

Amorphous Silica and its influence on Sting Nematodes

Amorphous silica, such as the one found in "**Mineral Magic**," can have various effects on soil and plant health, which can indirectly impact the population of sting nematodes. Whilst it's not yet been proven as a direct solution to controlling nematodes, here's how it can potentially influence their presence:

1. **Physical Barrier:** Amorphous silica particles can create a physical barrier in the soil. This barrier may make it more challenging for nematodes to move through the soil, limiting their ability to reach plant roots.
2. **Enhanced Root Health:** When amorphous silica is added to the soil, it can improve root health by enhancing root strength and structure. Healthy, well-developed plant roots are better equipped to withstand nematode damage.
3. **Desiccation:** Silica can absorb moisture from nematodes, leading to desiccation (drying out) and reducing their survival rates in the soil.
4. **Strengthening Plant Cell Walls:** Silica (monosilicic acid) can also accumulate in plant tissues, strengthening cell walls. Stronger cell walls can make it more difficult for nematodes to penetrate and feed on plant roots.
5. **pH Modification:** Depending on the source of amorphous silica and its pH, it can modify the soil pH. Sting nematodes may be sensitive to changes in soil pH, and altering it with silica may affect their activity.
6. **Toxicity:** Silica can also have a toxic effect on nematodes. As nematodes come into contact with silica particles, it can disrupt their cellular structure and functions, ultimately leading to their death.
7. **Diatomaceous Earth:** Radiolarite (**Mineral Magic**), is a direct relative of Diatomaceous Earth, a form of amorphous silica and has insecticidal properties and is used to control various pests. While it primarily targets insects, it might have some indirect impact on nematodes in the soil.
8. **Microbial Activity:** Amorphous silica can also benefit soil health by promoting microbial activity. Some beneficial microorganisms in the soil can help regulate nematode populations by acting as natural predators or competitors.
9. **Improved Plant Vigour:** Healthier plants resulting from the use of amorphous silica may be more resistant to nematode infestations. Stronger plants are better able to tolerate and recover from nematode damage.

It's important to note that the effectiveness of amorphous silica in nematode management may vary depending on factors such as application rate, soil type, and the specific nematode species present. It's advisable to conduct soil tests and consult with agricultural experts or agronomists to determine the most effective application methods and rates for your specific situation. Additionally, consider integrated pest management (IPM) strategies that combine various approaches to nematode control for the best results while promoting soil health and sustainability.