# **The Bigger, the Better: Humongous Hostas** – Don Rawson Q&A

### What to do with the soil to help out large hostas already planted?

Determine how deep (and rich) your topsoil currently is. If it is shallow (less than 8' for big hostas), then consider lifting your hostas and redoing your flowerbed, working in a lot of organic amendments. Your hostas and companion plants will benefit greatly!

If that sounds like too much work, you're left with trying to enrich the soil as best you can. Work in some organic matter such as mushroom compost or well-rotted manure around the dripline, being careful not to damage the root system. Mulch every spring and let it decompose. BTW, I do not recommend cedar bark because it just doesn't break down fast enough IMO, tending to build up rather than breaking down and enriching the soil.

Have your soil tested and apply the missing nutrients. Or, if you choose to forego having a soil test, then apply a balanced commercial fertilizer such as 10-10-10, or an organic fertilizer such as Plant-tone. Apply around the dripline in the spring. And water, water, water...especially during dry periods.

### Any experience with goat manure? I was told it is "cold" and can be used immediately.

I've used goat manure one time years ago, with good success. From research on the web, goat manure is considered cool and some websites claim goat pellets can be applied directly without worry about it burning your flowers. It has a more balanced pH and less salt. It's also much drier than chicken manure, dropping to the ground in polite, little pellets, much like a rabbit's poop, only a bit larger.

Here are two sources which may be helpful: https://www.gardeningknowhow.com/composting/manures/goat-manure-fertilizer.htm https://homeguides.sfgate.com/goat-manure-good-fertilizer-73730.html

*Gardening Know How* has a good webpage which offers information on using manure in your garden, and info about manure from various animals:

https://www.gardeningknowhow.com/composting/manures/manure-pros-cons.htm

### You indicated you use a root barrier around trees. Exactly what do you use?

Tex-R and Tex-Pro Series of Products, manufactured by Texel Technical Materials, Inc. This is a non-woven fabric with copper hydroxide on one side, available in rolls. Contact Texel to find the distributor near you. BTW, landscape fabric found at your local big box store will not prevent tree roots from invading!

http://texel.ca/en/market-segments/horticulture/products/root-and-weed-control/tex-r-and-tex-pro-series/

http://texel.ca/fileadmin/medias/documents/en/geosynthetics/products\_cut\_sheet/geobarriers/T exel-fiche-produit-Tex-R-EN-WEB.pdf Other options include heavy-duty poly tarps, black EPDM rubber membrane used for roofs and pond liners, and heavy plastic. However, these materials do not allow water and air to pass through.

Proper installation of the liner is essential. Any breech – the slightest tear or hole – will seriously compromise its integrity. Seams must be impervious. The liner must come all the way up out of the ground, and can be fastened to a strip of lawn edging or landscape timber if desired. Be careful not to puncture the liner with a shovel or garden stake once it's installed.

### How do you prevent run-off on the raised mound and make sure the moisture soaks in and just doesn't wash away?

Applying a mulch every spring is helpful, particular where the ground is sloped. Some mulches are better at preventing erosion than others. For a hillside, I recommend hardwood bark (not bark fines or woodchips). The bark may need to be broken up in the spring if it is getting compacted so that it does not shed water. For this reason, putting an inch on every year is better than putting down several inches at a time.

A generous application of straw is also very effective at preventing erosion, although not as attractive. To resolve this, spread the straw out in late fall after a hard frost has flattened all of the plants in the garden. (Do so just before a rain so that it doesn't blow away.) By spring, the straw will be laying flat against the ground and can then be mulch over with a layer of shredded bark or pine needles.

The other option is to use a ground cover on the steeply sloped areas. Many ground covers are very suitable with large hostas. Here are a few: Sweet Woodruff (*Galium odoratum*), Dwarf Solomon's Seal (*Polygonatum humile*), Ajugas, Spotted Deadnettle (*Lamium maculatum*), Strawberry Begonia (*Saxifraga stolonifera*), and ground cover hostas (see list at http://www.hostalists.org/hosta\_list\_gch.php).

