

How to Grow and Care For Hosta's To Beautify Your Landscape 1

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Diane Mumm

<http://www.picketfencegreenhouse.info>

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My Woodland Garden



A message from the Author

Hi, I'm Diane Mumm,



My sole purpose of this book is to help you better understand hostas and their cultural details, so you can achieve the very best from your hostas. You may be a beginner or a hosta collector, either way this book will help you improve your knowledge and also inspire you to expand your your hosta beds.

This book is going to give you some important information on how to achieve success with hosta gardening . You will learn more about this beautiful plant and to hopefully start or expand your venture into hosta growing .

What began as fun hobby back in 1999 , has turned into a passion and a business. It has given me a great opportunity to explore hostas and their varieties.. I not only sell hostas but I offer other sun and shade perennials annuals , and vegetables that I grow in my 40 x 70 greenhouse.

Picture in your mind a hostas Paradise ? Stroll through your yard and visualize a spot where you feel would offer a great place for a haven for Hostas.

Landscaping with different sizes and colors of hostas throughout your gardens can really bring out some interesting highlights to your perennial gardens.. Adding some contrast by adding annual shade flowers can really make your gardens attractive and beautiful.

As you continue on through this book you will learn more about these Popular Perennials. Why they are one of the most loved plants out there , and How you too, can become a pro at growing and caring for them.

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Chapter 1

Let's Study More on Hostas

Hostas are a herbaceous perennials . Herbaceous are plants which continue to live and increase in the open for several years. Stems die down each season and grow up again from the crowns each Spring. Hostas are clump forming springing from short, sometimes creeping rhizomes with fleshy white roots. The leaves appear to be mostly basal, large and simple which form the shape of a mound. The flowers are tubular which rise well above the leaves of the plant. Their colors range in white to dark purple. Some are fragrant , some are not. Hostas flower in June - August

Hostas come in all kinds of different colors .. The colors that are well known are blues, greens, yellows, lime green, variegated . Leaf color can change throughout the season depending on lighting. Juvenile hostas (young plants) will look somewhat different in color than a mature 5yr. old plant. As they become their mature size you will then see the true plant come to life . This can take from 4-8 years depending on the variety.

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Hosta varieties will grow at different rates.. Some types grow very rapidly adding several new eyes each year. Others are very slow growing and take years to become established.

One particular hosta comes to my mind . I planted the hosta 'great expectation', thou very beautiful , it was slow to grow. I guess you can say that in our area , it did not do very well. I really haven't found to many picky hostas but this one just was very slow to develop into anything . That was my experience, you may however have had other experiences with this hosta.

Maybe location, was the true problem.. Needless to say it did not make it. Thank God there is another variety just waiting to be planted.

Hosta leaves are distinctly different. Some come either smooth or puckered. They can even look like they have dimples or ruffled leaves . The veins of these plants create patterns throughout the leaves. Some are dull and some look shiny, some are frosted or look chalked. Hostas

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appearance can change depending on the area they are planted in.. For instance if a hosta is getting more light and sun in the morning hours the leaves will be lighter in color, less light they will appear darker .

This is something I have seen often. I have hostas in various areas in my gardens.. Most of them get some sort of sun during the morning hours.. but the ones I have hidden in some of the deeper shade, they just do not look as beautiful.. So make sure your hostas get some good lighting.. It really pays off!

Chapter 2

Hosta Care

To grow a good hosta you must know their basic needs and how they adapt to certain situations. Hostas love fertile soil, a little bit of compost (organic matter) will do them wonders. The heavier the soil , rather than lighter is better overall for them. They do prefer their soil on the acidity side of neutral.. Morning sun, afternoon shade and keep them out of the wind.. The wind can destroy them very fast.

Select an area rich in loam with a ph of 6 if possible. Hostas like it moist so try to place them in this area if you can. The soil must be a well drained area.. They will become much more satisfied and flourish if you give them what they need such as compost or well-rotted farm manure.. It is best to work it in the ground , where you want to plant the hosta and also around the area it is planted. Replace organic matter every year if possible . This will give you prize winning hostas that everyone will envy.

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When planting hostas, make sure you check to see how large this plant is going to be at mature size so you can determine the spacing . These details should be on the plant tag when purchasing .

As a general rule use these figures:

Small Hostas need a hole about the size of a gallon bucket.

Medium Hostas need a hole about 24" wide by 12" deep.

Large to Giant Hostas need a hole about the size of a bushel basket. Make sure to add some compost /manure when placing in the hole.

The best times to divide hostas are in the spring as the new shoot are emerging , or you may divide in late summer or early autumn while the soil is still warm . This will enable them to grow their roots rather quickly and get established. Some people do move them even in summer. If you decide to do this, they will require more tender care , especially if the summers are hot and dry. You we need to keep an eye on them and keep them watered.

Ask yourself if you were plant would you want to be moved

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in the heat of the summer.. Absolutely Not! This is pretty stressful on hostas, especially in the warm regions.. Do them a favor and move them in the spring or fall . It really just makes perfect sense.. Even though it freezes them in the fall, they still have time to grow roots in the ground.. It is a great time for them , because the weather is cooler.

This can also depend on your climate. Some summers are cool in certain areas of the states, and you could probably get away with dividing in the summer months..

Use your own judgment. In our area thou we get very hot and dry during summer months. I try to avoid these times as I know it will only cause them to stress their roots.

To Mulch and to Feed

Hostas are gross feeders made know more so on the larger varieties. Most hostas require applications of manure and fertilizers. However some of these organic materials are low in nutrient and unbalanced. They do however contribute to the even soil moisture by producing humus in the soil. When using artificial fertilizers the nutrients are known and can be applied how you see fit. Whether you want high

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nitrogen or high potash.. This will depend on your soil and its needs. When growing hostas, make sure you have a regular routine of spring and autumn mulching and feeding. Some people have mixed feelings on Mulching.. I guess it is a matter of preference.. I do, prefer to mulch.. Make your mulch the kind that is rough . It will help keep those pesky slugs and snails away.

Hostas love water! The best way to water is using a soaker hose or a slow releasing hose. Using this technique, the water will get to the roots faster and also the moisture is distributed in a more even pace. Watering over the hostas on the leaves can damage the leaves and then rays of the sun can burn the leaves, which cause brown spots , blotches . Make sure you water early in the day, morning is the best.. Why? because it gives the plant all day to absorb making it less desirable for slugs and snails, as they love wet areas.

Hostas can grow in variety of conditions. Most people when you think of hostas you think of a shady area.. Well this is not always true.. A lot of hostas, provided they have adequate moisture can handle some sun.. Morning sun suits

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most hostas, but afternoon depending on your climate can be too hot.. The best situation for them is dappled shade, or filtered shade, letting some sun through is best. Not all hostas require the same amount of shade . Provided you give them these light conditions you will then see the beauty when color variations appear. Hostas should be placed in different settings , otherwise they will not develop their proper coloring. Never place hostas in deep shade.

A natural setting such as placing hostas under trees, it may seem to be best place for them, but remember they have to compete with moisture. Some trees are surface rooting and some are deeply rooted.. So pay attention when placing them near trees.. If wanting to place around trees.. Add about 6-8 inches of fresh soil, work in some organic matter. Then border with some landscaping rock. If you do not border the dirt , the dirt will wash away when it rains . The hostas then will not have adequate soil to root down. After you get your dirt and rock placed . Place your hostas about 3- 4 ft apart . This looks very nice and is easy to achieve.

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I have several planted around trees, with pretty good success.. One thing that works for me is having the water close.. They will require more water , than if planted elsewhere.

A natural enemy to hostas is the wind.. If setting in a wind situation, hostas will not grow as large. The leaves will appear torn and bruised or scorched. I know this from my first hand experience with Hostas.

Never grow them where the wind is inevitable. You will be setting yourself up for much disappointment. What you can do is to make a windbreak . This can be achieved by putting up a fence , hedge or any others means you decide on to stop the force of wind.

Hostas in the fall can become ugly , this is normal. There has been some discussion on cutting the leaves off in the fall.. Well this is not recommended.. The leaves feed the plant, and it very important to keep them thriving . This will benefit the plant for next year . As winter approaches and the weather starts getting colder at nights . It is

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bound to start freezing at night in some areas. The foliage of the hostas will wilt and die when this happens.. The best thing to do is leave the foliage lay .. It will help protect the plant for winter.

I prefer to do all my cleanup work in the spring.. You want to leave things as they are to protect all your precious plants during the colder months.. Think of it as insulation , or a coat. It can get very cold in some areas , so act accordingly and use good judgement.

Chapter 3

Pest and Diseases

Slugs and Snails

The one culprit that loves hostas is slugs and snails they can do a lot of damage in a short period of time. They like wet moist areas, and if you are getting a lot of moisture you may want to check for slug and snail damage. You will notice when they are around because holes will start appearing on the leaf areas.. Slugs and snails like to feed at night. So do not water late in the day, because the hostas will not have enough time to absorb the moisture.

Understanding slugs and snails will help you in controlling them. Their primary job is to clear out all the rotting vegetation . So keeping your area free of dying leaves, and other garden debris is very important. They like areas that are dark and wet , this is where they like to breed. Areas such as bricks and stones , these areas may be a great place for them to hide their slimy little bodies and where they will multiply their numbers quite rapidly.

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The best way to treat them also is to know where they live.. Look for them in those damp, dark areas around your property and also check for them after a rain spell . If it stays wet for days , these creatures will do some damage quite quickly.

We have had some wet springs. We love the fact that we are getting the moisture., but it does have it's $\frac{1}{2}$ s problems. The wetter it stays the more slug and snail problems you will have. It can get pretty ugly if not taken care of in a reasonable time period.

There is a variety of problem solving solutions that can be put into place. From home remedies to commercial remedies all will work if presented at the right time. One of the most effective solution is to water a liquid metaldehyde formula on to the hostas and the ground around them in early spring, when the shoots are just starting to poke out of the ground. This is the time that the slugs and snails emerge from hibernation so timing is crucial. Repeat this treatment weekly for 6-8 weeks .

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Beer traps are widely used, although only moderately successfully. Place a small shallow container, such as a jar lid, level with the soil and fill with beer. Slugs are attracted to it, crawl in, and drown.

There is also pellets available that will attract them . Scatter the pellets around the hostas that you can see has some considerable damage.. This must be applied more often as they are only viable for 3-4 days. The best defense is to apply after a rain , and in damp muggy conditions. As with all chemicals take good care and read the precautions.. Some are not safe around pets so make sure you know what you are dealing with before using these products.

Other methods can be used, though they show limited success. Copper strips sold in garden stores and catalogs may be used to surround plants.

The use of gritty materials such as diatomaceous earth scattered on the soil surface is also used. Other traps may be made by laying wet newspapers on the ground overnight.

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Check beneath these the next day to find slugs that have taken refuge from heat and sun. Kill the slugs by dropping them into a 20% solution of bleach and water. Salt will also kill slugs if applied directly to them.

If you want to control these creatures without the use of chemicals . You can go around at dusk and gather them up and place in a bucket and dispose of them. This may be a little more time consuming but it works nevertheless.

Slugs especially can not tolerate rough areas to crawl on.. They have delicate little bodies. So I have placed wood bark around mine. I feel it does help to a certain extent.

You will find that some of your hostas will not be damaged from these creatures.. Why , because the leaves on the hostas vary. The ones that feel thicker are undesirable to them. The ones with the thins leaves are much more prong to slug and snail damage.. I guess you can say they go after the easiest to chew on.

As there are many remedies not mention here but are

being applied with much success.. I have only touched on a few. It is always best to go to your local gardening store and ask questions. They are always ready to help . They have the knowledge and availability of these products.

Foliar Nematode (*Aphelenchoides* sp.)

Microscopic worms that live in plant stems and leaves. The nematode lives and feeds inside the leaf tissue. They feed on Hostas, and other plants. Leaf/foliar nematodes are most damaging in regions where summers are warm and wet. The damage they do is described by fan-shaped, yellow-brown to gray leaf blotches that progress down and outward in the plant from upper leaves. The nematodes can move on a thin film of water, but their movement is limited by major leaf veins. The resulting symptom is a V-shaped, damaged area bordered by leaf veins.

Here are a few steps that can help control foliar nematodes:

1. buy clean plant material- most foliar nematodes are brought into the garden. Do not buy plants with leaf

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blotches. careful watering- do not water plants overhead with sprinklers, use watering wands or soaker hoses.

2. sanitation- remove and destroy heavily infested plants. Pick off and destroy all infested leaves and the 2 leaves directly above them.

Nematodes can live for years in plant debris or the soil without the benefit of moisture.

Deer can eat all your hosta plants in one evening, leaving just the stalks standing. Ten-foot tall fencing and trained guard dogs are the only reliable method to keep them out of the garden.

Gardeners also use deer repellent, a bitter-tasting chemical that is sprayed on the leaves. These products need to be re-applied after several rainfalls. Motion detector garden sprinklers have also been used with some success.

Rabbits occasionally eat young shoots in the spring, and sometimes bite off flower scapes.

Squirrels will eat hosta leaves during a drought, and sometimes dig up plants. Voles chew on the roots of hostas, and a heavy infestation of voles may kill plants. Wire cages made of hardware cloth encircling the hosta roots may deter them.

