



Compost Site Management

Weed Seed Germination Testing

Why Test For Weed Seed Germination?

As a best management practice compost that you intend to sell to growers, landscapers or greenhouse producers should be tested for weed seed viability. A product that contains a significant level of viable weed seeds will cause problems for the purchaser and damage your reputation as a source of quality compost product.

Keeping Weed Seeds Out of Finished Compost

Finished compost that has undergone an appropriate hot composting process should contain few, if any, viable weed seeds. Weed seeds can contaminate finished compost during curing and storage, when no further heating takes place. Finished compost must be protected from weed seeds that can be brought in with raw materials, wind, birds, equipment and similar factors.

Weed Seed Testing

Weed seed viability should be tested for each discrete batch of finished compost that you intend to offer for sale. Use the following procedure to test for weed seeds.

- Take a sample of at least 4 liters of compost from a curing pile, following the guide "Feedstock Sampling"
- Moisten the compost sample to 60% moisture
- Fill a seeding tray, preferably two, with the sample to a depth of about 1 - 1.5 inches and record the total liters used, along with identification of the compost batch and date
- Place the seed tray in a warm location with decent light, where the temperature is maintained at or above 70° F
- Maintain soil moisture - before sprouting begins moistened cloth or paper towels placed on the compost surface helps maintain moisture level



- Once sprouting begins, place the trays in full sun or under lights if necessary
- Maintain sprouting conditions for at least three weeks
- Count total sprouts found and divide by the liters of compost used
- Record the results along with any observations such as types of weeds that germinate

Weed Seed Germination Standards

Internationally, weed content tolerance ranges from 0.8 - 5.0 seeds per liter. Some European countries have a legal requirement to test commercial compost products for weed seed germination. Denmark's voluntary standard includes three content levels, which provide a good benchmark for the kind of results you might find.

Figure 1 - Weed Seed Germination Trays



Very Low

Less than 0.5 seeds and plant parts per liter

Noticeable Content

Up to 2.0 seeds and plant parts per liter

Large (High) Content

More than 2.0 seeds and plant parts per liter

Companion Resources:

[Feedstock Sampling](#)
[Temp Probe Recalibration](#)
[Pile Monitoring and Logs](#)
[Recipe Development](#)
[Recipe Calculator](#)
[Food Scraps & Feedstock Acceptance](#)



References

Brinton, W. F. Compost Quality Standards & Guidelines. Wood's End Research Laboratory, Inc. Prepared for New York State Association of Recyclers. 2000.
Web Resource: Retrieved May 21, 2015.

On-Farm Weed Seed Germination Testing Protocol. Highfields Center for Composting. Hardwick, VT.
Web Resource: No longer available.

Carlsbaek, M. & Broegger, M. (1999): New standardised product sheet for compost in Denmark. In: Bidlingmaier, W., de Bertoldi, M., Diaz, L. F. & Papadimitriou E. K. (eds.): ORBIT 99 Organic Recovery and Biological Treatment. Proceedings of the international conference ORBIT 99 on biological treatment of waste and the environment, Part II, p. 445-451. Rhombos-verlag, Berlin. ISBN 3-930894-20-3. Web Resource: Retrieved June 9, 2015.

Photos

- Highfields Center For Composting
- Srise

Acknowledgements

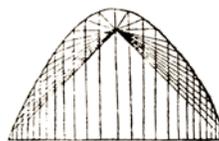
This guide was created under contract with the Vermont Agency of Natural Resources, Department of Environmental Conservation, Solid Waste Program, in 2015. Any opinions, findings, and conclusions or recommendations expressed in these materials are solely the responsibility of the authors and do not necessarily represent the official views of the Agency of Natural Resources.

The following resource uses or is adapted from content originally developed by the Highfields Center for Composting in Hardwick VT. The Highfields Center for Composting dissolved as an organization in December 2014 and ended its active involvement in the Close the Loop Program.

The content has been made publicly available for use in supporting organics management in Vermont and elsewhere through the generosity of the High Meadows Fund, the Harris and Frances Block Foundation, and the Vermont Community Foundation. For more information about the use of Highfields related materials please contact jake@vsjf.org.

The Vermont community wishes to thank the Highfields Center for Composting for its years of outstanding leadership in the service of community composting and universal recycling in Vermont.

Content Updates



**Compost
Technical
Services**

www.CompostTechnicalServices.com

Design



www.srise.com

For more information contact



AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation

Solid Waste Management Program

Waste Management & Prevention Division

1 National Life Dr – Davis 1

Montpelier VT 05620-3704

www.recycle.vermont.gov

(802) 828-1138

