



Soil Foodweb New York Inc.

Center Moriches, NY



APEX-10 Increasing Soil Biomass & Nutrient Availability

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Soil Foodweb NY conducted a biological assay evaluating the impact of APEX-10, a Peat Humic Substance analyzing soil microbial communities reproduction and activity. Results from the assay provided clear evidence that APEX-10 stimulates microbial populations and enhances metabolic function, supporting a more active and diverse microbial ecosystem within the soil.

Trial Standards

Parameters measured included total and active populations of bacteria, and fungi. Populations of protozoa, nematodes, and mycorrhiza fungi and plant available nitrogen derived from microbial biomass activity.

The study was conducted over a 90-day period at three replicate test sites, each receiving applications on Day 1, Day 30, and Day 60.

Site 1 (Control): Irrigated with water only

Site 2: APEX-10 applied at a rate of 3 oz per 1,000 sq. ft.

Site 3: APEX-10 applied at a rate of 6 oz per 1,000 sq. ft.

This experimental design was structured to evaluate the dose dependent effects on the microbial community structure.



Discussion

Samples were collected, Days 7, 45, and 90, assessing total and active microbial populations to capture both early stage and longer term biological responses.

Day-7: Early stage analysis revealed increases in fungal activity at low and high rates, with high-rate exhibiting a pronounced response. Total bacterial also increased, significantly more at the high rate.

Day-30: At low rates bacterial and fungal activity continued to rise, suggesting a sustained microbial stimulation. At the high rate microbial activity began to stabilize, though fungal biomass still showed an upward trend.

Day-90: Fungal activity had increased at both levels, confirming the longer-term stimulation on fungal populations. Total bacterial biomass increased at both the low and high application rates

Results suggest that APEX-10 supports sustained microbial development and activity over time.

Summary

The application of APEX-10 provided an immediate and sustained resource for growth and activity of bacteria and fungi. The rapid microbial response observed early in the trial indicates that APEX-10 acts as an effective catalyst for microbial colonization and metabolic activation.

By day-90 significant increases in higher trophic level organisms specifically with protozoa and beneficial nematodes were recorded.

Increases indicate an enhanced bacterial and fungal biomass from APEX-10. The data confirms that APEX-10 fosters a biologically active soil environment.

Microbe Population Increase

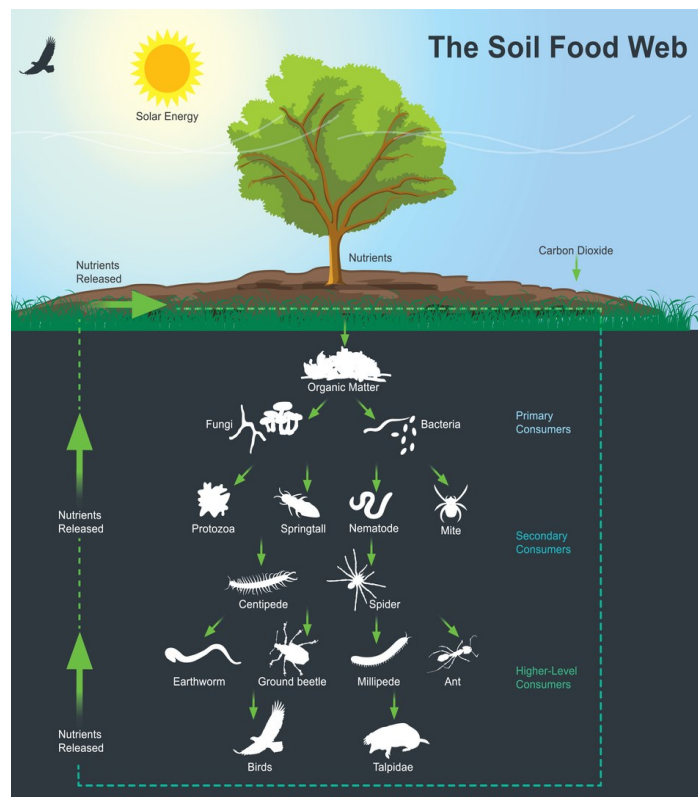
Category	3 oz. 1,000	6 oz. 1,000
Active Bacteria	39%	26%
Total Bacteria	46%	67%
Active Fungi	32%	32%
Total Fungi	55%	78%
Flagellates	395%	504%
Amoeba	2,480%	3,091%
Ciliates	350%	650%
Beneficial Nematodes	2%	15%
Root Feeding Nematodes	0%	0%
Available Nitrogen Lbs. per acre	400%	667%

Results

Composite soil samples from each rate were collected and submitted to Rutgers University for chemical nutrient analysis. Results indicate lower levels extractable nutrients in APEX-10 treated composites compared to the control. This reduction in extractable nutrients is consistent with the observed increase in biomass and activity.

The findings suggest in the presence of APEX-10 microbial populations are more actively retaining and cycling nutrients within the soil reducing leaching potential as well as enhancing nutrient availability for plant uptake over time.

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