Never did I see what was chewing on my hostas. They were some newly leafed out hostas. I suspected it was either deer or rabbits.. I was leaning more to rabbits as we had an abundance of them running around. It seems thou as the plant got bigger they lost interest.. I imagine the taste was not as good , or they found something else that tasted better to them. Perhaps my vegetable garden.

They sure can be a nuisance, and I have heard a lot of complaints toward these little creatures. I guess that is what we have to deal with in nature. I always thought everything has it's purpose, but have come to the conclusion that I am not so sure now.

Diseases

Hostas usually are pretty disease resistant, but can have a occasional problem or two..

Crown and Root Rot

I have experience this plenty of times over the years.. As we live in humid climate , I know this contributes to the problem. For Me It seems to have had more effect on the plants I divided and then placed in pots.. It is best to dispose of the plant, and if possible do not place another hosta in that same hole. You do not want it spreading to others.

If you have crown rot, the leaves of the plant can often be pulled off the plant at the slightest tug, revealing a soft, rotten base area. Root rot on the other hand cannot be seen unless you dig out the plant and inspect the root system. The roots will be sparse, and perhaps spongy or rotted in appearance. Root and crown rot are difficult to eliminate once they take a foot hold and usually the best thing to do is to remove and destroy the plant. The best

cure is to take preventative measures by providing adequate drainage and air circulation to the areas in which the hostas are planted.

Below is a good article on this issue, to more understand how it comes to be, how it affects plants and what to do.

Crown Rot Poses Danger for Hosta Lovers

**By Brooke Edmunds Research Assistant, Plant Pathology
Iowa State University Extension**

[Crown Rot Article Page](#)

Hostas are prized for their attractive leaves, assortment of shapes and sizes, tolerance of shade and minimal maintenance. But in the last few years, some gardeners have noticed a problem. Each year in midsummer, the outer leaves of the same planting of hostas turn yellow and wilt. These leaves are easily pulled off the plant, seemingly severed at the base.

Gardeners are confused because hostas are supposed to have few problems in Iowa. So what's going on? Yellow, wilted leaves that easily detach are symptoms that

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something has caused rotting of the crown. The crown is the area of the plant at or just below the soil. A fungus, *Sclerotium rolfsii*, can cause such crown rot on hosta. This disease is usually introduced into the garden as hardened round masses of the fungus called sclerotia. Sclerotia are similar in color to soil particles and very small, often compared to the size of mustard seeds.

The crown rot fungus is most active during the humid, hot weather in June and July. First, the small round sclerotia break open. Fluffy white strands of the fungus, called mycelium, are produced and grow across the soil to the base of the plant. The mycelium exudes a poisonous chemical called oxalic acid. This chemical makes short work of the petioles (leaf stalks) of hostas, causing a brown soft rot to occur.

The fungus invades and breaks down the crown tissue. This destruction causes water to stop flowing to the leaves, causing them to yellow and wilt. If you tug at a discolored leaf, it will easily separate from the plant and show a brown mushy texture at the end. Only the outer leaves of the hosta are usually damaged, but small plants may be

killed.

A close look at soil around an infected plant shows sclerotia scattered over the surface. These resistant structures are white when young but mature to a brick red or dark brown color. Sclerotia can infect more plants right away, or can survive over the winter.

What can you do to avoid crown rot problems? Start by inspecting plants before buying them. Take a close look at the base of the petioles checking for sclerotia, white fluffy mycelium or any brown, rotten areas. Examine leaves for yellowing or wilting. Hold the petioles and give a little tug -- healthy leaves will remain attached to the crown. Remember other problems, such as drought, excessive sun or inadequate fertilizer can cause discoloration of the leaves, mimicking crown rot symptoms.

What if you find evidence of crown rot at home in your yard? First, put the suspected area in quarantine. Avoid spreading soil that may be contaminated with sclerotia to other areas. As you know, mud and debris are easily stuck

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in the treads of gardening shoes and on tools, so rinse everything well before leaving the quarantine area. For extra assurance, dip tools in a 10 percent bleach solution.

The crown rot fungus seems to be especially fond of mulch and grows rampantly through it. Maintaining a mulch-free ring several inches wide around the base of hostas may help reduce the chance of crown rot.

If small areas are infected they can be excavated and replaced. This is hard work, requiring that all contaminated soil to a depth of 8 inches be removed. New soil can be added and the area replanted. Hostas can be put back in, but it's best to replace these plants with less susceptible species. Coral bells, lamb's ear and lady's mantle are all suited to shady conditions and are less susceptible to crown rot than hosta.

For more information and lists of plants susceptible and tolerant to this disease, check out the Iowa State University Extension publication: Crown Rot on Hosta (SUL 8). This publication is available from your local Extension

office or the Extension Distribution Center, 119 Printing and Publications Building, Iowa State University, Ames, IA 50011-3171.

Hosta Viruses

Believe it or not, I have just learned of hosta viruses this past year. Please do not get paranoid and think all your plants may be infected.. This is something that is going to take some time. You may want to look over your plants and check the list below for the ones that are most affected.

When I first heard of this, I was a little concerned to say the least. This subject is not talk about much at this time, but I feel as time goes on more and more will become aware of the problem in the hosta world.

You must remember , this can happen , and it does happen to other plants to.. Viruses are around and they do spread. There is no cure for plant viruses, so it is best to dispose the worst cases as soon as you can.

Like people, hostas can get viruses . The difference is thou

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virus pass in humans, with Hostas, they must be dispose of. Viruses are of concern and are an emerging and important issue in growing hostas. Symptoms include an irregular mottling of the foliage, yellow ring spots, or small yellow dots or flecks on the leaves. You may also notice distorted leaves. Viruses spread to others by way of sap and root.. If a virus is present, the plant(s) should be discarded and tools used in the hosta planting should be disinfected.

Beings this is rather a new topic, as most haven't even heard of it. I am sure in a couple of years they will have a better look at this situation . They will be able to better educate people on this subject. The important thing is to be more careful when working with them.

If there is a specific need for diagnosing viruses in a hosta plant or planting, contact your local extension office or state university's plant and/or pest diagnostic lab to discuss the testing procedures and fees that are involved.

Below is some in depth info that I collected from a great site with their permission.. Read it in full.

Hosta Virus X - Spring 2005 Update

In the summer of 2004 the extent of the Hosta Virus X problem became apparent as infected plants began showing up everywhere. The Spring, there is much to report as the world catches up to this runaway train of a virus. Most noteworthy is the huge number of plants showing symptoms out in the marketplace. Additionally, because this virus can take 3 years or more to show symptoms, some infected plants are turning up in gardens in hostas that were thought to be healthy. Hostas in all types of nurseries and garden centers can frequently be found exhibiting symptoms that are typical of HVX. These locations include everything from the big "box" stores like Home Depot, Lowes, and Wal-mart, to finer plant nurseries, hosta specialty nurseries, and smaller local garden centers. The virus is most commonly found in the cheaper varieties that have been mass-produced in very large numbers.

High percentages of infected plants in the marketplace:

'Birchwood Parky's Gold'

'Blue Cadet'

'Corona'

'Gold Edger'
'Gold Standard'
'Golden Tiara'
'Goldrush'
'Honeybells'
'Royal Standard'
'So Sweet' (often mislabeled)
'Stiletto'
'Striptease'
'Sweet Susan'
'Sum and Substance'
'Undulata Albomarginata'
'Venucosa'
several unlabelled varieties

Some infected batches in the marketplace:

'Diamond Tiara'
'El Nino'
'Ground Master'
'Guacamole'

'Janet'

'June'

'Katherine Lewis'

'Krossa Regal' (+ 2nd virus)

'Night Before Christmas'

'Pacific Blue Edger'

'Paradise Joyce'

'Regal Splendor' (+ 2nd virus)

'Revolution'

'Sagae'

'Sun Power'

'Sugar and Cream'

tardiva

'Yellow Splash Rim'

Varieties named for viral infections:

'Blue Freckles' (probable HVX)

'Breakdance' (confirmed HVX)

'Dotted Fantasy' (probable HVX)

'Eternal Father' (confirmed HVX)

- 'Kiwi Dreadlocks' (probable HVX)
- 'Kiwi Watercolours' (probable HVX)
- 'Leopard Frog' (confirmed HVX)
- 'Lunacy' (confirmed virus)
- 'Pamela Ann' (probable HVX)
- 'Parkish Gold' (probable HVX)
- 'Strip Show' (probable HVX)
- 'Tye Dye' (probable HVX)

The categories above shows a list of reported infected plants that is current for Spring 2005. All of these are available for sale in numbers and should be considered suspect. Purchase of these varieties is recommended only if they are known to be free of HVX. Purchase of the last group is not recommended at all - these are just heavily symptomatic infected plants, not new cultivars, which should be destroyed.

Because this virus is easily spread and often does not show symptoms for several years, there is a chance that individual specimens of any hosta from an infected source may be infected also, but this is different from a variety

that was mass-infected during propagation and widely available. Cheap plants in stores that do not specialize in hostas are often mislabeled, so some of the varieties above can be found with different labels.

New information about HVX from the conclusion of a study by Dr. Ben Lockhart indicates that it is common for the virus to not cause visible symptoms for three or more years after infection.

Reports are coming in about plants that were purchased 3-4 years ago that this year displayed symptoms for the first time.

Often an infected batch of plants will only contain a small number of plants showing symptoms, but because of the long period before symptoms are expressed all plants in the batch must be considered infected. It has also been confirmed that plants that have been tissue-cultured can contain the virus if the original plant put into culture was infected. Tissue culture itself does not guarantee clean plants.

Although specific research has not been completed yet on how it is spread, there is good reason to assume that it cannot be spread by insects, fungi, nematodes, or pollen. Limited research has indicated it may infect plants other than hostas, but it has not been observed in other plants at this time. Transmission through seed is not considered very likely, but not ruled out.

The primary method of infecting plants is moving fresh sap from one plant to another. There are any number of ways to do this, including the cutting of rhizomes, leaves, or scapes, lawn mowers and string trimmers, handling hail-damaged plants, keeping plants with fresh cuts in contact with each other, and possibly animals feeding on leaves. No future cure is expected, so all plants with HVX must be destroyed.

What is being done - The two countries producing the greatest share of the HVX-infected hostas are the United States and Holland. Both have begun taking steps to get the disease under control.

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In the United States, the USDA is aware of the problem, but is unable to devote resources to it because of more pressing issues like Sudden Oak Death, Mad Cow Disease, and others with greater consequences. At this time, many of the individual state agriculture departments are not yet aware of HVX. More labs are testing for HVX, so getting plants tested for it is becoming easier. Many nurseries are just now discovering the problem and still have to learn how to handle it.

In Holland, efforts have begun to get the spread of HVX under control. The government is working with the growers to work out and implement strategies to inspect and quarantine all infected fields so as to stop the export of HVX-infected hostas. Newly tissue cultured varieties are being tested for HVX. A research program has begun to determine how the virus had spread so widely.

Generally, the spread of HVX-infected hostas which had become a flood this Spring is expected to slow considerably by next year due to increased awareness on the part of the primary producers of infected plants. More education and activism in 2005 will help to further reduce

the number of infected hostas.

What you can do - If you see hostas for sale with HVX symptoms, please assume that the seller is unaware of the problem. HVX is still new and many nursery people are still unaware of it. Inform them about the virus and point them to places where they can receive more information about it. Few real nursery operators wish to sell infected plants of any kind, and most will respond by getting rid of them.

Be sure to make it clear that the plants in the batch that do not show symptoms are also likely to be infected and should also be destroyed. If they want to get plants tested, they must be sure to ask specifically if the lab has the ELISA kit to test for HVX. If you are contacting state departments of agriculture or extension offices, be aware that many of these do not yet know about HVX. Again, point them to more information, and tell them that the USDA is aware of it and can provide more information.

In the garden, immediately burn or place in trash to be removed from property any plants which show symptoms of

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HVX. If healthy-appearing plants came from batches which included plants showing symptoms discard those too rather than wait to see if symptoms appear. Watch carefully for symptoms among other plants, especially those known to have been sold with HVX infection, and discard any that show symptoms. Clean hands and tools before touching other plants after handling infected plants.

Do not under any circumstances keep these plants around, even if they appear to have been "cured". Once infected, a hosta has HVX for life and can only spread it to healthy plants. This is a contagious disease that has no cure and should be treated with care. All parts of an infected plant should be considered infected with the virus and able to spread it to other plants.

Begin practicing the habit of sterilizing tools or washing hands after getting hosta sap on them before touching other hostas. This is especially important to prevent the spread of disease when doing such chores as cutting leaves damaged by deer or hail, removing flower scapes, or other tasks which normally include spreading sap from one hosta to another.

Keep string trimmers and lawn mowers away from hosta leaves.

Inform friends and neighbors if you see plants with HVX symptoms in their gardens. Point them to more information and photos if they are not convinced. If we all pull together we may be able to get this virus stopped before our gardens are infected with it. Don't feel shy about pointing out virused hostas - many of us are already doing so.

