



## HUMA GRO® TURF PROMAX® Reduces Nematodes on Golf Course



### Field Report

#### Summary:

Greens at a California golf course were infested with ring nematodes that were killing the bent grass in large patches. Toxic fumigation had taken place, closing the course for three days. Large portions of the most infested 9th green had been replaced with new turf.

Soil testing in early August indicated a nematode count of 1,203 per cc on the 9th green. All greens were infested with nematodes. The nematode count of the 9th green was analyzed as the gauge to determine nematode reduction using Huma Gro® Turf PROMAX® organic pest control.

In 4 weeks, PROMAX® application was able to reduce nematode counts by 93%, from 1,203/cc at baseline to 87/cc on Day 28 (see Fig. 1).

#### Purpose

Nematodes eat the roots of the turf grass and cause large dead spots in the greens that can cause disease. Whether new turf is seeded or sod is laid in nematode-infested soil, it will not survive due to the destruction that the nematodes can cause.

A ring nematode's life cycle lasts 25–35 days. Second-stage juveniles (J2) hatch from the egg in 11–15 days, molt to a J3 in 3–5 days and to a J4 in 4–7 days, and become an adult 5–6 days after that.

Adult females begin to lay eggs in 2–3 days and can lay 25 to 30 eggs. An adult female will deposit single eggs every 2–4 days, so it is very important to interrupt the life cycle.

#### Description

08/10—**First soil sample** and analysis

09/01—**First application:** 2 gallons PROMAX® per acre

**Water:** Enough to get penetration of the entire root profile plus 1 to 2 inches below for buffer zone

09/14—**Day 14** (from first application): Second soil sample

**Second application:** 1.5 gallons PROMAX® per acre

**Water:** Full penetration of entire root profile plus 1 to 2 inches for buffer zone

09/28—**Day 28** (2 weeks from second application): Third soil sample

**Third application:** 1 to 2 gallons PROMAX® per acre

**Water:** Full penetration of entire root profile plus 1 to 2 inches for buffer zone

10/12—**Day 42:** Conduct last soil test and apply ZAP® at 1 gallon per acre for the rebuilding of healthy soil biology

#### Results

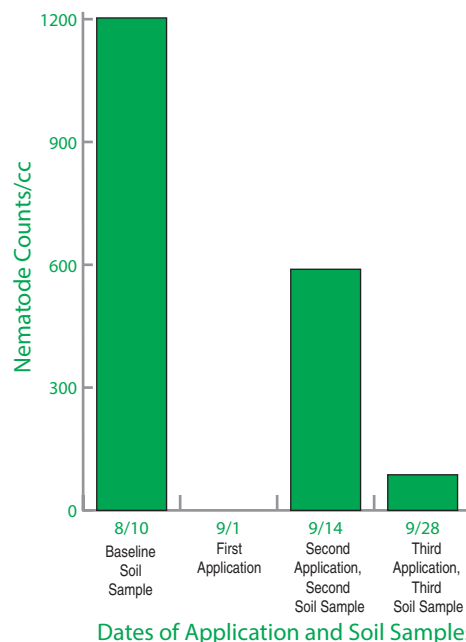


Figure 1. Nematode counts and dates of application/soil samples

#### Conclusion

PROMAX® was able to efficiently and effectively control a majority of the population of nematodes, improving the soil and turf health, vigor, and quality.

In a phone conversation with the superintendent, he said that the greens had filled in and that management was very pleased with the results.

Applying ZAP® after completing the PROMAX® cycle will rebuild the soil to a healthy state. This healthy soil will help combat the return of nematodes through competitive exclusion.

**PROMAX® organic pest control is a protective and curative pesticide recommended for control of soil-borne diseases and plant parasitic nematodes of turf. The active ingredients of PROMAX® are essential oils.**



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Huma Gro® Turf Products Are Highly Efficient and Effective Due to Our Unique Delivery System