# Someone told me once that the large hostas don't like to be split. Is that true? I split a huge blue hosta and it never bounced back.

If you want your hostas to get really, really BIG, don't split them! If they are growing well, they do not need to be divided...ever. They will grow fine indefinitely and they need years to mature, so splitting just sets them back. If you want more, then buy more. If your neighbor wants one like yours, buy one for him too! Leave yours alone so that it can form an impressive focal point in your landscape.

With that said, sometimes division is justified if a plant has outgrown its spot, or if more hostas of the same variety are wanted but cannot be purchased. In addition, some hostas may become fairy-ringed (dead in the center).

Division is best carried out in the spring, just as the noses are emerging. However, any time during the growing season can be managed, as long as they are kept well watered. Carefully lift the hosta and wash the soil off with a hose, or let it soak in a tub of water. My preferred method for splitting is using two garden forks back-to-back. Avoid cutting or breaking the roots as much as possible. Teasing the roots apart is well worth the time and effort. Tie up new transplants for the first week or two to maintain turgidity.

Division and transplant shock will set a hosta back as it adjusts to its new conditions. Some varieties handle it better than others. Cultivars which are weak growers (e.g., those with a lot of white) and those which grow slowly take more time to become established again.

### How do you grow your hostas in so much sun without them burning the leaf?

I garden in Michigan, a northern State with an average annual precipitation of 31", 60% of it occurring as rainfall in the growing season. In addition, our summers are quite humid, reducing transpiration. I have a deep layer of topsoil (to encourage root development) and apply a layer of mulch every year. In addition, I have underground sprinkling throughout most of my gardens.

My hostas grow fast and are very full. However, the wax coating wears off many of the blues by mid-summer and some of my hostas scorch a bit. Generally, hostas will take the heat and bright sunlight if they have sufficient water.

# Do you have suggestions for fertilizers in spring/fall? How much/when, specifically, should they be added?

Build up the soil by adding lots and lots of organic amendments - compost, well-rotted manure, leaf mold, peat moss, and grass clippings are all fine. I've also had recommendations to add green sand (for trace minerals), cottonseed meal, and alfalfa meal (organic, non-burning, mix one handful per hole). Bone meal and blood meal are wonderful slow-release additions. Furthermore, you can use a planting fertilizer such as powdered rock phosphate (up to a half cup per planting hole, mixed well into whole root zone area). Apply mulch every year to enrich the soil as it decomposes, but don't mulch over the crown.

With a deep, humus-rich topsoil, hostas do not need to be fertilized to survive. However, the application of a balanced fertilizer in spring around the dripline may be beneficial because the nutrient content of organic materials is often low and unbalanced. Indeed, to grow really luscious, huge hostas, it is necessary to establish a regular routine of mulching, and spring and summer feeding. Look for a fertilizer with magnesium, or apply some Epsom salt.

Epsom salt is hydrated magnesium sulfate. Both magnesium and sulfur are secondary essential nutrients after Nitrogen, Phosphorus, and Potassium. Magnesium increases water retention, helps in better intake of nutrients, and most importantly, aids in the creation of chlorophyll, on which the process of photosynthesis depends. Similarly, sulfur also participates in the development of chlorophyll, increases the plant's resistance to diseases, and helps in growth. A few tablespoons of Epsom salt around your ground hostas in the spring will give them a great early boost.

When to fertilize hostas? Ideally, apply an application in spring (with a fertilizer that has Nitrogen, vital as hostas get ready to leaf out) and a second application mid-summer (July 1st). Avoid fertilizing after September 1<sup>st</sup>, as you don't want soft, sappy growth in fall.

### What percent of organic matter do you recommend?

Generally, gardeners tend to make two mistakes when adding organic amendments: they don't add enough, and they don't let it decompose beforehand. Organic material can take anywhere for four weeks to 12 months to decompose. The amount of time needed to produce compost depends on several factors, including the size of the compost pile, the types of materials, the surface area of the materials, and the number of times the pile is turned. So, since different items work on different timelines, how do you know when your compost is finished? The easy answer is that it should look like topsoil — dark and crumbly, like dirt.