If you have a nursery or garden center - First check the above list of infected varieties, then go and see if any of these in your stock show symptoms of infection. All blocks of plants that have symptomatic individual plants should be destroyed. Hostas infected with HVX can take more than three years to show symptoms and it is not practical to test each individual plant. Some, maybe all, of the ones that do not show symptoms will also be infected.

Thoroughly inspect any newly arriving stock for HVX symptoms. Even one slightly symptomatic plant means that the whole batch is infected and should be refused.

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If you receive infected plants from a specific source, you may wish to have other varieties from that source tested even if they appear clean. This is especially a problem with naturally divided field-grown stock. Bare root stock should be held until leafed-out and checked for symptoms.

Symptoms normally appear soon after foliage expands. Be sure to specifically request that they be tested for HVX, not just general testing, because not all labs are currently testing for HVX as part of a general test.

Blocks of the varieties above which do not show any virus symptoms but were purchased from a supplier who has sold infected plants in the last few years should be considered suspect. These should be kept separate from other varieties and from each other, and cutting any parts of these plants while still green (as opposed to dry-leaf clean-up after dormancy) should be done carefully so as to not spread sap from each batch to any other stock. Cutting roots sticking out of pots can also transmit the virus. Tools and hands should be thoroughly cleaned after handling suspect plants.

Because the virus could already have spread, it is strongly recommended that hands and tools be cleaned after any cuts on hostas, but at minimum it should be done before moving to the next variety.

For Update Information

Hosta Virus Myths contributed by C. H. Falstad

MYTH - Plants infected with a virus may recover.

FACT - Viruses do not just disappear, nor does a plant "fight off" an infection. The virus is permanent and will be with the plant until it dies. For practical purposes in the garden and nursery, there are no cures for viruses.

MYTH - Hostas from Tissue Culture will not have viruses.

FACT - If a hosta has a virus before going into tissue culture, the virus will be propagated along with the plant. Many infected hostas in the marketplace were tissue-cultured. Plants that were clean after the tissue culture process may also be infected when being grown on. Labs are beginning to test all propagating material so in the near future tissue cultured hostas from those labs will be clean.

MYTH - All hosta cultivars will exhibit the same symptoms if infected with the same virus.

FACT - Symptoms can vary considerably with the same virus, and different strains of a virus may cause different symptoms.

MYTH - All mottled foliage in hostas is caused by viruses.

FACT - Mottling patterns in hostas can have a variety of causes, some of them environmental, and many have causes which we do not yet understand. 'Xanadu Paisley' has been repeatedly tested and despite its similarity to HVX symptoms has yet to be shown to be infected with any diseases.

Old plants like 'Cynthia' and 'Filigree' also have no known cause for their mottled appearance and have never been know to pass this trait to other plants.

MYTH - Viruses will kill, or at least severely inhibit growth of the host plant.

FACT - Eventually, some deterioration in the health of the plant can occur, but a plant may survive for many years

when infected with a virus. Different viruses affect the plant's health at different rates, but some effects may go unnoticed.

MYTH - If symptoms disappear after showing up in a previous year the plant has either cured itself or didn't have a virus in the earlier year.

FACT - The expression of virus symptoms can disappear, but this does not mean the plant is cured. The virus is still present in the plant and still able to infect other plants. Sometimes this can be due to environmental factors that might reduce the rate a virus replicates thus preventing a high enough population, or titer, to effect expression.

MYTH - Removing a leaf showing infection, or dividing out the portion of the hosta showing symptoms will help cure the plant.

FACT - Removing some symptomatic tissue will have no real effect in "curing" a plant of a virus. The virus is already in all or most all parts of a plant by the time symptoms show.

MYTH - All plants infected with HVX will show symptoms immediately.

FACT - To the contrary, many plants in Dr. Lockhart's study did not show symptoms after three years despite testing positive for infection.

We do not know if they will ever show symptoms, but they are infectious in this state.

MYTH - If the symptoms have not spread to nearby plants the virus is safe.

FACT - If a virus is "safe", how did that plant catch it? The only way to tell if HVX has spread to other plants is through ELISA or other more sensitive scientific testing. It may be years before infected plants show symptoms.

MYTH - If a plant doesn't show symptoms it doesn't have a virus.

FACT - It can take years for an infected plant to show symptoms. During this time it very much can infect other plants. Only careful scientific testing can determine if a plant that does not show symptoms is infected with a virus - there is no way for the gardener or nursery owner to tell.

MYTH - HVX is the only virus affecting hostas.

FACT - There may be more than ten viruses currently known to be found in hostas. HVX is now the most common by far, but Impatiens Necrotic Spot, Tobacco Rattle Virus, and Tomato Ring spot Virus have been frequently identified. Some as yet unidentified viruses have appeared also.

MYTH - Symptoms of Hosta Virus X look attractive.

FACT - Actually, this is not really a myth. The effects of HVX on some hostas can be attractive to many, thus heightening the risk of introducing the virus into the home garden. In addition to the mottling, these symptoms can include making the infected plant more compact and more glaucous.

Nursery professionals and home gardeners alike have actually named HVX-infected hostas and offered them as new varieties.

MYTH - If we pretend the virus doesn't exist it will go away.

FACT - If we ignore the presence of Hosta Virus X in our gardens or nurseries, it will continue to spread until many more plants have it. In time, the number of infected plants will increase beyond any hope of eliminating the virus. It is irresponsible to keep the virus around, because it can infect other plants and spread itself. All plants exhibiting HVX symptoms must be destroyed immediately to prevent further infection, and in nurseries all plants in a batch that had symptomatic individual plants must be also considered infected and likewise destroyed.

MYTH - Talking about HVX and other diseases will ruin hosta gardening.

FACT - While it may be unpopular in the short term, allowing incurable diseases to run unchecked through nurseries and gardens will certainly cause worse problems down the road. The long-term impact of disease-filled gardens on their owners will surely be a negative one and far outweigh any short-term effects of facing our problems now. A healthy garden is a source of joy to the gardener, but a garden full of diseases and other problems

will never provide the same enjoyment, and if it gets worse every year we will lose our enthusiasm.

MYTH - People don't want to know about HVX.

FACT - It is not a pleasant subject, but as adults we all understand that life isn't perfect. The world contains many harmful organisms, and some of these do affect hostas. We can face the issues of plant health when we need to.

We understand that sometimes there are outbreaks of a particular disease that require our special attention. We don't really want to know, but we have to know to keep our plants healthy. We don't want that information kept from us when the time comes that we need it.

MYTH - Viruses are a "grower problem" and not a cause for concern among gardeners.

FACT - Hostas infected with HVX or other viruses ceased to be simply a "grower problem" when the retailers sold them to gardeners. Thousands of virus-infected plants have already been sold at the retail level, and many

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gardens now harbor virus-infected hostas. All gardeners should be aware of HVX and other viruses and be careful to avoid spreading them to other plants and to other gardens.

Chapter 4

Multiplying your Hosta Beds

The best way to share a plant is to giveaway a plant. Make sure you are giving away a healthy plant . Hostas are very easy to divide . If you feel one of your hostas is overgrowing an area , remove some of it by lifting the outer edge just enough to break loose some of the plant.. Make sure you get roots when you doing this.. You can also dig up the whole clump and divide in quarters if you like.. When dividing it is a good idea to use a fungicide powder to dip the fresh cut in.. This will prevent any diseases from occurring.

What I have done is let the cut up sections heal (meaning let it dry and form a seal on the cut section of the plant) Stick the roots in a potting soil mix with the crown above the soil mix. Let it set there until it looks like a scab is form over the crown. This works but make sure you give the hostas plenty of water when replanting.

Division

The best and easiest time to divide is when the shoots start appearing in the spring. Although they too can be divided all though the growing season . If you decide to divide other that spring. Make sure they get adequate moisture, as they will need more care and water at these times of the year.

Here are some basic suggestions on how to do this.

A good time to divide and plant is on a cloudy day or when rain is in the forecast.

Another tip when moving leafed out hostas divisions is to remove the leaves when planting. This way all the energy will go into the roots to form new shoots at a quicker rate.

When digging up a hosta to divide, be careful to not damage the plant. Make sure and dig down deep enough to get most of the roots.

Also , you can just dig up the partial clump . Take your spade and pry up on the outer side of the clump.. Some will come loose, and sometimes the whole clump wants to come

up.. Just use your best judgment.

Loosen soil from all sides of the hosta, lift up on the shovel just slightly to loosen the roots.. they should come out.

Once you get the plant out of the soil, shake off excess dirt , you can also use a hose and wash them clean. Or I have swished them around in a bucket of water. This works really well.

Now you will be able to see the crown and roots. You will want to divide where there is a eye. Make sure there is roots attached at this section.. Sometimes they are easily pulled apart, and other times you may have to take a knife and cut.

Make sure your knife is disinfected with 20% bleach solution. To help from spreading disease. Cut to the center of the crown on your first cut, then if you need to cut more sections, do so but make sure you have at least one eye and a good amount of roots attached.

By Seed

Hostas can also be started from seed, but the downside of

this is it may not be what you have hoped for.. They do not come true from seed, (another way to put this) is they will not look like their parent plant. The quality of the plant will not be anything like the original species.

I know a lot of people love to try these from seed.. It can be fun and challenging at the same time.. In my opinion if you want a nice plant sooner it is a better decision to buy a plant already started in a pot or by division. It will take off much faster and produce a nice mounded plant in a few years if left alone.

If you would like to venture into starting from seed , then keep on reading.

Collecting and Starting From Seed

Hosta lovers like to grow hosta seeds. If you wish to collect the seed yourself, do not dead head the flower stems from your hostas and you will notice that seed pods result. If left to mature and turn tan in color, these pods are usually ripe. In October, collect the pods and when you open them, the seeds should be black.

It does not take long before a hosta enthusiast will cross-pollinate some plants. Making your own new hosta hybrids is the most exciting, challenging, and rewarding hosta game of all. A hybrid is created when pollen from the anthers of one flower is placed on the stigmatic surface of the flower from a different plant.

RULES OF THUMB IN BREEDING HOSTAS

The following refers to the color in the center of the leaf. The margin color is irrelevant.

1. Hosta seeds do not usually come true to the parent.
2. Solid color pod parents usually produce monochrome seedlings.
3. Green hostas will usually produce green offspring except 1 in 100 variegated or gold seedlings may occur. If the parent has *H. sieboldiana* in its background some blue seedlings are also likely.
4. The variegation of a leaf is decided maternally a streaked leaf pod parent will often produce a high number of variegated seedlings.

Edged variegated hostas will NOT produce variegated

offspring except in 1 in 100 rarities.

5. Blue hostas will produce some blue, some green, and some gold offspring and the gold offspring may be lutescent or viridescent along with the chance of a variegated seedling.

6. Blue hostas will produce some blue, some green, and some gold offspring and the gold offspring may be lutescent or viridescent along with the chance of a variegated seedling.

7. Gold hostas will produce some blue, some green, and some gold offspring that will be lutescent and viridescent. If there is *H. sieboldiana* in the background of either parent, blue seedlings are not likely.

8. Only hostas that have white streaks in the center of the leaf will reliably produce variegated offspring sometimes as frequently as the 1 in 100 oddity. Hostas with speckled centers seem to regularly produce speckled seedlings.

9. White centered hostas will produce all white hostas that usually die in the seed pots due to a lack of chlorophyll however these parents will also produce green seedlings as well, if the plant is fertile. Some white-centered plants give odd seedlings.

POLLINATION TECHNIQUES

The easiest method to pollinate hostas is to let bees do it for you. Some well known hosta hybridizers follow this method. They put plant varieties they want cross-pollinated in close proximity to each other. If they bloom at the same time, bees do a fairly good job of crossing the pollen from plant to plant within this block. However, since bees usually seek the nectar from one plant completely, before going on to the next plant, if you want 100% accurate cross pollination, the plants should be in a greenhouse environment or you must remove the flower petals and pollen sacs (stamens) just before flowers open. Some breeders use tweezers to apply the actual pollen sac from one flower onto another, while others use artist's brushes.

Going out an hour after sunrise and doing pollination on newly opened flowers, is the best method of doing crosses. However, keep in mind that bumblebees usually start flying at 5 AM. Trying to pollinate in midday to late afternoon is not practical, since the bees already done the pollination for you.

COLLECTING SEED

Collecting, drying and cleaning hosta seed is not difficult. When one sees pods on flower scapes, the first question coming to mind is "When will these pods be ripe enough to harvest the seed?" Generally speaking, it takes at least thirty days, depending on variety and environment for seeds to be fully ripe, even if the pods are still green. The best way to know when to collect the seed is watching the bottom pods. When the pods start changing color towards a dark brown, they are ripe. When the pod starts to split open, the seed should be collected. If left for days after pods have split open, the seed will fall on the ground and be lost.

After the seed pods have all developed (at least 3 weeks after the last bloom has faded), some people prefer to cut the whole spike, drop it inside a brown paper bag and place it in a cool dry room to dry out completely. Using regular sheets of paper with the edges folded up boxlike; the collected pods can be dumped inside. Drying seed inside the house, where it is warm and dry, results in pods splitting open within two or three weeks. Dumping the seedpods into a box and shaking with some enthusiasm will

result in seeds coming out of pods. Dumping the seeds onto a spaghetti strainer, having 1/4 inch holes, results in seed falling through and the pods remaining behind.

