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04-30-2005, 02:14 AM

#1

MynameStitch Dr. Doolittle ICMag Mentor



Join Date: Mar 2004 Location: Wildlife Prairie Park Posts: 4,620

Marijuana Garden Saver: AKA The Complete guide to Sick Plants,pH, and Pest troubles!

I have put a lot of work into this for those who need it when I'm not around 😊

This thread has been updated 7/15/2010 All updates are in RED. Scroll down to the bottom for most of the updated stuff.

If you need help please DO NOT post in this thread. Make a thread in the infirmary, or post in the link below if you need my help with something.

Split From: The Complete Gude to Sick Plants,pH and Pest Troubles

When you do post please give as much detailed information as possible to faster get your diagnosis.

Questions provided by CannaGod from PLanetGanja and 10K from ICMAG

*NOTE: Please Cut And Paste only the section that applies and add your response. The more information you can give the better and faster people can help you out. Pictures should be added to every thread to ensure a proper diagnosis, when using pictures please ensure your HPS if using one is not turned on while taking pictures, as the lighting hides the plants problems. Fill out

ARE YOU USING?

SOIL:

- How long has this problem been going on? What STRAIN are you growing? What was the establishing technique? (seed or clone?) What is the age of your plants? How long have they been in the soil mixture they are in now? Were they in the same mixture when they were seedlings/smaller plant? If not, what mixture were they in before? How Tall are the plants? What PHASE (seedling, vegetative or flower) are the plants in? What Technique are you using? (SOG, SCROG etc) What size pots are you using? (Include how many subjects to pot) What substrate/medium are you using? What brand of soil mixture are you using? (percentage of perlite, vermiculite...etc?) What brand Nutrient's are you using? How much of each nutrient are you using with how much water? *Knowing the brand is very helpful* How often are you feeding? If flowering, when did you switch over to using Bloom nutrients? What order are you mixing your nutrients? (example: veg nutes 1st, bloom 2nd ect) What is the TDS/EC/PPM of your nutrients used? What is the pH of the "RUN-OFF"?

How often are you testing pH/ppm/EC/TDS?
What method of pH test was administered? Using Strips? pH pen?
How often are you watering?
When was your last feeding and how often are you feeding?
What size bulb are you using?
How old is your bulbs?
What is the distance to the canopy?
What is your RH Factor? (Relative Humidity)
What is the canopy temperature?
What is the Day/Night Temp? (Include fluctuation range)
What is the current Air Flow? (cfm etc.)
Tell us about your ventilation, intake exhaust and when its running and not running ?
Is the fan blowing directly at plants?
Is the grow substrate constantly wet or moist?
Is your water HARD or SOFT?
What water are you using? Reverse Osmosis (RO)? Tap? Bottled? Well water? Distilled? Mineral Water?
If using tap water, what is the ppm/EC/TDS of the water right out of the tap? (Only if you have a tds pen)
If using RO,Distilled,mineral water, what is the ppm/EC/TDS without any additives? (Only if you have a tds pen)
Are you using water from a water softener?
Has plant been recently pruned, cloned or pinched?
Have any pest chemicals been used? If so what and when?
Are plant's infected with pest's?

