications so we suggest testing with lower rates of iron and slowly increasing rates until desired color is achieved. CIVITAS TURF DEFENSE shown favorable results with up to 44.6 g Fe (example 234 g ferrous sulfate/100 m<sup>2</sup>) or 1.5 oz Fe (example 7.9 oz ferrous sulfate/1000 ft<sup>2</sup>).

CAUTION: Do not mix CIVITAS TURF DEFENSE with wetting agents, surfactants, spreader stickers, etc. Do not use CIVITAS TURF DEFENSE in combination with PCNB. Please refer to the CIVITAS TURF DEFENSE product label for specific use precautions.

### When is the best time to use CIVITAS TURF DEFENSE?

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CIVITAS TURF DEFENSE should be used primarily as a preventative fungicide. Turf must be actively growing and healthy for CIVITAS TURF DEFENSE to perform as intended. The key to achieving the best results is to start early. The first application of CIVITAS TURF DEFENSE in the spring should be made after the second mowing of your turf. With no known pathogen resistance issues, CIVITAS TURF DEFENSE can be used consistently throughout the growing season without worrying about maximum yearly application restrictions.

### Does CIVITAS TURF DEFENSE affect seedling germination?

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CIVITAS TURF DEFENSE testing proves germination of seedlings is not impacted when used as directed.

### Does CIVITAS TURF DEFENSE have any negative impact on overseeding on sports fields?

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Academic research has shown that CIVITAS TURF DEFENSE does not negatively impact overseeding.



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### What are the recommended treatment rates and intervals?

The recommended treatment rate for a 14 day interval is 5 gallons per acre – 14.7 oz/1000 ft<sup>2</sup>.

The recommended treatment rate for a 21 - 28 day interval is 5.75 gallons per acre – 17 oz/1000 ft<sup>2</sup>.

### Can CIVITAS TURF DEFENSE be used in high heat conditions?

Yes. CIVITAS TURF DEFENSE products will not cause phytotoxicity when used as instructed.

1. Be sure to apply when turf is active and healthy and not under severe stress or decline.
2. Start applications before the plant experiences environmental stresses such as high heat. Best results are achieved by applying CIVITAS TURF DEFENSE products early in the spring and continuing throughout the summer to benefit from a higher tolerance to stresses.
3. It is recommended to apply at least two mid-to-high rate applications of CIVITAS TURF DEFENSE one week prior to onset of high temperatures (>87°F and >100°F).
4. During high temperature periods complete applications during early morning or late evening hours.
5. Do not apply during or immediately prior to times when temperatures are expected to be very high (>87°F for cool season grasses or >100°F for warm season grasses) or near freezing (at or below 40°F), or when rain or other unsuitable weather conditions are predicted.
6. During high temperatures use lowest label rates of CIVITAS TURF DEFENSE with a minimum number of tank mix partners. Since CIVITAS TURF DEFENSE provides ancillary adjuvant benefits, it is important to evaluate and understand the plant condition and requirements of each component of the tank mix. Please refer to the product label for specific use precautions.
7. If turf begins to show signs of severe stress or decline, it is recommended to pause CIVITAS TURF DEFENSE applications until more suitable growth conditions return.

### How do I monitor water stress in turf treated by CIVITAS TURF DEFENSE?

It is best to use soil moisture meters until those watering understand and can visually recognize water-stressed turfgrass. Wilt stress often appears slightly different in treated areas so using the footprinting method to determine level of wilt stress is not recommended.

### How should CIVITAS TURF DEFENSE be used to treat Snow Mold?

By going into the winter clean from disease, turf comes back green earlier in spring. Two applications are recommended:

1. To clean up, apply one application of CIVITAS TURF DEFENSE PRE-MIXED at full rate (17 oz/1000 ft<sup>2</sup>).  
(Optional: add tank mix commercial fungicide as per the CIVITAS TURF DEFENSE Snow Mold recommendation chart)
2. To prepare for winter, apply one application with CIVITAS TURF DEFENSE PRE-MIXED at full rate (17 oz/1000 ft<sup>2</sup>).  
(Optional: add tank mix commercial fungicide as per the CIVITAS TURF DEFENSE Snow Mold recommendation chart)