However, if you are hybridizing, each pod must be treated separately and kept with a label indicating the pod x pollen parents. It is important to have good labels when working with hosta seedlings, since it can take as long as six years before the seedlings are at their mature stage. Using plastic labels, and writing on these with a waterproof marker is not nearly good enough. Outdoor elements make such a label unreadable. The sun's rays make the plastic brittle and then they break. Aluminum labels will not rust and will last forever. You can scratch your information right into aluminum labels with a nail or a carbide tip 'Scriber'.

The seed is now ready for sowing. If you do not plan to sow immediately, put the seed in the plastic film canister, then label and seal it. Plastic film cartridge containers, available free from any film shop, are ideal for seed storage. They hold 1000 to 1500 hosta seeds and sowing a full film canister into each standard-sized flat is about the right

amount. Place the containers in a cool environment. Some nurseries will store their seed in the freezer so it remains fresh.

Hostas, being the perennials they are make this pleasure a lasting experience. New developing characteristics appear each succeeding year as the hybrids reach maturity.

STARTING HOSTA SEED INDOORS

Growing hosta seed is a simple procedure. Hosta seed sprout nicely indoors, under normal house conditions, with temperatures running 60° to 70°F (20°C).

One rule that needs special attention is that your growing medium must be sterile. Pathogens are present in all outdoor soil, so you should not use soil from your garden without sterilization first. Sowing containers or flats, and any other materials used with the sowing, should also be clean and sterile. If you use an unwashed flat, which was lying around outside, it will likely have a white mold that will grow on the soil surface, and when the seeds sprout, plants will damp off. There is a product called 'No Damp'.

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A few drops of this chemical, in the water you use to wet the soil could make the difference between success and failure. The flat can also be washed with a 90% water - 10% bleach solution to kill dry molds on the container. After washing thoroughly, rinse with hot water.

Potting soils are available at garden centers and it is better to buy these rather than, try to make your own from garden soil. Three basic soilless ingredients that are in most potting soils are shredded peat moss, vermiculite, and perlite. You can mix your own potting soil by purchasing a bag of each of the ingredients mentioned and adding them in equal amounts to a large container. It is best to use course grades of vermiculite and perlite with the finely shredded peat moss rather than fine particles of every ingredient. Other experts mix equal parts of peat and perlite for the growing medium and cover the seed with a 1/4 in. layer of vermiculite.

A "standard greenhouse flat" measuring 11 inches wide, 22 inches in length, and about 3 inches deep (28 x 56 x 8 cm) can be considered an excellent sowing container. Your flats must have holes in the bottom for proper drainage, root

aeration, and bottom watering.

Also available, are plastic sowing tray inserts having 10 to 20 preformed rows to sow seed into and these fit nicely inside the standard greenhouse flat. A clear plastic dome is also available.

A good tip to simplify watering is to place your flat inside a sealed plastic bag. Your sowing is then inside a miniature greenhouse. This "incubation chamber" maintains humidity around your sowing so you will not need to water again until seedlings require transplanting. This incubation chamber is rather tricky to do since everything sealed inside the bag must be sterile. Any fungus or virus present in this sealed environment will lead to mildew growth and damp-off.

When you are done planting, the seed flats must be misted with water to thoroughly soak the seed. As soon as you plant the seeds, label the container or put a plant marker in the seed tray. A fine tipped permanent marker will identify the plant name, and seed source. You will be surprised how quickly you can forget what you just planted. When you sow hosta seed, keep in mind, that germination

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from variety to variety is very irregular and there are not many varieties that provide 80% seed germination.

Therefore, sprinkle the seed thickly since you will more likely be getting one plant for every five seeds sown.

Folding a thin piece of cardboard in half, pouring seed into the fold, and then tapping it with your finger is an easy method of sowing.

Soil temperature plays an important role as to how long it will take the seed to sprout and whether the seed will sprout at all. Soil temperatures tend to run 5 to 10 degrees cooler than the air temperature in a room.

In temperatures of 60° to 70°F (20°C), the germination time for hosta seed will be about two weeks. Cooler rooms will greatly increase the germination period.

Hosta seed does not require light to assist sprouting; therefore, you can place your flats in a warm, dark area of your house. When you see sprouts showing and breaking the sod soil surface, place the containers under fluorescent lights.

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You cannot grow seedlings indefinitely in the incubated state. If you are using a soil less growing medium, you will need to open your mini greenhouse, mist plants with water soluble fertilizer, and reseal the sowing again to hold moisture and prevent rapid dry out. You can transplant to your garden directly from your flats. This will save transplanting hassles and maximize your production.

Using shallow soil in a flat, results in roots reaching the sides and bottom of the flat quickly; and this results in rapid plant growth above the soil. If, on the other hand, you use a deep flat most of the growing energy will be directed to root growth. You are better off to sprout seeds in shallow soil since this provides faster growth of plant tissue above the soil.

There are two ways to grow seedlings: 1). Professional Style - which is to produce plants as quickly as possible by doing anything and everything to maximize growth and 2). Amateur Style - which is not being in a hurry. This is the most cost effective. The amateurs just want to start some seedlings as cheaply as possible having no flowering deadlines in mind. They want to grow some starter plants

to move outdoors later.

The professional hosta seed growers use continuous light that is turned on when sprouts are coming through the soil. Lights run continuously until the seedlings are moved to an outdoor environment. Hosta seedlings do not need a night time rest period, so if the lights are on 24/7, you will gain 3 - 9 months of additional growth by the time they are set outside. Any hosta seedling can bloom seven to eight months later and hence, provides the opportunity for hybridizers to get the next seed generation in a given year. Most professional growers like to transplant in uniform batches, so they wait until most of the seed has germinated and the plants have developed second leaves. Amateurs however, will often transplant each seedling as the first leaves have fully developed.

Once the seedlings are transplanted, the soil should be top dressed with a 1/4 inch layer of sharp sand to discourage gnats and mildew. After watering the transplants from the top, all future watering should be from the bottom. Fertilize only after the third leaf has appeared.

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Secondhand fluorescent bulbs are good enough. Here is a trick to maximize light reflection. Go to any hydroponics shop and purchase some mirrored foil to line the sides around your growing area. This will maximize light reflection. Using such reflectors permits you to set the fluorescent light bulbs two to three feet above your growing bench and triple your growing area. In addition, if twelve hours of light is too costly, you can drop down to six or eight hours per day, since all light is contained within the growing area.

Once the air temperature is consistently above 50° F (10° C), you can plant your new seedlings outdoors.

However, before that; the seedlings should be "hardened off". This means setting the flats in shade for a couple of hours each day for 4 days, then extending the outdoor experience an hour each day until the plants are left outside all day long. If any of the plants are going into the sunlight, they should be exposed to morning sun first and that should be increased every day as well. Once the seedlings have gone through this process, they are tough enough to be transplanted with a minimum amount of transplant shock.

HOSTA SEED OUTDOORS

An alternative to this indoor planting process is to sow the seed outdoors where they will sprout soon as the soil temperature becomes 50° F (10° C). This process begins by putting a two to three inch layer of peat moss over your garden soil to provide a good mulch against weed seed and to provide an excellent germinating base for your hosta seed. Hosta seedlings sown and sprouted outdoors should grow large enough to survive the winter climate in one season. The biggest problem, with outdoor sowing, is weed seeds also sprout and weeding can be a pain. Otherwise it's an almost free and easy method of growing hosta seedlings.

It is exciting to sow seed and watch new life sprout forth. Hostas, being the perennials they are, make this pleasure a lasting experience. Surely this is somewhere near the top of the list of "having fun"!

[Article contributed by: Perfect Perennials](#)

Tissue Culture

This article perhaps will be more for the expert, but it gives you some idea how tissue culture is achieved.

I have ordered these types of plants, very reasonable to buy, and they seem to do pretty well once they get their roots established.

Tissue Culture Explained

Set the picture in your mind ... think of a single eye of a hosta as an artichoke There is a bud under every junction of the leaf at the crown the first ones are visible to the naked eye ... as they are now swelling for next year as you remove more leaves, they get smaller and smaller ... these are dormant buds ... they may never become undormant ... or should I say dominant ...

A Tissue Cultur'er will take a bud strip it of all leaves ... sterilize the bee-gee-bees out of it and the work station... and put it in a beaker with food and hormones ... at this stage the hormones will tell the bud to unlock the dormant

buds They will come back after a given period of time ... and there will be all these little ex-plants on the bud maybe the a sixteenth by 1/8th inch

They will then take these off and put them in a new beaker with a new hormone to cause root growth if there was too much budding hormone the plant can continue to force dormant buds all thru the growth cycle ... the balance on all these hormones is very delicate They put them under the lights for another time period ... and then move them up to cell packs ...

Some Tissue Cultur'er sell them now as tiny, tiny runts ... there is barely anyway to tell if the plant is true to name as they are barely bigger than your thumb at this time Other Tissue Cultur'er will grow them up thru 2x4 inch cell packs ... these Tissue Cultur'er provide the customer a 6 inch plant with multiple leaves ... and we can be pretty sure they are true to name ..

Contributed by Ken Adrian

Chapter 5

Most Popular Hostas and Descriptions

Conditions and climate area will affect how large your hosta grows.

Sum and Substance- The immense leaves of the classic "Sum and Substance" make it the most popular gold hosta ever introduced. An idea specimen or background plant, some sun is required to draw out the best coloration. Lavender flowers compliment the foliage in mid summer. 2004 Hosta of the Year- Shade to part sun. Rapid growth to 2-3 H and spreading to a mammoth 5- 6 ft W

Great Expectations-(natural sport of sieboldiana Elegans) A specimen that will live up to its name! Beautiful large yellow puckered leaves are edged by wide irregular margins of blue and light green. Clusters of white flowers mid-summer. One of the most beautiful hostas. This hosta is a slow grower from my experience, but worth having. Plant will grow to 24" height by 50" wide.

Sagae- This upright vase-shaped, large hosta with a satiny blue-gray leaf and a very wide creamy border remains the

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finest and most dramatic variegated hosta ever introduced! The pale lavender flowers top the 6' wide clump on 54" scapes in summer. 24 in tall

Gold Standard-:(sport of Blue Fortunei) Hosta 'Gold Standard' has a medium growth rate. Golden yellow green leaves with green margins. Lavender flowers. Will grow in shade to 75% morning sun. This Hosta will grow to 24" height by 30" wide.

Francis Williams-:(sport of sieboldiana Elegans) The Hosta 'Francis Williams', Hosta sieboldiana, is a large Hosta with wide yellow margins that surround blue-green centers, making it very striking. The white flowers bloom from July to August, however, Hosta's are not known only for their flowers. With a plant height of 24" and a spread of 48-60", Hosta's provide bright color in shade with wonderful foliage.

Olive Bailey Langdon- An improved 'Frances Williams.' Nicely puckered, large round blue/green leaves with gold and cream edge. White flowers in early June. Plant size 28

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H x 60W

montana Aureomarginata- The large leaves are 15" long x 8" wide. The leaf margin is bright gold with a green center. The plant holds its color all season. Grows 6' wide x 27" tall

Patriot-(Sport of Francee) This Sport of 'Francee' has the same dark green centers and beautiful form but it has a much wider margin that is striking and crisp. Lavender flowers early to mid-summer. A favorite Grows 50" wide x 23" tall.

Krossa Regal- Shimmering, frosty-blue upright foliage makes this perennial a standout in the shade garden. Pale lavender flowers are displayed on 5 feet tall stalks above the foliage. Herbaceous perennial. Partial to full shade. Moderate grower to 30" tall, clumps to 2 ft wide.

Love Pat-Striking blue, corrugated foliage with cupped leaves and white flowers makes this hosta stand out. Countless blue-leaved hostas are on the market, but this

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one has withstood the test of time and continues to be admired in our shade gardens. Plant with *Amsonia hubrechtii* for spring and fall interest. The yellow fall color of the *Amsonia* contrasts nicely with the blue foliage of 'Love Pat'. Grows to 20" spreads 18-24 Medium.

Halcyon-a vigorous grower and is known as one of the best blue Hostas around. The plant will grow to a height of 16 inches high and 48 inches wide with deep blue-green leaves. Halcyon Hosta makes an excellent specimen plant in the garden and will add interest and excitement to a dull garden. 'Halcyon' will bloom on 28" scapes from late July to mid August, bloom color is blue to lavender.

Blue Angel-The biggest hosta in the variety trial, 'Blue Angel' never fails to attract attention (like traffic-stopping attention). It has huge, blue-grey leaves, and the three plants make a circle 4 feet across! In the summer, this rich mound of foliage is topped and accented with spikes of large, pure white flowers. plant 18"- 28" tall , spreads 36-48 in.

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Tokudama Aureonebulosa-This old Japanese cultivar is found in virtually every established US hosta garden...and with good reason. The thick, corrugated, golden leaves are surrounded by a wide blue edge...SPECTABULOUS! In early summer, the 42" wide clumps are topped with near-white flowers on 18" tall scapes.

