

Basamid® Granular Soil Fumigant: Pre-Plant Soil Fumigation Update

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Pennington, W 1995. Basamid® Granular Soil Fumigant: Pre-Plant Soil Fumigation Update. In: Landis, T.D.; Cregg, B., tech. coords. National Proceedings, Forest and Conservation Nursery Associations. Gen. Tech. Rep. PNW-GTR-365. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station: 13-14. Available at: <http://www.fcnet.org/proceedings/1995/pennington.pdf>

Abstract-A seven-day program using irrigation to completely activate BASAMID®, seal the soil surface and maintain toxicant contact within the soil profile has been developed by BASF. This BASAMID® program is designed to provide nursery managers with a system to improve their success rate with BASAMID® as a preplant soil fumigant.

INTRODUCTION

BASAMID® (active ingredient: Dazomet) has been used as a soil fumigant for more than twenty years. It has been deemed by many to be a poor alternative when compared to existing soil fumigants used by forest tree nursery managers. However, BASAMID®'s ability to adequately control soil pathogens, weed and grass seeds, and nematodes has been proven by many users. Their secret: adequate moisture. Before using BASAMID®, be aware that the three most critical factors for a successful fumigation program are:

1. Soil preparation (fine tilth)
2. Soil temperature (medium to warm)
3. Soil moisture (water)

BASF developed a layman's approach to solving the critical issues associated with poor results often reported by those who inadvertently miss the soil moisture portion of the program. This system will allow the nursery manager to completely activate the BASAMID® granules and maximize the toxicant's contact in the soil profile.

SEVEN DAYS TO A SUCCESSFUL FUMIGATION PROGRAM

This guideline is intended for use in sandy loam soils:

Day One

- * After incorporating BASAMID®, measure soil temperature at 4 inches and record.
- * Roll the soil surface.
- * Irrigate with a minimum of 1 inch (or more) of water over a 4-hour time period (1 1/2" to 1 3/4" over 6 hours) .

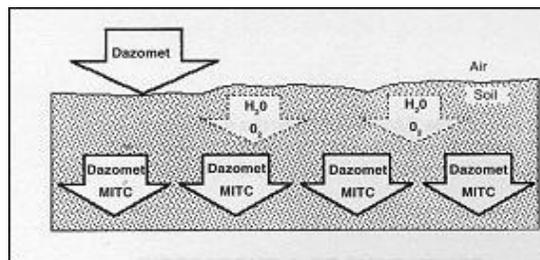
Day Two

* Irrigate with a minimum of 3/4 " (0.75") of water in two applications; one (0.375") in the morning, one (0.375") in the afternoon.

* Keep the soil surface wet, but not waterlogged.

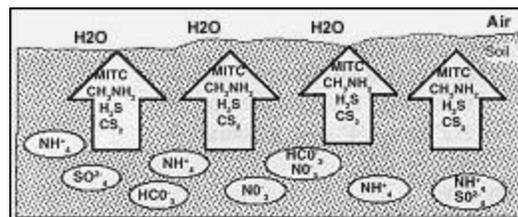
Day Three

* Irrigate with a minimum of 1/2" (0.50") of water in two applications; one (0.25") in the morning, one (0.25") in the afternoon. (This assures that all BASAMID® granules are activated and moved downward throughout the soil profile. This liquid phase will contact the soil particles throughout the incorporated profile.)



Day Four

* Irrigate with a minimum of 1/4" (0.25") of water in two applications; one in the morning, one in the afternoon.



Day Five

* Irrigate with a minimum of 1/8" (0.125") of water to ensure that the surface area has not dried out and no cracks appear in the treated area. (This assures that no gases escape as they move up the soil profile).

Day Six

* Irrigate with a minimal amount of water to keep the surface sealed and free of cracks.

Day Seven

* Irrigate with a minimal amount of water to keep the surface sealed and free of cracks.

No additional water is needed after day seven.

To release any remaining gases, break the soil crust and aerate before planting. Please refer to product label for complete directions.

CONCLUSION

In order for fumigants to be successful, soil moisture is needed to activate the soil borne pests. It is best to have the pests active before fumigation takes place. In any planned fumigation program consider the pest being controlled, then plan your fumigation activities. Understand the pest and its habits and adjust cultural practices to economically control soil borne pests and organisms. Fumigation timing will usually determine the success rate of pests controlled. BASAMID[®]'s effectiveness as a preplant soil fumigant, when used according label directions and following the seven steps above, is a proven alternative to the gas or liquid fumigants currently used by nursery managers.

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