Hostas have lots of delicate little feeder roots that spread out, so they do not like hard, compact soil. Organic amendments improve soil texture (making it easier to work), add nutrients, and increase aeration, water infiltration, and both water- and nutrient-holding capacity. Heavy clay soils especially need a lot of organic matter to loosen the soil particles, and very sandy soils also benefit from the addition of organic matter to retain moisture. Add lots of organic material...you cannot overdo it! Just remember, the more compost which is added, the more settling that will occur, so elevate the planting area sufficiently so that your hostas will end up on a mound, not in a hole.

# What hosta varieties might be the hardest when it comes to root competition? I have heard 'Elegans' is a tough one.

Tree roots are fierce competitors for water and nutrients. If your hostas are mysteriously getting smaller year after year, the likely culprit is buried tree roots which you are unable to see. They are like invisible giant sponges, wicking up an enormous amount of water. The tree takes all the energy and there's nothing left for the hosta. If you're striving to grow huge, sumptuous hostas, you'll have to eliminate root competition. Otherwise, the trees will eventually win!

All hostas are affected by root competition. Most absorbing roots on a tree are within the top 12" of soil – right where your hosta roots grow. In fact, 90% of the fine roots of a tree that absorb water and minerals are in the upper few inches.

### Where may I find the chart of recommended spacing when planting hostas?

Giant hostas can become several feet in diameter. While standing in a crowd shoulder-toshoulder is okay for a moment, it's no fun for the long haul. Give your hostas plenty of room! Fill the area between with smaller plants which are easier to move than the large ones. After all, the last thing we want to do is to be transplanting very large, mature hostas if we can avoid it.

When choosing a site to grow these mammoths, stop and think about how large they will really become. The most enormous varieties can sometimes eventually span eight feet or more. Generally, large hostas look best when they are just touching leaf tips...so hostas which reach eight feet wide should be spaced eight feet apart. While it may seem a little extreme to leave this much space between individual plants, it will become more apparent as each one matures. Meanwhile, bare areas can be interplanted with smaller varieties or used to display garden art.

Plant tags and catalogues may not provide accurate plant dimensions. Begin by checking *The Hostapedia* for the size of each cultivar at maturity. Then, when laying out your gardening plot, make sure to leave enough room so that one is not encroaching on the territory of another.

Below is a guide for proper spacing...but as mentioned above, consult *The Hostapedia* for the mature size of each cultivar, leaving just enough room for the leaf tips to touch one another.

Miniature (6-12" wide), plant 10-18" apart Small (1-2' wide), plant 18"- 2' apart Medium (2' wide), plant 2' apart Large (3 - 4' wide), plant 3-4' apart Giant (4 - 8' wide), plant 4-8'apart

### If you have to move a hosta, what is the best time?

Moving or dividing hostas is best carried out in the spring, just as the pips are emerging. However, any time during the growing season will work, as long as they are kept well-watered. Avoid cutting any roots, as much as possible. For this reason, I prefer digging a large hosta with two heavy-duty garden forks (not a shovel). A few years ago, I purchased two heavy-duty garden forks on Amazon and that was one of the best gardening investments I've ever made. <u>https://www.amazon.com/Garden-Digging-Heavy-Duty-Unbreakable-Design/dp/B07BFGC9RQ/ref=sr 1 5?dchild=1&keywords=heavyduty+garden+fork&gid=1616593535&sr=8-5</u>

A good tutorial for moving a large hosta is posted at <u>https://www.houzz.com/discussions/2000608/moving-a-large-fully-leafed-out-hosta-lots-o-pix</u>.

### To amend clay soil for hosta, is peat moss a good additive when preparing a new bed?

Absolutely! Its dry and airy texture can add "fluffiness" to the soil. It absorbs water like nothing else. Gardeners have been using it in their soil for decades. There are no pathogens, bacteria, bugs, or weed seeds to worry about, like you might find in other soil amendments.