Golden Tiara-(sport of nakaiana seedling) The Hosta 'Golden Tiara' has heart-shaped green leaves with wide chartreuse and white margins foliage, making it very striking. The dusky lavender flowers bloom from July to August, however, Hosta's are not only known for their flowers. With a plant height of 12" and a spread of 24-36", 'Golden Tiara' provides bright color in shade with wonderful foliage.

sieboldiana Elegans- The grandfather of large blue hostas is a gem...thick, round, corrugated blue leaves, developing eventually into a 5' wide clump. In spring, the clump is topped with white flowers with a lavender blush, sitting just above the foliage...a large clump is truly a sight to behold! 24" in tall

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Sun Power- Large Hosta that turns brilliant gold in full sun. In areas with harsher light, give it morning sun in order to enjoy the glow of its ruffled foliage. Lavender flowers in July and August. plant 18"-28" tall , spacing 4-6 ft

Francee- Hosta 'Francee' has a medium growth rate. Green heart shaped leaves with white margins. Lavender flowers. Will grow in shade to 50% morning sun. Plants will grow to 21 inches in height by 45 inches wide

On Stage- (sport of H. Montana.) Chartreuse/yellow margins that streak irregularly toward the midrib. Center turns creamy white if grown in some sun. Also known as 'Cho Ko Nishiki.' Lavender flowers in late June. This is just about the last plant to emerge in the spring. plant 6"-10" tall spacing 24-36 in.

Regal Splendor- (Krossa Regal sport) 2003 American Hosta Growers Hosta of the Year. Visiting our new supplier of Hosta's for this season I was awestruck by the remarkable height (5 foot) of the flowering stalks of lavender purple flowers that adorned this beautiful vase shaped plant. No wonder it's named Regal. The plant itself has shiny blue leaves with an excellent creamy yellow

border. The grower tells me it grows to a 3 foot wide clump. Fragrant Bouquet -This charmer is composed of shiny, apple-green foliage with a very wide creamy margin.

H. 'Fragrant Bouquet' forms a vigorous sun tolerant 4' wide clump, 24" spread , topped in late summer with 2' tall scapes of large, very fragrant, near white flowers...a true fragrant bouquet!

Hostas of the Year

1996 'So Sweet'

1997 'Patriot'

1998 'Fragrant Bouquet'

1999 'Paul's Glory'

2000 'Sagae'

2001 'June'

2002 'Guacamole'

2003 'Regal Splendor'

2004 'Sum and Substance'

2005 'Striptease'

Chapter 6

Hosta- Reverting or Sporting

What is a Sport ?

Have you often heard of the phrase this hosta is a sport of such and such variety ? Well, some hostas have to come from some other variety. You are probably wondering where new hostas come from. Would it surprise you to know that well over half of the hostas in the market were found as "sports" or mutations on existing cultivars.

A sport is where a hosta will actually mutate into a different color leaf pattern. For example a gold hosta may sport to a gold with a green edge, or any other number of color pattern changes. The reason that so many sports are found is that hostas are genetically fairly unstable.

A new term has been coined for folks who intentionally indulge in this new and wildly popular pastime of looking through nurseries for these hosta mutations known as "sport fishermen"

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As I walk out into my hosta beds, I am noticing some changes in some of the hostas. Although they look healthy , there seems to look like there is two plants within one hosta.. The leaves have different colors , some which are green and some are variegated.. Hmm.. I ask myself (yes I talk to myself occasionally) What is going on here? As I look further on the hostas that were variegated last year, have come back all green this year. So I start to ask questions.

To more understand the process these hosta go through, and what makes this happen. Is it a fluke of nature , or is this common in hostas today.

Take a walk outside and look around your beds. Do you see any like I have described? It seems to happen only on some varieties. I , personally have only had a few that I noticed this year.

Here is a article that will give you the insight and knowledge of why this happens . To make you better understand the hosta world. Go ahead and read the

information on Hostas reverting or sporting . This is a great article and I am happy to share it with you.

An Informed look at reverting, sporting: Hybrids don't
revert

By WARREN POLLOCK

Terms are:

Hybrid - a seedling from two distinct genotypes (Genotype = the genetic makeup of a plant.)

Sport - an individual arising from the result of mutation, chimeral rearrangement, or mitotic recombination that is genotypically or phenotypically different from the original individual.

Phenotype = physical appearance.) (It's not necessary here to define chimeral nor mitotic.)

To these definitions we need to add another, also from the AHS glossary:

Revert - change of a variegated sport back to its original

solid color predecessor.

A natural and often very frequent characteristic of hostas is that they sport or revert. This occurs with both hybrids and sports, and can be very disconcerting when prized variegated-leaved hostas develop solid-colored leaves.

The distinction I want to make is there is a difference in this characteristic between sports and hybrids, and using "reverting" for hybrids is not technically accurate.

First, sports: If a variegated-leaved hosta originated as a sport of a green leaved hosta and green leaves develop, the plant has reverted (sported back) to its predecessor, that is, its mother plant.

As an example, when the variegated-leaved H. "Frances Williams," a sport of H. sieboldiana "Elegans," develops green (blue) leaves, it has reverted (sported) to its mother plant, H. s. "Elegans." Another example is the variegated-leaved H. "Guardian Angel," a sport of H. "Blue Angel," that changes back (reverts) to its single parent, H. "Blue Angel."

However, if a variegated-leaved sport develops solid-colored leaves that are not the same color as its parent, then the sport has sported, not reverted, to the new hosta and needs a new name. I'll cite H. "Frances Williams" again.

When H. "Frances Williams" develops all-gold leaves - which is not the leaf color of H. s. "Elegans," it has sported (not reverted) to a new hosta called H. "Golden Sunburst."

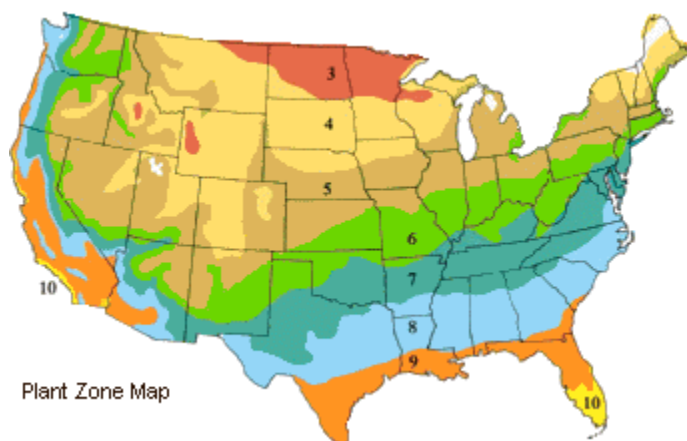
Now, hybrids: When a variegated leaved hybrid develops solid-colored leaves, it is not reverting to its parent because it doesn't have a single parent. A hybrid has the genes of its two distinct parents and cannot change back to one of them. It sports to a non-variegated form of the hybrid itself, and requires a new name.

An example is the popular variegated-leaved H. "Cherry Berry," a seedling (hybrid), that sports to the green-leaved H. "Marashino Cherry."

The bottom line is this: Reverting is sporting - but hybrids do not revert. Sports revert, but they can also sport.

Chapter 7

Knowing Your Zone and Hostas



In making hosta garden plans, or simply garden plans, there are many things you need to consider. First, if you don't know what hardiness zone you're in, check the map. For example, hostas can grow successfully in Zones 3-9.

The plants tend to grow larger and produce more intense, bluer, and greener coloration in colder climates. Their main requirement is a period of dormancy in the winter. It seems that a period of 1.5 to 2 months of average temperatures below 40 degrees will suffice.

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A grower friend asks this question: Do oranges grow where you live? If the answer is yes, then hostas will not do well there. Other shade perennials have other requirements. You can always check with local gardeners and the Cooperative Extension Agent serving your area.

Contributed by : Hosta Farm

Chapter 8

Hostas Categories

Although I do not have all the varieties of hostas listed here . These are some of the more popular available today.

Sun -Tolerant

Although none of these hostas will be truly happy in full sun, Depending on your climate area, these varieties have shown tolerance for afternoon sun and up to 3/4 sun in our gardens.

Abba Dabba Do

Foundling Fragrant Bouquet

Francee

Ginko Craig

Gold Drop

Gold Edger

Goldee

Honeybells

Hoosier Harmony

Invincible
Lemon Lime
Plantaginea
Plantaginea 'Aphrodite'
Plantaginea 'Ming Treasure'
Royal Standard
Royal Super
So Sweet
Sugar and Cream
Sum and Substance
Sum It up
Sumthing Good
Sun Power
Sweet Standard
Pest- Resistant
Sum and Substance
Fragrant Gold
Invincible
Blue Umbrellas

Green Sheen
hypoleuca
Krossa Regal
Leather Sheen
sieboldiana & forms
Silvery Slugproof
Fragrant Flowers

The following hosta varieties have been identified by growers as fragrant. Some are more fragrant than others.

Aqua Velva
Emily Dickinson
Flower Power
Fragrant Blue
Fragrant Bouquet
Fried Bananas
Fried Green Tomatoes
Guacamole
Honeybells
Hoosier Harmony

Invincible

Iron Gate Delight

Moonlight Sonata

plantaginea

plantaginea 'Aphrodite'

plantaginea 'Ming Treasure'

Royal Standard

Royal Super

Savannah

So Sweet

Summer Fragrance

Blue Leaves

Love the blue ones, they really add beautiful contrast among all other colors

Blue Cadet

Abiqua Drinking Gourd

True Blue

Tokudama

sedboldiana 'Elegans

Serena

Moscow Blue

Love Pat

Hadspen Blue

Dorset Blue

Buckshaw Blue

Blue Vision

Blue Seer

Big Daddy

Blue Angel

White-marigated Leaves

Perhaps my favorite varieties

Patriot

Ginkgo Craig

Frosted Jade

Francee

Mountain Snow

Allan P McConnell

Carol Crispula

Green Leaves

Green is good to add color interest

Royal Standard

Sea Drift

Green Acres

Devon Green

Leather Sheen

Yellow Leaves

Yellow is fabulous with all variations

Daybreak

Sun Power

Midas Touch

Fragrant Gold

Birchwood Parky's Gold

Golden Specter

Golden Prayers

Golden Medallion

Yellow-margined Leaves

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Loves this color , it brings out some unique variations

Wide Brim Golden Tiara

Frances Williams

Fortunei Aureomarginata

Radiant Edger

montana Aureomarginata

fluctuans Sagae

Chapter 9

Hostas for Warm Climates

by Tony Avent, Plant Delights Nursery, Inc.

For those in climates of zone 9-10, picking the right hosta can be a daunting task. Many of the hostas that grow well in cooler climates will not fare as well in the deep south.

The key is hostas must have a minimum dormancy requirement of 30 days at temperatures below 43 degrees F. Some hostas perform better than others, due mostly to their reduced winter dormancy requirements. While all hostas will emerge the following spring after a "non winter", they are usually quite weak and proceed to deteriorate during the subsequent season.

The easiest way to determine the dormancy requirements is to observe which hostas emerge the earliest in spring. There is generally at 75 day difference in emergence dates of hostas in spring. Below is a list of those that emerge extremely early and would make good candidates for trialing in warm climates where there is little or no winter chilling.

The dormancy requirements of each hosta relate to which species was used in the breeding of a particular cultivar. Species names are also included in the list, and those names start with small letter. Beside the cultivar names are the species (where known) from which they are derived that account for their low chill requirement.

Green Foliage

Baby Bunting (venusta)
clausa Fall Bouquet (longipes)
Fourth of July (kikutii)
Hirao Splendor (kikutii)
Honeybells (plantaginea)
Invincible (plantaginea)
Jade Cascade (montana)
laevigata
Otome No Ka
pachyscapa
Purple Lady Fingers (clausa)
pycnophylla

Potomac Pride (yingeri, poss. plantaginea)

Raspberry Sorbet

Rippled Honey (plantaginea)

Sweet Bo Peep (plantaginea)

takahashii Gosan

Tortifrons (longipes)

venusta

Waving Wuffles (ventricosa)

yingeri

Variegated Foliage

Anne Arett (sieboldii)

Crested Surf (sieboldii)

Diamond Tiara (nakaiana)

Emily Dickinson (plantaginea)

Fan Dance (sieboldii)

Gala (longipes)

Golden Tiara (nakaiana)

Grand Tiara (nakaiana)

Iron Gate Delight (plantaginea)

kikutii Kifukurin

kifukurin Ko Mame

montana Aureomarginata (montana)

Peedee Gold Flash (sieboldii)

Savannah (plantaginea, sieboldii)

Scooter (sieboldii)

Sea Thunder (sieboldii)

Showboat

So Sweet (plantaginea)

Stiletto (sieboldii)

Sugar and Cream (plantaginea, sieboldii)

Summer Fragrance (plantaginea, sieboldii)

Sweetie (plantaginea)

Verna Jean (sieboldii)

Warwick Edge

Waving Winds (sieboldii)

Gold Foliage

Birchwood Parky's Gold (nakaiana)

Chartreuse Wiggles (sieboldii)

Gold Scepter (nakaiana)

longipes Golden Dwarf

Sweet Tater Pie (yingeri, nakaiana)

Blue Foliage

Blue Belle (longipes)

Blue Blush (longipes)

Silver Bowl

Chapter 10

Companion Plants for Hostas

What are some good companion plants to mix in with Hostas? Well a lot of things comes to my mind. My woodland garden consist of a mixture annuals and perennials.