HYDROPONICS/Aero Ponics/Coco/Soiless/

How long has this problem been going on?
Are you growing in a PVC grow tent? (example: Hydrohut or any other non brand tents)
What system are you running? (DWC? Ebb flow? Aero? Water Farm? Flood Tables? and so on...)
What STRAIN are you growing?
What was the establishing technique? (Were the seed or clone?)
What is the age of your plants?
How long have they been in there mixture they are in now?(coco,soiless etc..)
How tall are the plants?
What PHASE are the plants in? (seedling, vegetative or flower) are the plants in?
What Technique are you using?
What substrate/medium are you using?(Hydroton, RockWool etc.)
What is the Water temperature?
What color are your roots? White? Brown? Are your roots slimy?
What Nutrient's are you using? (If growing soiless)
How much of each nutrient are you using with how much water? *Knowing the brand is very helpful*
How often are you feeding? (If using soiless)
How often are you giving nutrients? (If using soiless)
If flowering, when did you switch over to using Bloom nutrients?
What order are you mixing your nutrients? (example: veg nutes 1st, bloom 2nd ect)
What is the TDS/EC/PPM you are using
What is the pH of the "Tank"?
How often are you testing your pH/PPM/EC/TDS?
Are you sure your calibration is correct on your equipment?
When was your last watering?
What is your water temps?
When was your last feeding change? (ie. grow-bloom-micro-additional)
How often do you clean your system: example: Flush out water replace with clean water and nutrients?
What size bulb are you using?
How old is the bulbs you are using?
What is the distance to the canopy?
What is your RH Factor(Relative Humidity)?
What is the canopy temperature?
What is the Day/Night Temp? (Include flucutaion range)
What is the current Air Flow? (cfm etc.)
Tell us about your ventilation, intake exhaust and when its running and not running ?
Is the fan blowing directly at plants?
Is your water HARD or SOFT?
What water are you using? Reverse Osmosis (RO)? Tap? Bottled? Well water? Distilled? Mineral Water?
If using tap water, what is the ppm/EC/TDS of the water right out of the tap?
If using RO,Distilled,mineral water, what is the ppm/EC/TDS without any additives?
Are you using water from a water softener?
Has plant been recently pruned, cloned off of or pinched
Have any pest chemicals been used? If so, What and When?
Are plant's infected with pest's

I have been doing a lot of research on sick plants and also helping out others a lot on sick plants!
Most of the stuff I have learned is from others and keeping up to date on there problems they are having. Some I have learned on my own, the sick plant troubles I have had was ph troubles! I didn't really think the importance of how ph plays a role with your plants being healthy or dead.

I honestly think one of the most important parts of your growing is having a good solid pH tester, a digital one is the best to have. There are other ones you can buy as well, liquid pH test kits are inexpensive and get the job done if you can't afford a digital pH meter, **STAY AWAY FROM SOIL TESTERS**, they don't do the job and are not very accurate at all. pH test strips work well, even if you are on a budget! So if you rely on a soil tester and its tell you your soil is 7 and your having problems, 9 times out of 10 it's going to be your water pH that is messing up the soil pH check the water you are using. Unless you are using additives in your soil mixture like blood bone meal, and Peat moss those will throw your pH off too.

Adding nutes to your water can cause the pH to get low as well, so its best to test your pH of your water before and after you add your nutes. Nutrient deficiencies are mostly caused by human mistakes, along with too much or too little of the amount of nutrients available. The best range for nutrients to be absorbed is between a pH of 5 and 7 and a (TDS) range of 800 to 3000 PPM.

Having these conditions will help making nutrient deficiencies alot easier to overcome.

Well this guide I am making on sick plants is going to be very detail in helping out as many as possible... I have collected a lot of accurate data and have been putting it together piece by piece... Stuff on what kinda of nutrients can lead to locking out other nutrients as well....

I will be updating this until it gets done, because I have a lot of information but just not on every sick problem that is out there....

Mobile Elements are mostly going to affect the older leaves first then work its way to other leaves and then the nutrients will be taken from old leaves to newer growths...

The following are mobile elements and as well macro nutrients.

First off, we are going to start out with Nitrogen.

Nitrogen (N) Mobile Element and Macro Element

Benefit: Nitrogen plays a very big role in your plants; this one element is directly responsible for production of chlorophyll, photosynthesis, Amino Acids, which are the building block of Proteins. The myriad of enzymes which help the plants growth in leaves stems and the how well the vigor of your plants is.

Nitrogen is the biggest mobile element meaning it can travel anywhere on the plant.

Usually the def will start on the lower to middle part of the plant, and then will usually happen to older leaves first. Then the deficiency will work its way up the plant. Your plant can be green on top, then yellowing on the lower leaves when the deficiency is starting out. Yield will be greatly reduced without good amounts of nitrogen in your plants. Sometimes in bad cases the leaves will turn a purplish color along with the yellowing.

Unlike a magnesium deficiency, nitrogen def will start from the tips and work its way back to the leaf node. Nitrogen and Magnesium get confused. The best way to tell them apart is, nitrogen deficiency starts around the tips and works its way to the back of the leaves, where a magnesium deficiency will cover the entire outer part of the leaf and make the entire leaves yellow leaving the veins to stay green. If your plants are having a slow growth rate and have yellowing of the leaves, then most likely it's a nitrogen deficiency.