Peat moss has an acid pH, so it's ideal for acid loving plants. Hostas are not too fussy about the pH, but grow best when the soil pH level is at 5.8 - 6.5, so the addition of peat moss may be much appreciated if your soil is alkaline. To know exactly what type of soil you have, you'll need to test it.

### Should you put a high nitrogen fertilizer on your hosta beds prior to them emerging?

Hostas need a sufficient supply of nitrogen, and that is especially true with large-leaved varieties. However, high nitrogen fertilizer (such as lawn fertilizer) will tend to produce soft, sappy foliage which is easily destroyed by wind and weather. Furthermore, that type of foliage is more susceptible to slug and snail damage. A balanced fertilizer with even amounts of Nitrogen (N), Phosphorous (P), and Potassium (K) contains the best amounts for both foliage and root growth.

The only case in which additional nitrogen may be beneficial is when a heavy layer of mulch is added, especially in spring. Most organic mulches cause short-term nitrogen deficiencies while breaking down, but add nitrogen in the long term. Granular general-purpose fertilizers, such as 15-5-10, or organic fertilizers like blood meal and cotton seed meal, would be fine. I would not use lawn fertilizer, such as 29-0-5.

### I have heard alfalfa is good to add when planting. What are your thoughts?

Alfalfa meal and pellets, made from dehydrated and ground alfalfa, is a good soil conditioner. It's an all-natural fertilizer with a 2.5-0.5-2.5 formula and is rich in trace elements. Alfalfa can come as a meal or sometimes as pellets, and can be purchased at your local feed store. Soaking the pellets can help to break them up, and you are then left with meal.

Most people use alfalfa meal in their gardens as a dry soil amendment. You can simply hand broadcast it around your garden, and either let the worms and microbes take care of it, or you can till and mix it into the soil by hand.

Using alfalfa meal as a general soil amendment is a good way to increase organic matter and to add nitrogen to your soil. It is fast-acting and breaks down rather quickly. I use it often when preparing a new spot for a hosta. However, when preparing a large area, I go with manure or compost because it's much cheaper than purchasing bags of alfalfa meal.

## Do different varieties of hostas require more or less acidity, or do they all have the same soil requirements?

Hostas are not too fussy, although all varieties prefer slightly acidic conditions (as far as I'm aware). Regarding soil pH, W. George Schmid writes, "Soils can be acid, alkaline, or neutral. In their native habitat, hostas often grow near pine and oak forest which impart acidity to the surrounding soil, but they also grow on limestone rock where the soil is more alkaline. The genus has great adaptability to soil pH levels, seemingly preferring slightly acid soils, a condition found in most garden soils, so adjustment of pH is normally not required." *The Genus Hosta* – Giboshi Zoku, page 369

### How to revitalize old hosta garden? Dig up hostas and add new soil?

See above, "What to do with the soil to help out large hostas already planted?" (1) Work in at least 2" of organic matter such as well-rotted manure or finished compost. Be careful not to damage the roots. (2) Mulch around your hostas every year with leaf mold, wood chips, shredded bark, or straw. Mulch retains moisture, prevents weeds, cools and enriches the soil.

### What is the most impressive large hosta you have grown?

Our *Hosta* 'Sum and Substance' gets lots of attention, taking many years to mature. My challenge to <u>you</u> is to grow the world's largest hosta! The list of "Very Large Hostas" will help you select a variety that can become enormous: http://www.hostalists.org/hosta\_list\_vlh.php

### What is the most effective method to fend off slugs?

Here's a list of remedies which are sometimes recommended for the prevention of slug and snail damage:

1. In late spring, remove winter mulch, debris, dead leaves, and other ground cover until mid-June (70°F).

2. Water in mid-morning so the ground is dry by evening. Encourage good air movement.

3. Choose slug-resistant hostas with heavy leaf substance, not smorgasbords.

4. Interplant with nature's repellent plants - Prostrate Rosemary (*Rosmarinus officinalis*) or Wormwood (*Artemisia absinthium*).

5. Surround plants with abrasive materials - diatomaceous earth (available from swimming pool suppliers), wood ashes, cinders, sawdust, shredded eggshells, gravel, sand, oak leaves, cedar or oak bark, tobacco stem meal. Or cover the ground with finely shredded human or horse hair.