One of the best annuals for shade that blooms all summer is the impatiens.. These are gorgeous with hostas, because they come in a variety of colors. They also will reseed themselves which is a added benefit. This can make extra plants with no attention or cost to you. Planting tuberous and seed Begonias do great and bloom most of the summer into the fall. The foliage plant Coleus really brings out great colors when planted with hostas.. These come in a lot of different foliage colors from deep shades to lighter shades. I do, however, prefer annuals, as you can not beat the blooming season .

Perennials are reliable and show up every year. The plants I have included in this group are sweet woodruff, lamium,

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coral bells, columbine, ferns, pachysandra and astilbe . These are great for coming back every year but do not have the flower power that the annuals do.

Adding too some Violas Pansies this year in hopes they will spread throughout the woodland area for next years season. What is nice about a woodland garden is I am just letting it pretty much be it's own.. but make sure you weed now and then to keep it looking it's best.

The list below can vary depending on your zone.. Take into consideration this is a filtered shade/ dappled shade area, with some sun peaking through. These are what I have in my woodland garden. They all are doing great!

Perennials

Japanese Painted Fern, Ostrich Fern, Tiarella, Brunnera, Dicentra-bleeding hearts, Pulmonaria- Lung Wort, Heucheras -coral bells, Astible, Asarum, Pachysandra- Japanese Spurge, Foxglove, Aquilegia- Columbine, Viola Pansy- Johnny Jump Up

Ground Cover Perennials

Ajuga, Lamium- Dead Nettle, Galium- Sweet Woodruff,

Lysimachia nummularia- creeping jenny (not the weed)

Annuals

Impatiens, Coleus, Begonias-tuberous , seed begonias,
Lobelia

Chapter 11

Mother Nature- Hail - Hostas

Mother Nature can sneak up on your Hostas. If you have ever had hail destroy your hostas you know that it can be devastating. No one wishes it to happen , but as we all know it is beyond our control. There has been some years that this has happened and it is very upsetting to say the least. Time will repair these beautiful plants , but it will take some patience on your part.

The damage that occurs will affect the large leafed hostas the most. Which makes perfect sense. Depending on how many hostas you have to clean up , will depend on what method works for you.. As you know, if the hostas leaves have been damaged or die , they will regrow.. Don't worry they will!

There is two solutions here:

1. You can either clean up the damage.
2. Or you can just let it remain ugly until new growth appears.

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It will all depend on the amount of hostas you have , and the amount of time you have. If you want to clean all the damage leaves, get a hedge sheers or something to cut with.. You do not want to spread diseases from one hosta to the next. So you may want to have a bucket of 20% bleach solution so you can disinfect the sheers between varieties or plants. If you do not do this and there are diseases already present they will spread to the existing hostas. Better safe then sorry !

Another tip is DO NOT use your lawn mower to mow all the debris, this will only spread more disease if it is already present.. Don't take any chances!

The other alternative is to just leave well alone. They will re grow. If you decide to leave the old debris on top of them. You will noticed that the hostas will not get as big as they would have if they were all free from debris.

It is just a matter of what is best for you .. I would prefer cleaning it up .. because I would not be able to stand the mess until new growth appears.. It would just be a constant

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reminder.

So the end result , your hostas will come back . It is good thing they are so forgiving by the damage Mother Nature can sometimes do.. If this happens to you , it is repairable .

Chapter 12

No Shade -Can you still have Hostas ?

If you live in a area with absolutely no shade. This doesn't mean you can't have hostas. You can build a shade structure, and it isn't as hard as you may think. I have been pondering this ideal, because I am losing some trees to storms, wind. More and more hostas are being exposed to too much hot sun.

Make sure you have that someone handy to help you. Always use treated wood or some other type of material. Use your imagination and come up with a plan. It will also set up a nice focal point in your gardens and add interest.

Below is a good article on one way to make a shade structure. A very important piece of information to consider is the position of the structure to the position of the sun on those host sunny days.

You wouldn't want to get this all constructed and then notice it's position isn't correct so it shades the hostas during the heat of the day.. So make sure this is taken into

account before starting. Each section to my shade shelters have 4 4x4 posts as their support. These legs are not visually intrusive. In fact, their presence gives a strong support for other garden amendments like trellises, hanging basket brackets, ornaments, bird feeders, and the list can probably continue indefinitely.

The box of the top is generally square to rectangular. If you are a gifted craftsman you can make any type of shapes like octagons for example. The material for the box top structure I don't like to skimp on because thin warping lumber will distract from your garden appearance. I do not use lumber less than 2x6's. 2x8's may be preferable if you have a long stretch supported by 2 support posts or plant to hand a lot of weight from your shade shelter top. My largest square top frame is made from 2x6x16 treated lumber. Yes, it covers a bit of an area.

The support material for the shade making material (cloth or lattice) varies on what kind of material you will be using for the shade maker. If you are using shade cloth, hanging beams 4 feet apart is more than sufficient. If using lattice, you may want to reduce the minimum distance to

probably no shorter than 2 feet.

My favorite shade making material is KNITTED shade fabric. If it is cut it will not unravel. WOVEN shade fabric if cut must be mended and will unravel in an instance if not carefully maintained. Shade fabric also can be ordered with different shade percentages from anywhere from 5" shade to 90% shade.

The higher percentage of shade, the higher the cost obviously because more of the material is required to block to sun.

Wooden lattice is also nice looking, supports probably a 50% shade environment on average, but is must more expensive and needs more maintenance. (Gee, am I showing my favorite material??)

KNITTED shade fabric can be ordered with other amenities. Such as side taping and grommets. I highly recommend that if you are using KNITTED shade fabric, to have to sides taped and grommetted. It is a minimal

charge for this generally and is well worth the money and effort.

KNITTED shade fabric can be installed without tape and grommets, but you will need special attachments to grab the fabric to limit attachment stress. This also works well. It is really your preference and how you want the finished product to look.

Chapter 13

Top Ten Hosta Myths

Contributed by Tony Avent

Plant Delights

Myth 1 - If you fertilize hostas they will turn green.

Reality - We see many consumers that still believe this. Obviously, this was perpetuated when H. 'Undulata' was the prevalent hosta sold and nurseries didn't understand the process of viridescence. Hostas are actually very heavy feeders.

Myth 2 - Hostas are very drought tolerant.

Reality - Hostas hate dry soils. While they might last through one drought, a continuing drought will result in an irreversible decline and often a dry rot or disintegration of the crown. A hosta that continues to grow well in what seems like dry soil has actually sent roots deep enough to find extra moisture.

Myth 3 - Hostas need to be regularly divided like daylilies

Reality- This myth is probably perpetuated by neighbors who simply want divisions for themselves.

Myth 4 - You can get rid of foliar nematodes by picking off the leaves that show damage.

Reality - I've had several nurserymen try to pass this one off as true. I guess you can convince yourself of anything if you want to believe it bad enough.

The fact is that plants can be filled with nematodes and show no visible symptoms. The plants will still spread nematodes to other nearby plants...usually within 3 feet. The display of symptoms is cultivar specific. The only way to be sure that a particular plant is clean is with a nematode test.

Myth 5 - Hostas can only be divided in spring.

Reality - In fact, many commercial growers perform most of their dividing chores in the summer.

Myth 6 - Hostas prefer shade.

Reality - While a few wild hosta species actually grow in shade, the majority prefer some sun. In the wild, most hosta grow either on rock cliffs or in sunny meadows...often with daylilies.

Myth 7 - When I have a mutation on a hosta, I should give it a name and introduce it.

Reality - Ideally, hostas should only be named and introduced if they are an improvement. A green reversion of a variegated hosta is almost never an improvement. Such introductions serve only to confuse the public and dilute the hosta trade with junk.

Myth 8 - The myth of Originator's Stock (OS) as a different or better plant.

Reality - This is a brilliant marketing gimmick, where hosta vendors have convinced customers that one particular division is worth 10 times another identical looking division. This "con" is based on the premise that the size of knife used to divide the clump somehow makes the clump better or different. Even normally intelligent people buy into this

one.

It doesn't matter if 100 different people handle or divide the clump. Either the plant being sold is the correct cultivar as named by the introducer or it is not.

Myth 9 - Tissue culture hostas are inherently bad.

Reality - Nothing could be further from the truth.

Without tissue culture, we would only have a fraction of the cultivars that are available today. Tissue culture is one of the best methods for cleaning up a hosta with foliar nematodes. Just like with garden divisions, all reverted shoots must be removed and discarded. Obviously there are going to be more reversions in tissue culture, so attention to detail is critical. The bad reputation of tissue culture is due to labs that had poor quality control procedures.

Myth 10 - I like hostas, so I should start a hosta nursery and make lots of money.

Reality - This one sounds really good in theory, but if an accountant took a look at the books of most small hosta

nurseries, they would recommend that you instead consider a passbook savings account or an extra job flipping burgers. The profit margins that seem huge to the public simply don't exist...especially now that the days of \$200 hosta introductions are long gone. If a hosta is grown to a quality size, it will be one of the least profitable perennial crops that you can grow.

Chapter 14

Suggestions - Tips - Uses for Hostas

Natures Mulch

A good mulch for Hosta could be right in your backyard. You noticed around your evergreen trees , such as pine or spruce, you will have fallen needles on the ground below them. These needles make a great mulch! They look attractive, there free, they enrich the soil . Rake them up and spread around your beds. What better way to use what nature's gives us.

A good tip and what I will be doing at the very start of the spring season is lay mulch down before anything comes up. Not to heavy but just enough so I do not have to do it when the plants are present. I believe it will make my work easier. You also could do this in the fall after everything has died back and went dormant.

Hostas in Containers Have you ever thought of placing a Hosta in a container.. If you have limited space or just

want to try something a little different, then you must give this a try. I have done this several times with great success.. You want to make sure it is deep enough to winter in.. The pot should have good drainage holes at the bottom.

You can use any pots but I prefer deeper pots so they can winter nicely in them. Place some compost at the bottom of the pot . Make sure you use a soil that drains well.. Do not use just topsoil this will be to heavy in a pot and may rot the hostas. Try this mix, a mix of these three ingredients: peat moss, vermiculite, and perlite. You can buy it already mixed. I like to add this to some topsoil also , so it does not dry out so fast and also because it makes the pot heavier and will not tip over.

When placing hostas in pots they are going to require more moisture than if they were planted in the ground.. You may need to water them every other day depending on your area and moisture.

These will stay nice all summer until they die back in the cold regions. After they die back I usually place them in a

shed somewhere outside, such as a garage.. Just make sure it stays cold enough for them to stay dormant. Check them about once a month. If the soil is dry, a very light watering is all that is needed. When spring arrives I bring them out , clean up the debris in the pot and watch them appear.

Landscaping with Hostas

Hosta are an all-time favorite for landscaping. With all the color variations it is possible to create a beautiful shade garden. First you need to find a area with some morning sun, dappled shade, afternoon shade. Make sure your soil is good for placing Hostas, if you don't know do a ph test. You also can always improve your soil with humus and rotted manure.. Start small because you can get overwhelmed in a hurry. Do not place your Hostas to close together.

The mistake that is easily made is not leaving enough room for them to grow to their potential growth.. I usually like to leave at least 3-5 ft. depending on the hosta .

You will want to to add different shades of colors.. to add contrast and interest.. The size is also important.. It is nice to have a large hosta as a focal point or in the background . I like to place these towards the middle. Or to add even more interest place a large hosta near the front . Just do not let it hide some of the smaller hostas.. Space them far enough apart so the large hosta will not cover it in a few years. Just have fun! There is no mistakes here.. If you decide you don't like it somewhere just dig it and place it somewhere else. Like I said before , Hosta are pretty forgiving!

Tips for Shipping Divided Hostas

Follow the how to make divisions in Chapter 4 Multiplying your Hostas Beds on page 33-34. After you have made some divisions from a larger hostas.

You may figure you have more than you can possibly use. Why not send them to a friend , relative or possibly reselling them on auctions. This is a gift that keeps on giving.

When you decide to ship these plants. It will be best to go priority mail so it gets to it's destination quicker. If you are going to ship immediately , do so by wrapping the roots in moistened paper towels or newspaper. Let the excess moisture run off. Do not cover the foliage, just the roots.. at this time.

Now you may place a plastic bag around them. Use a rubberband to tie the bag so it doesn't come loose. The next thing to do will be to roll the entire plant in a newspaper. Do this carefully to not injure the foliage.. Cover foliage and all. Let the ends open if desired. Either tape the paper together or place a rubber band around the whole thing.

When placing in your box, make sure to use some packing such as shredded paper, packing peanuts, anything to cushion the package. That's about it!

Protect Against Disease

Again I can't express this enough.. A good rule of thumb when dividing hostas is to make sure you use a clean

disease free spade otherwise diseases can be spread from one hosta to another.. This means for each different variety clean your spade with a mixture of bleach and water.

Scorched Leaves

Do you notice your Hosta getting brown blotches on it leaves looks like sunburn.. Most of the time it is caused by too much sun or wind.. So make sure you have them placed in a good area.. No afternoon sun. You will usually notice this in the summer as the temperature starts heating up.