Towards the middle to end of flowering stages, the plant will show a nitrogen deficiency almost always. This process is **completely** normal and just let the plant naturally yellow out as it uses it's stored nutrients. This actually helps you by getting ready for final flushing and then harvesting. At this point **DO NOT** not use nitrogen to fix the problem. The yellowing leaves will then eventually drop off after the plant is done with them.

Parts affected by a nitrogen deficiency are: Older foliage, going to whole plant, Petioles (rare) cases.

Now for having too much nitrogen in your growing mediums or soil. The plant will have like an overall DARK green look and have delayed maturity. Due to Nitrogen being involved in vegetative growth, too much nitrogen will result in tall plants with weak stems. New growth will be very lively and plant transpiration will be high, but not always. Nitrogen toxicity can be seen when there are very very dry conditions almost as if there was a drought, which may show a burning effect. If you give your plants ammonium based nutrients they may show NH₄⁺ toxicity, which will show a smaller plant growth and lesions that occur on stems and roots, leaf margins that will roll downward. Also the big fan leaves will have "the claw" look. The tips will point down but the leaves will stay up as if when you bend your fingers downwards. Leaves can be twisted when growing... mainly new growths. Roots will be under developed along with the slowing of flowering. Yields will be decreased, because too much nitrogen in early stages of flowering slows down bud growth. Water uptake is slowing down from the vascular breakdown of the plants as well. Too much potassium and nitrogen will lock out calcium as well.

Problems with Nitrogen being locked out by PH troubles.

Waterlogged soil and Soil with low organic matter.

Nitrogen is a very important element in the plant, all of them are but some are more important than others. For soil the best pH to have is 6.8. Why? Because at 6.8, that's the best number for ALL available nutrients to be absorbed into the plant without any of them being locked out. For hydro and soil less mediums best pH to have is around 5.8. Try not to keep your plants too cold, because the cold temps will cause the nitrogen harder for the plant to be absorbed.

pH levels for Nitrogen:

Soil levels

Nitrogen gets locked out of soil growing at pH levels of 4.0- 5.5.

Nitrogen is absorbed best in soil at a pH level of 6.0-8.0. (wouldn't recommend having a pH of over 7.0 in soil) best range to have nitrogen is a pH of 6-7. Anything out of that range will contribute to a nitrogen def.

Hydro and Soil less Mediums

Nitrogen gets locked out of Hydro, Soil less mediums at the levels of 4.5-5.0.

Nitrogen has the best absorption rate at a ph of 5.5 to 8.0

(Wouldn't recommend having a ph over 6.5 in hydro and soil less mediums.) Best range to have Nitrogen is: 5.0-7.0. Anything out of that range will contribute to a nitrogen def.

Solution to fixing a Nitrogen deficiency

Avoid excessive ammonium nitrogen, which can interfere with other nutrients. Too much N delays flowering. Plants should be allowed to become N-deficient late in flowering for best flavor.

A goof solid N-P-K ratio will fix any nitrogen deficiency. Any chemical or organic fertilizers that have Nitrogen in them will fix a nitrogen deficiency., Peters all purpose plant food 20-20-20 is good, Miracle grow All purpose plant food, Miracle grow Tomato plant food, (Only mixing at ½ strength when using chemical nutrients, or it will cause nutrient burn!) as well and blood meal! If you need to give your plants a quick solution to nitrogen and you want to use blood meal, I suggest making it into a tea for faster use, where blood meal is slow acting, but when made into a tea it works quicker! Other sources of nitrogen are dried blood, Cotton seed meal which is slow acting, Insect eating bat guano which is fast acting. Bone meal which is a gradual absorption when not made into a tea. (also excellent source of phosphorus). Fish Meal Or Fish Emulsion is a good source of nitrogen and is medium acting. Worm castings, which is gradual absorption. Seabird guano, All purpose Millennia Seabird guano, Original Seabird guano All Purpose, Crabshell ,which is slow absorption. Fox Farm Grow Big, which is fast acting. (can bring down your ph as well)

Here are a list of things that help fix a Nitrogen Deficiency:

Chemical Nutrients

Advanced nutrients Grow (2-1-6)

Vita Grow (4-0-0),

BC Grow(1.2-3.2-6.5)

GH Flora Grow (2-1-6)

GH Maxi grow (10-5-14)

GH floraNova grow (7-4-10),

Dyna gro Grow (7-9-5)

Organic Nutrients

Dr. Hornby's Iguana Juice Grow (3-1-3)