6. Don't mulch with slug-infested materials.

7. Spread powdered ginger, crushed limestone, or fresh-cut fennel around plants.

8. Encourage predators to feed on them - toads, turtles, lizards, snakes, ducks, decollate snails, and ground beetles (plant clover). Centipedes and fireflies eat slug eggs. Build or buy toad

houses.

9. Be a slug stalker before the sun rises. Look under leaves.

10. Make slug traps - beer or yeast in tins, beer-soaked clay pots, upside down grapefruit and melon rinds, cabbage leaves, wet newspapers, and boards.

11. Barricade plants with white spray paint or whitewash, aluminum foil with red pepper powder, aluminum lawn edging, wire mesh with sharp edges at top, or a thin (.002 inch thick) copper strip 3" wide. Copper tape and flashing is available on Amazon.

12. Make a slug cocktail and spray it around your plants.

13. Coffee-researchers at the USDA in Hawaii have discovered that a 2% caffeine solution is effective in killing snails. But I've also read that using coffee grounds to repel slugs is a gardening myth, and that tests have shown that coffee grounds actually inhibit growth when mixed directly with the soil.

14. Use nematodes to kill slugs. Effective, but expensive and time-consuming. See <a href="https://www.slughelp.com/nematodes-for-slugs-and-snails/">https://www.slughelp.com/nematodes-for-slugs-and-snails/</a>.

15. Commercially manufactured slug traps, from a number of manufacturers. Go to Amazon and search for "slug trap".

16. Spray slugs with a 50/50 vinegar water solution or fresh lime juice to kill slugs directly. Or spray ground and stems (not leaves) with a 10% ammonia (clear type, not milky) solution. A hot chili pepper spray is effective. Mix hot pepper powder with a few drops of liquid dish soap and water.

17. Commercial molluscicides - pellets, granules, liquid sprays - varying ingredients (metaldehyde, iron phosphate) and strengths. Water the areas prior to treatment to encourage slug activity the following evening when you will apply the poison.

Personally, I apply metaldehyde pellets in spring, and sometimes a second application midsummer on hostas which are known to be easily damaged by slugs. Lock Out, sold by the farm supplier Wilbur Ellis (<u>https://www.wilburellisagribusiness.com/focus-product/lock-out/</u>), is more affordable than the leading brand.

### Garlic mustard in mulch? I plant ground covers.

There certainly can be plenty of weed seeds in some mulches, as with hay. The key is to make sure it is well-composted. While mulch can unfortunately include seeds of noxious weeds, one of the key benefits to mulching to the garden is <u>prevent</u> weeds. Shredded hardwood, in my experience, looks great and does not contain weed seeds.

### Do you recommend predator urine to deter unwanted critters from gardens?

There are various animal repellents available, some of which include predator urine. Personally, I've never used the leading brand, Bobbex (<u>https://bobbex.com/</u>), or Hawbaker's Coyote Lure (<u>https://www.amazon.com/Hawbakers-Coyote-Lure-500/dp/B00TXMRWIY</u>) to repel deer and other critters. Bobbex claims their formula works well on hostas (https://bobbex.com/growing-hostas-tips-for-best-results/) and there are plenty of testimonials to support it (https://www.facebook.com/BobbexInc/posts/if-you-long-to-grow-hosta-but-refrain-due-to-deer-damage-listen-to-what-bobbex-c/1791931857518073/).

# Is there an easy way to fertilize garden hosta with liquid fertilizer? A water pitcher is too time consuming.

A Miracle-Gro and water solution can be applied through a sprayer, which works wonders for your plants. Just put the recommended amount of Miracle-Gro in the container, hook it up to the garden hose, and spray in the evening when the sun is not so hot. It's amazing how quickly your plants will grow and how healthy they will look! <u>https://www.amazon.com/Miracle-Gro-Garden-1-Pound-Purpose-</u>

Fertilizer/dp/B000P0DK1Q/ref=sr\_1\_5?dchild=1&keywords=miracle+grow+hose+end+sprayer &qid=1616599470&sr=8-5

Just remember that chemical fertilizers and chemical foliar sprays, such as Miracle-Gro or Peters, provide a brief burst of nutrients and can make your hostas look stunning in the short term, but they don't contribute to the long-term health of the soil. Use them only as a supplement to organic fertilizers and compost which support healthy soil.