Watering in the Fall

If you are having a dry spell in your area. It is a good idea, to water your hostas good before winter arrives. This gives the hostas an opportunity to expand their roots and grow. You want them to settled in for the hard winters. I begin watering in Sept and Oct . You especially want to do this for newly planted hostas or ones you have divided .. This is very important, otherwise next years hostas may not be very productive.

Labeling your Hostas

When you start to get a good collection of hostas you are going to want to either label them , or map it down on paper.. I would suggest doing both.. You want to use something that isnt going to be affected by rain. Some ways of doing this are as follows: People paint on rocks and cover it with polyurethane . They then use cheap plastic window blinds cut into pieces, with marker or typed labels covered with clear packing tape. You could Use a 'paint marker' to label your hostas. You can buy the expensive copper plates with wire stakes. These really look professional and seem to handle the weather quite well.

Garden Walks

The best way to get some great ideas is to tour some other gardens. Every year you can find out where they are having garden walks. They are inexpensive and you usually get to tour them in an afternoon. You can possibly contact your local garden club to find out the dates in your area. Take along a pad and pen and take notes. You will be amazed at what you will learn. Make sure to ask questions if you want to know a particular name of a plant.

Chapter 15

Gardening Articles

The Hosta - A Shade Loving Perennial

By Bonnie Carrier

Bonnie P. Carrier is the creator of Savvy Home Decorating & Savvy Outdoor Decorating. She is the mother to two grown daughters and a very spoiled 4yr old Blue Merle Sheltie named Toby.

Stop by for information and ideas for both inside and outside your home.

My first introductions to Hostas were four small green and white clumps edging a small section of my mother- in- laws driveway. I was not terribly impressed, they looked more like scraggly lettuce plants with a few sticks growing out of the middle plus their size never seemed to change from year to year.

Fast forward a few years, I now had my own home with visions of gorgeous gardens blooming in my head. The

property was surrounded by trees, which we loved not only for the privacy but the house was kept quite cool during the hot summer months. I soon discovered that all that shade may have been good for keeping our home and family cool it wasn't great for growing certain perennials as most I'd looked at all said full sun.

During trips to local nurseries looking for shade loving plants I kept noticing Hostas, thinking "Oh, great spindly lettuce" I went ahead and purchased two plants, I was desperate to plant something along the perimeter of those wonderful trees.

The two green plants with white stripes found a home next to a simple concrete birdbath, one on either side. During the summer I weeded around them, watered and feed them every two weeks but didn't really hold much hope that they would turn into anything special.

The following Spring during winter clean up I noticed small green shoots popping up beside the birdbath but again didn't get to excited. Well, by mid summer those two had

tripled in size were very full and looked absolutely beautiful.

I began to rethink my first impression of Hostas and after doing some research discovered there are hundreds - actually more than 2600- of varieties available. Leaf colors include green, blue, gold and white. The leaves can either be a solid color or variegated with a second color mixed in the center or along the edges.

Several plants in various shades can really dress up a shady corner. By mixing several of the brighter hues along with darker shades can be quite dramatic.

Another way to use Hostas is by mixing them with other shade plants, which can include Perennials such as Astilbe, Bleeding Heart and Japanese Painted Ferns also, Shrubs like Azalea, Hydrangea or Sweet Pepperbush.

You're not limited to using shade plants just within wooded areas or around trees. For instance, a partly shaded walk way along side your home would make a perfect candidate

for this combination, plant the shrubs or tall perennials along the back next to the house with the Hostas placed in front can look quite stunning.

A large shade tree in our front yard looked like a good candidate for dressing up and because of the success of the birdbath Hostas of course I decided to try more around the tree. Using a tiller we formed a circle around the base and mixed good topsoil into the existing dirt, edged the circle with bricks, all that was need now were the plants.

I spent several days' scouring local nurseries looking for Hostas in different colors and leaf textures. Armed with six new plants of moderate size - I'm one of those impatient gardeners - I staggered them around the tree, put down a thick layer of cedar mulch then for decorative accent added several groups of unusual looking rocks found in the woods, a family of resin squirrels also found a home sitting around the plants.

It really looked great and I just knew by the following year

with regular watering and feeding those six plants would be larger, fuller and gorgeous.

Several days later while doing my daily walk around to look for anything new, I noticed something strange around the tree in the front yard. Getting closer things really looked funny.

It took a moment to realize there were no longer leafy plants growing there, just a bunch of green stems.

This was how I learned that Hostas happen to be a favorite before dinner snack for deer.

Therefore my advice is if you live in an area populated with those brown eyed beauties and your going to give Hosta growing a go make sure to spray them with a safe repellent periodically from their emergence in the spring until the first frost in the fall. So for those shady areas think about planting Hostas, after all they are a whole lot more than scraggly looking lettuce.

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This next article is really interesting. I really didn't give much thought to colors and their meanings. Although I have heard of this being applied.

Colour in the Garden

By Gwen Stewart

To find out more about the books and subscribe to her free Newsletter visit

[Gwens Healing Garden](#)

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Article Source:

Colour affects our emotions, moods, physical, and spiritual well-being. It has a significant effect on everything we eat, drink, and touch and influences our physical environment including our home, office, and garden. Colour reflects our personalities.

The colours we prefer for home interiors carried out to the garden, provide continuity between our interior and exterior living spaces.

Colours are a useful tool in creating different moods in the landscape. In order to effectively create with colour it is important to understand the meaning of the different colours.

Red creates vitality. It tends to command attention and will make areas seem smaller. It is a good colour for dining areas as it increases appetite. It creates a feeling of warmth, movement, and drama. For those who may find it too stimulating, use pink instead. Red plants to use in the shade include begonia, coleus, and impatiens. In sunny areas use salvia or verbenas. To augment your plantings use glazed pots, red sandstone gravel, red clay bricks or tiles will bring that vitality to your landscape.

Orange means optimism. It is primarily the colour of joy. It is warm, welcoming, just bursting with earthly energy. Orange flowers have been known since ancient times as a

cure for depression. It is a good colour to use when you have experienced trauma or loss. Plants to try in the shade include begonia, coleus and impatiens. For sunny areas try honeysuckle and marigolds. Materials to augment plantings include terracotta pots, ornaments, rusting metal, golden gravel, and clay bricks.

Yellow means contentment. It represents the power of the sun, increases the feeling of space. It brings a sense of well-being to the garden even on grey, dull days. Golden foliage will often scorch in full sun so plant in dappled shade. Many of the grey or silver-leafed plants have yellow flowers.

Plants to grow in shade include begonias, coleus, and hostas. For sunny areas try day lilies, potentilla and yarrow. Materials to augment plantings include reconstituted stone containers, ornaments, golden sandstone gravel, and buff paving.

Green means growth. It is a primary healing colour. Green Foliage on its own will create a tranquil impression. It is

restful and relaxing as it offers sanctuary from the outside world. Using foliage colours and architectural leaves gives structure and form to any garden space. Plants for shady areas include coleus, ferns, and hosta. Use junipers, grasses and conifers in sunny areas. To augment plantings use green wood stain on fences and buildings. It is a popular colour for garden furniture, umbrellas, glazed pots, garden ornaments.

Blue means spirit. It is very conducive for meditation. It conveys the peacefulness of sky and ocean. It combines well with many other colours. Use this colour for modern-day stress and anxiety. Blue flowers add depth and strong healing vibrations to a border filled with pink, lilac, and white flowers. Plants for shade include campanula and columbine. For sunny areas, delphinium, lobelia and morning glory. Materials to augment planting include deep blue-grey slate, paving, granite and ceramics with vivid blue glazes.

Violet means calm. It brings a feeling of self-worth. It sometimes appears dull unless plenty of contrast in texture, form, and tone are used. Flowers are particularly useful for protection and for the cleansing vibrations they

give out. It is a rich regal colour that indicates knowledge, self-respect, spirituality, nostalgia, dignity, and wealth. It will help soothe the mind if you are tense. Plants for shady areas include coleus and impatiens.

For sunny areas use aster, butterfly bush and salvia. To augment the planting use glazed pots, dyed fabrics used on garden furniture and umbrellas.

Gwen Nyhus Stewart, B.S.W., M.G., H.T., is an educator, freelance writer, garden consultant, and author of the book *The Healing Garden: A Place Of Peace - Gardening For The Soil, Gardening For The Soul* and the booklet *Non-toxic Alternatives For Everyday Cleaning And Gardening Products*. She owns the website *Gwen's Healing Garden* where you will find lots of free information about gardening for the soil and gardening for the soul.

Chapter 16

Organic Home Recipes

Recipes for Hosta Pests Deer-squirrels - rabbits Repellent

If you live in an highly populated area with deer . Here is more suggestions to keep them away from your plants.

1 gallon water

4 eggs well beaten and strained (so the mixture won't clog the sprayer)

1 - 2 tsp garlic powder

1 - 2 tsp cayenne

1 - 2 oz fish emulsion

Spray on any foliage, trees and the surrounding ground you want to protect. It also seems to repel squirrels and rabbits.

A fence/barrier ten feet in depth

Coyote urine, 'Thirm,' with Wilt-Pruf as a spreader/sticker at half strength

Lifebuoy soap in a mesh bag

Organic SLUGS CONTROLS

When they find your hosta, KILL the little buggers soon with vinegar. Vinegar will not kill or hurt your plants in any way. Its not necessary to be careful how you mix the vinegar. Spray 2 times per week until you cannot find fresh slug damage.

Beer placed in a shallow saucer or frisbee will attract slugs and snails. The alcohol destroys their body tissue and they die. Make sure to sink the saucer in the ground so it is level to the ground.

Coca-Cola placed in a frisbee will attract and kill slugs and snails.

Charcoal briquettes can be broken up in a bag and sprinkled around the border of garden bed to prevent slugs and snails from crossing into garden.

Sandpaper can be placed as a collar at the bottom of plants; slugs and snails will not crawl over it.

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Plant slug and snail resistant plants. These include: begonias, fuchsias, geraniums, and impatiens, as well as stiff leaved plants with highly scented foliage (i.e. lavender, sage, rosemary).

Chapter 17

Making Your Own Compost for Hostas

It's easy to make good compost. Quite a lot of people make some kind of compost, but you couldn't say it's "good". It's no more trouble making a really good product -- in fact it's less trouble, because good compost reduces almost every other kind of gardening problem. So why not get it right in the first place? This guide is about making GOOD compost.

How not to fail

It's a common mistake to use too much water -- it's probably the most common reason for failures. (Others are not enough nitrogen, and, more rarely, no aeration.) The overall moisture content of the assembled pile should be about 60--65%. They say it should be as moist as a wrung-out sponge, which is a good guide if you've put everything through a shredder so it's homogenized and the particle-size is small, but with the usual rough compost materials it's not very useful.

This is typical advice: "Spray the mixed materials with a hose until wet like a sponge but not soggy. Fork it into the bin, spray more water to make sure it is wet enough."

Beginners read such things and end up with a disaster.

When the stuff starts to decay it disintegrates into a slimy, stinking sludge, like what happens to grass clippings if you leave them in a big pile: it gets very hot, and then it dies into a dark green gunge -- much worse if there's manure and kitchen scraps in it! And it's difficult to repair the damage and get it working properly. That's often the end of that particular beginner's composting efforts.

Compost materials are often much wetter than they look at first. Fresh green leaves can be 95% water, but they don't look wet. Kitchen wastes are usually more than 85% water. Spreading fresh greens out and letting them wilt for a day loses a lot of the water, and probably quite a lot of the nitrogen too, unfortunately. Manure is a lot easier to handle if it's on the dry side, which also loses a bit of the nitrogen.

There's another way of going about this.

Greens and browns

Compost materials are assembled in the correct proportion of "Greens" (nitrogen-rich) and "Browns" (carbon-rich) to achieve an overall carbon/nitrogen ratio of 25-30:1 . Put simply, fresh green matter such as grass clippings, vegetable wastes, fresh leaves, etc, contain a lot of nitrogen. So does manure, blood meal, kitchen scraps, alfalfa meal, and hay. Fallen leaves, straw, sawdust, shredded newspaper and cardboard, wood chips -- browns -- contain high proportions of carbon.

Instead of thinking in "greens" and "browns", think in terms of "wets" and "dries". In fact wets are usually green, and browns are often dry.

You can make sure the browns are dry -- collect fallen leaves when the weather's dry, for instance. Presume your compost materials will always be too wet, and always have lots of dry browns on hand to balance it with. Too much carbon? We'll deal with that in a minute.

The advantage of dry browns is that you can store them indefinitely, unlike wet greens. With a bit of foresight and effort you can always have a few garbage bags filled with dries ready for when you need them. Make a big effort in autumn -- collect enough leaves for the whole year.

Hints

1. **Not enough water is better than too much water.** Too much water is usually a disaster, but if there's not enough, the pile will heat up and then stop. Empty it out, loosen it all up with the compost fork, add more moisture, and put it back in the box again, no big deal. Soon you'll learn how much water is enough. If your pile is too wet, try emptying it, fluff it out, add more dry stuff, and some dry greens if you have such a thing (blood meal, peanut cake, alfalfa meal), and rebuild it. It might work.