### How would you subscribe to the newsletter you spoke of?

To subscribe to the American Hosta Society eNewsletter, just click on this link: <u>http://www.americanhostasociety.org/Publications/enewsletter.htm</u>. Joining the AHS email Newsletter is FREE and EASY! Just enter your name and email, then click the "Click To Join" button.

### How do you protect from late frost?

There is an excellent article by Gail Russo in the AHS enewsletter. The article is in two parts:

Spring Frost Damage to Hostas, Questions & Answers: A Guide with Solutions, <a href="http://americanhostasociety.org/Publications/eNewsletter/january2021/january2021.pdf">http://americanhostasociety.org/Publications/eNewsletter/january2021/january2021.pdf</a>

Preventing Frost Damage to Hostas: Protection Coverings, <u>http://americanhostasociety.org/Publications/eNewsletter/april2021/april2021.pdf</u>

# How many years does it take a hosta to get established and really take off after planting?

"Sleep, creep, leap" is a time-worn yet accurate adage used in describing how hostas grow. That is how long it takes for the roots to develop the proper symbiotic relationship with the soil organisms. A young plant will "sleep" the first season it's in the ground. Small hostas will develop more quickly, medium hostas will take 3 to 5 years to mature, the giants, up to 10 years. Patience is a virtue! It takes time for a very large hosta to reach its enormous proportions, but the wait is well worth it.

### How do you protect hostas from deer?

Deer are a serious problem for many gardeners. Providing an effective means for repelling them can be a real challenge – simply because they are persistent and because they eat a lot! On average, a deer consumes anywhere from 6 to 8% of its body weight each day. That

means that a 150-pound deer can eat up to 12 pounds of food (i.e., hostas) per day. Multiply that by 3, 4, or more – all dining on your hostas, which they really find delectable – for a period of many days and nights, and it becomes obvious why deer must be expelled from the garden!

There are various methods intended to ward off deer or to restrict them from certain places in the landscape – some of them which are likely more effective than others. Deterrents include homemade concoctions (eggs, garlic, onion, and chili pepper added to a soap solution), stuffing ladies' nylons with human hair and hanging in trees, applying blood meal (sprinkled around the base of the hosta), and dipping a rag in clove oil (which is then hung in a cup on a shepherd's hook above your hosta). Some gardeners use applications of Milorganite to repel deer. There are also a variety of commercial deer repellents available, as well as animal scents such as Bobbex. Netting over plants and shrubs, an electric fence, or an 8 ft. woven fence is effective in keeping them out. And, I have a friend who has had excellent results using solar-powered lights (https://www.niteguard.com/) to deter deer.

### **Recommendations for southern blight?**

The Hosta Library has a good article on Southern Blight at <a href="http://www.hostalibrary.org/Disease/PestSB.htm">http://www.hostalibrary.org/Disease/PestSB.htm</a> . In addition, *The Hosta Adventure: A Grower's Guide* (page 26) contains some helpful instructions.

I don't recommend using the bleach. It kills every living organism in the soil and won't prevent your hostas from getting Southern Blight the next year either. Digging up the hostas is a lot of work and unnecessary. Terrachlor is effective to control Southern Blight, but isn't really a curative or preventative.

Southern Blight is caused by the fungus known as *Sclerotium rolfsii*. One fungicide that's currently available for *Sclerotium rolfsii*, effective both a preventative and curative, is flutolanil (EPA registered name). Several products are now available which contain flutolanil (in various concentrations), but only a few are labeled for use on ornamentals. Most are designed for commercial application by farmers or greenhouses. The product designed for homeowner's application on ornamentals is Bayer ProStar 70WP (available on Amazon). Read the instructions on the product, which involves mixing it at the proper rate and then drenching your hostas with the solution.

For anyone who has battled Southern Blight before, I recommend thoroughly cleaning their beds in the fall, making sure their hostas are planted high in the ground (mounded up rather than in a hole), and that their garden receives adequate ventilation (trim tree branches up, etc.). Applying the ProStar to the affected areas in early spring as the hostas are just popping up is an excellent preventative for dealing with the problem later in the summer.

### What is best time to move hostas?

Transplanting hostas is best carried out in the spring, just as the shoots are emerging. However, any time during the growing season can be managed, as long as they are kept well watered. Hostas transplanted in the fall may experience heaving in the winter and early spring. gently push the hosta back down. Hostas are very durable... probably tough enough to survive having some exposed roots. To reduce or prevent frost heave, hostas transplanted late in the season should be mulched.

Bob Solberg gives this advice when asked, How late is too late to plant hostas in the fall?

August is a great time to plant hostas almost anywhere in the country. You can safely plant them all month in the Midwest and North and the latter half of the month in the South. My standard rule is you want to get them in the ground 4-6 weeks before the first frost. This allows them to make some new roots while the soil is still warm and then have some time to prepare for winter.

Most of us, though, have planted hostas in the ground later than that with good success. I have planted them as late as the first week of November without any noticeable ill effects. You do run a risk with late planting however. Hostas are completely dormant during the winter, and they will not produce new roots until after they have made new foliage in the spring. They literally sleep through the winter.

Late planted hostas may rot over the winter if (1) the ground is frozen and stays frozen shortly after they are planted, (2) they are very dry when the ground freezes, (3) the soil stays too wet because of poor winter drainage or (4) heaving occurs during cycles of the soil freezing and thawing. Snow cover or a covering of mulch will help with all these situations. Remember, blue hostas, as well as many gold hostas, with *H. sieboldiana* and *H.* 'Tokudama' parents as well as some *H. longipes* types are the most susceptible to winter kill. Miniature hostas may also completely heave out of the ground, resulting in cold damage to the crown. https://www.hostahosta.com/planting.html

So, with late hosta planting, first make sure the plants are full of water when the first hard frost hits. Then try a little mulch to protect the hosta crowns and moderate soil temperatures. (Beware! Deep mulches may entice mice and voles to make their winter homes in your hosta garden.) With a little luck from the winter weather, you can probably extend your planting season another month or so, even after the first frost.

### "What is the best way to do the topdressing?"

Ideally, a flowerbed is well-prepared with a generous amount of organic amendments prior to planting. The soil is deep, rich, and fluffy...full of air and nutrients, and can absorb water. A bed that is well-prepared beforehand will go a long way in growing hostas and companion plants to their greatest proportions.

Once the bed is planted, the regular addition of a topdress is also very beneficial. As organic matter breaks down, it enriches the soil. The resulting soil is rich in nutrients and contains beneficial bacteria and fungi. Materials such as decomposed manure, leaf mold, compost (especially mushroom compost), alfalfa meal, and decomposed grass clippings are all fine to use. Decompose organic material can be laid directly on top (nutrients added from the top naturally seep into the soil to slowly provide nutrients to the roots of the plants) or gently worked into the soil around the dripline of each plant, being careful to not injure the root system. Don't topdress directly over the crown of the hosta.

Once the topdressing is applied, mulch can then be layered on top. Late winter or early spring is the best time of year to topdress so that plants can absorb organic matter as they come out of dormancy. It takes the microbes a while to break down organic matter and release nutrients. By topdressing early, your soil will be full of nutrients as your plants enter the vegetative phase.

A few things to keep in mind: (1) Make sure the materials you use for topdressing plants are decomposed well. You do not want to burn the plants. The compost should look like crumbly soil. (2) If topdressing and mulch is applied too thick, it can create an ideal habitat for voles.

You may not even be aware of their presence and damage throughout the garden. Personally, I use castor oil and bait stations. (3) Sometimes, mulch may form a crust which sheds water. I find that it is beneficial to gently break up the old mulch in the spring before adding a fresh layer of mulch on top.