2. **Too much nitrogen is better than not enough nitrogen.** If there's not enough the pile will just sit there forever, nothing happens for a year or two. If there's too much the pile will heat up well and simply blow off the excess with the steam in the form of ammonia gas, until the balance is right. But isn't that a waste of precious nitrogen?

No -- nitrogen's only precious if you're dumb enough to buy it from a chemical company (see below, Adding liquids). Again, this way you'll soon learn how much is enough.

3. Roots: shake as much soil as you can off clumped roots before putting them in the compost. Many people put much too much soil in the compost with the roots, and it clogs everything up. But always have some soil sprinkled throughout the pile. It helps to inoculate the compost with the beneficial soil microorganisms that make the process happen, especially if you're not using animal manure, and clay particles in the soil help to spread a thin film of moisture throughout the pile, which is just what you want.

4. Useful additions: Lime, or, better, ground limestone, the finer ground the better. Liquid seaweed emulsion, such as Maxi crop, SM-3 or equivalent -- all the minerals for all the soil bugs, in easily digestible forms. Compost or compost siftings from the previous batch to inoculate the pile. Sprinklings of ground rock powders are useful.

5. Newsprint: Modern printing inks are almost always non-toxic and biodegradable, particularly black ink, so don't be shy of using shredded newspaper (very "brown").

Compost containers

If you have really big supplies of organic wastes, make windrows, 8ft at the base, 5-6ft high, with sloping sides, and as long as you like. Otherwise prefer boxes or bins to heaps.

If you're expert enough you can make a steep-sided heap, even a sheer-sided one, otherwise it degenerates into a mound, which is not efficient -- unless you're making an expert Biodynamic compost heap, that is.

Boxes and bins have sheer sides, and protect the compost from the elements. There are endless different designs.

Here's how to make a wire mesh bin. Make a "tube" of chicken wire, 3ft in diameter. Leave about 8-10" overlap, and connect the ends with four twists of wire each. You'll need about 10.5ft of 3ft-wide mesh, and two more pieces each 3ft long -- total 16.5ft.

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Line the bin with a garbage bag, or two bags, with the bottoms cut off, to keep the moisture in. Have the liner flush with one end, and overlapping the other (that's the top).

Make a 3ft square of four bricks, one at each corner, with a fifth in the middle, and put a 3ft square of tough wire grille such as pig fencing on the bricks. Put one of the two 3ft-square pieces of chicken wire on top of that. Stand the mesh bin on end on top of this aerated base. Now you can fill it with compost material.

When it's full, depending on the weather, you can close it loosely with the garbage bag overlap, again to keep the moisture in; when it starts steaming, open the bag, if it seems to be getting dry, close it again.

Cover the top with the second 3ft-square piece of chicken wire, and clip it on, to dissuade wildlife.

If it's in the open, cover the top with a garbage bag to keep the rain out.

You'll need two of these bins -- you always need at least two compost bins/boxes: when one's full, you start filling the next one. By the time that one's full, the first one is finished and can be emptied.

Assembling the materials

It's easier to make good compost if you have enough materials to fill the box at one go. If not, see below, Batches. Basically, anything that was once alive or part of something alive can be composted. This is the recipe: the assembled pile should have 60--65% moisture content, good aeration, acid-alkaline level about neutral (pH 7) or slightly acid (pH 6-6.5), carbon/nitrogen ration 25-30:

First, collect all the greens together and mix them thoroughly with a compost fork. If anything's too big to mix, chop it up into 4-6" lengths with the edge of a spade or a chopper.

Up to 10% of the material can be rough material like small sticks and prunings -- they probably won't break down but they'll help with aeration and prevent the material packing down and clogging up too much.

Assemble all the ingredients in a sort of big pancake (5-6ft diameter) in front of the open box (leave yourself enough room around it to work).

Put wet greens on top of dry browns. Use a 5-gallon bucket or a basket.

Spread out two buckets of browns (pack it in) and then one bucket of greens on top.

Do that twice, then add some sprinklings: a handful of ground limestone or wood ash (sprinkle it like icing sugar on a sponge cake), some bone meal if you have it, a handful or two of soil, and a couple of handfuls of compost (unless you're using the siftings from the previous batch -- mix with the browns if they're dry enough). Scuff over the surface to bury the sprinklings a bit, then add liquid (see below, Adding liquids) -- 1-2 liters, with a sprinkling can. If you must use a hose, set the nozzle to a fine mist.

Repeat this whole layering process two or three more times or until you've used all the materials.

Now work from the edge of the layered pancake: rake off about 1ft with the compost fork, mix it up well, and fork it into the box, spreading it evenly and tamping it down firmly (but not too tight). Layering it and then mixing vertical slices this way gets it thoroughly mixed and evenly distributed.

Aeration

Compost needs air from underneath. You can put the box on the soil, if it's good soil that breathes well. Even then, loosen it well with a fork to a depth of about 12 inches. An advantage of this is that if the pile is too wet some of the excess water might drain off into the soil. (Or it might not.)

Alternatively make a base like that for the wire mesh bin described above: make a 3ft square of four bricks, one at each corner, with a fifth in the middle, and put a 3ft square of tough wire grille such as pig fencing on the bricks. Put a 3ft-square piece of chicken wire on top of that, and stand the box on this base.

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When filling the box, stand a 5ft length of bamboo or a broomstick upright in the middle until the box is full. Then shake it from side to side a bit (an inch or two) and pull it out. Or make vertical holes every 6" or so across the top with a piece of rebar, push it right down until you hit the wire mesh at the bottom. Now your compost can breathe easily.

Put a lid on the box when it's full, not airtight, but wildlife-proof, and waterproof if it's in the open. That's it.

By the next day the temperature should be above 50 deg C, and it should climb to 60 deg or higher. You can turn it after a week or two when the temperature's fallen to about 40 deg, or just leave it for another couple of weeks instead.

Get a soil thermometer, or any long thermometer that will reach the center of the pile to monitor the temperature. Or just put your hand in -- if it's too hot to keep it there, it's fine.

Adding liquids

The best form of liquid addition for compost is what some composters primly call Household Compost Activator. Other people call it urine. Don't be coy about it -- this is what should happen to urine rather than wasting it by flushing it down the toilet.

Develop a self-righteous attitude about not wasting it -- but don't shout about it too loud, modern city people like neighbors and so on can be funny about these things, what they don't know won't hurt them.

First, urine is sterile. Second, it contains the drainage of every cell in the body -- it's crammed with minerals and vitamins. Third, it contains a lot of nitrogen -- that's one reason that it's silly to buy nitrogen (there are others).

It shouldn't prove too difficult to arrange to have a few liters of Household Compost Activator set by when it's time to make the compost. You can use it neat, or mix it 50-50 with water, and add a capful of seaweed emulsion

while you're at it. Use a sprinkling can.

More about nitrogen: well-made compost piles often end up containing more nitrogen than they started off with -- up to 25% more.

It's provided by free-living nitrogen-fixing bacteria that thrive in a compost pile and "fix" nitrogen from the copious supplies in the air.

Batches

Smaller gardens won't provide enough material to fill a 15 cub ft compost unit at one go, it comes in dribs and drabs. So do kitchen scraps. You could just throw it all in a compost bin as it comes, but it'll probably be too wet and clog up, or it won't get hot, or only quite hot (mesophilic) rather than very hot (thermophilic), which is better than nothing.

It's worth organizing the process by gearing garden wastes to kitchen scraps and then processing it all in batches until the bin is full.

Kitchen scraps

Get a smallish (10-12") plastic bucket with a lid, and a tray that it can stand in. Drill some holes in the bottom. Put 3" of dry stuff in the bottom, add your kitchen scraps on top as they're produced. Keep the bucket in the kitchen. No meat/fish etc or cooked food until you're more experienced (eggshells are fine). If you're a big family you might need a bigger bucket.

Don't let it get too wet, don't let it go rotten -- if liquid starts coming out the bottom, empty it (every few days, depending how much you cook).

Meanwhile collect garden wastes and odds and ends of greens -- they'll keep for a while if you spread them out somewhere dry in a layer a few inches deep.

For the first batch, put 4" inches of dry stuff in the bottom of the compost bin. Mix up greens and kitchen wastes, add some manure if you have it. Then mix it up with twice the quantity of browns/dries, add sprinklings of lime

or wood ash, bone meal, some dry compost, as above ("Assembling the pile"), and a bit of liquid if necessary, and dump it in the bin, spreading it evenly. Pack it down quite tightly.

Add an inch or two of browns plus a sprinkling of compost or topsoil on top.

The first batch might not have the bulk to get hot, which normally eradicates the smell of the kitchen scraps (and anything else), and a layer of browns on top will help keep flies away. As further batches increase the bulk it should heat up well. Put a lid on the bin.

Once it cools down it should be turned -- empty the bin, fluff everything up thoroughly with the compost fork, add liquid if necessary, and put it back in the bin. If it doesn't get that hot the second time, never mind, just leave it there for a few weeks.

Animal manure

Many people say it's not essential to use animal manure to

make good compost, and that's true. Some people actively avoid it. But it's better to use manure, if you can get it.

All natural topsoil is derived from a mixture of animal and plant matter -- nature never attempts to raise plants without animals. It's important that some portion of what's recycled into the soil should have passed through animals. This is one of the reasons we recommend using urine as an activator.

Manure from any animal that's not a carnivore will do, plus poultry. The Biodynamic school of organic growing -- ace compost makers -- swears by cow dung, ascribing special qualities to it. In Hong Kong we used manure from the herd of feral water buffalo who were our neighbors, and it was excellent. A fifth of the total amount of compost material is enough manure, don't use more than a quarter.

Beware of manure from factory-farmed livestock that's fed commercial feed laced with antibiotics.

You can use it, it'll probably work okay, and the antibiotics

will break down in the heat, but why put stuff in your compost that'll kill the very critters that do all the work for you?

Sifting

If you've got a shredder, you can shred the materials before you load the box, shred them again a week later, and maybe again a week after that, and then you won't need to sift the compost. Otherwise it'll need screening.

There are many different screening systems. Simplest is a 5ft x 3ft-wide piece of 5/8th-inch or 3/4-inch wire screen wire-stapled to a light wooden frame.

Stand it at an angle against a wall and throw the compost at it with a shovel (aim high).

Or use it horizontal to the ground, supported at each end at a height of 3-4ft, shovel the compost onto it and rub it through the screen with your hands (use gardening gloves) or with the back of a garden rake.

Store what goes through the screen for a few weeks to let it cure before using it in the soil. When applying it to the soil, hoe it lightly into the top few inches where it'll do the most good. The earthworms will do the rest. No earthworms? Don't worry, there soon will be!

You'll be left with up to a quarter of the pile in siftings. It makes a very good mulch, or you can add it to the browns for the next lot, or mix it with kitchen scraps and greens for batch composting.

Cold weather

A person who said he'd made "lots of compost" wrote: "In northern climes especially, you're more in need of adding heat to the pile some of the year... The problem here in Wisconsin is it just gets too cold in winter. I know, I've tried it, it froze solid in the winter. Somewhere I've seen plans for a solar heated outhouse, and solar heated compost bin, which would probably be the ticket."

That's just not how compost works. If it's correctly prepared, the biological activity will heat it up, no matter

how cold the weather is.

Adding extra heat from outside is no use. Finally he admitted: "I don't think my compost piles ever heat up much. Not enough nitrogen for one thing, here in town. I suppose if you had a large batch of materials mixed up properly with the correct ratios, it might have a chance, but you can't do that with the daily wastes." Yes you can.

As for not enough nitrogen, a strange statement indeed, he then read this: . He'll be trying "Household Compost Activator" next year.

Elaine Ingham, President, Soil Foodweb Inc., wrote: "The definition of properly composted material, when applied to thermal compost, is that it has reached temperature throughout the material for long enough that weed seed, human pathogens and most of the plant pathogens and pests have been killed... Many people do not understand that the bacteria and fungi growing in organic matter raise the temperature.

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If all you do is physically heat compost, you don't get the same reduction in [pathogens]. This is a biological process. Competition with aerobic bacteria and fungi, inhibition by other bacteria and fungi, and consumption of disease-organisms by protozoa and nematodes are all part of the process of making good compost, getting rid of the pathogens.

If you just steam heat organic matter, you don't get the same benefits of the growth of the competitive, inhibitory and consuming interactions that happen when the full food web is present." -- Sustainable Agriculture Network Discussion Group, 5 November 2002

"Even in Alaska -- in the middle of the winter -- my compost pile reaches 140 degrees or more. If it gets too hot, beneficials, such as worms, simply move (crawl) out of harm's way. Turn pile every 4 or 5 days, folding outside materials to the inside and versa visa, like kneading bread. Keep it moist, not soggy, and be glad you're making 'post! Nice work!" -- Marion, message to the Gardening Organically Internet mailing list, 26 September 2002

We've made compost outside in the usual way at temperatures of -15 deg C (5 deg F) with no difficulty, the compost rose to 65 deg C (150 deg F) as usual.

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Suggested Reading and Websites

Hosta web forums

You may need to subscribe to some of these to post, but it is free

[Hosta Forum](#)

[Pal-Metto Forum](#)

[Yahoo Hosta Group](#)

[Perennial Nursery Forum](#)

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A big Thank you goes out to many friends that have given me permission to use their articles in this book.