Advanced Nutrients Mother Earth Grow (1.5-.75-1.5)

Earthjuice Grow (2-1-1),

Pure Blend Pro (3-1.5-4)

Bone Meal(0-10-0)

Blood Meal(12-0-0)

Fish Emulsion (5-1-1)

Seabird Guano (11-13-3)

Crab Shells(2.5-3.0-.5)

Pure Blend Grow (0.4-.01-.5)

Marine Cuisine (10-7-7)

MaxiCrop Seaweed (1-0-3)

Super Tea (5-5-1)

Mexican Bat Guano (10-2-0)

Sea Island Jamaican Bat Guano (1-10-0)

Kelp Meal (1-0-2)

Seaweed Plus Iron

Neptune's Harvest (2-4-0.5)

Alaska Start-Up(2-1-2)

Bio-Grow (1.8-0.1-6.6)

Age old Grow (12-6-6)

AGE Old Kelp (.30-.25-.15)

Neptune's Harvest (2-4-1)

Maxicrop Seweed(.1-0-1)

METANATURALS Organic grow (3-3-3)

METANATURALS Organic nitrogen (16-0-0)

So adding anyone of these above should fix up your nitrogen deficiency! Nitrogen deficient plants usually recover in about a week, affected leaves will not recover.

Now if you added to much chemical nutrients and or organics, (which is hard to burn your plants when using organics) you need to flush the soil with plain water. You need to use 2 times as much water as the size of the pot, for example: If you have a 5 gallon pot and need to flush it, you need to use 10 gallons of water to rinse out the soil good enough to get rid of excessive nutrients. Soluble nitrogen (especially nitrate) is the form that's the most quickly available to the roots, while insoluble N (like urea) first needs to be broken down by microbes in the soil before the roots can absorb it.

Note: Blood Meal, Dried Blood, Guanos, Kelp Meal, Cotton Seed Meal, Peat Moss, Sulfur and fish meal are all

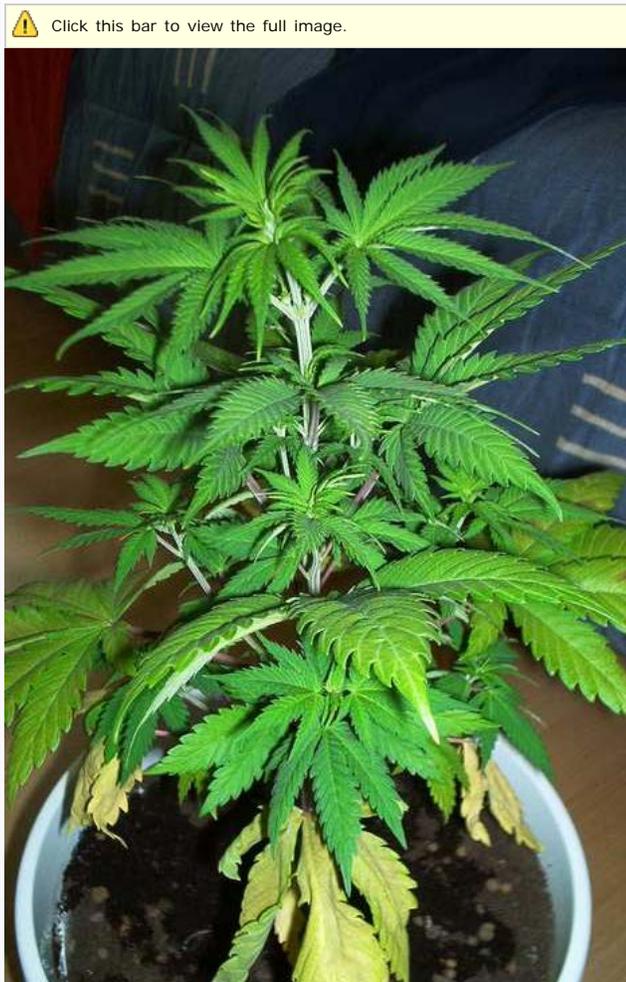
acidic and can bring your ph down, so if you add these please monitor your ph when using those.

Note: Bone Meal, Rock Phosphate, Wood Ashes pretty much all ashes, Shellfish Compost and Crab Meal are all alkaline and can make your ph go up, so if you add any of these please monitor your ph.

Here are 3 pics of what a nitrogen def looks like... the first one is a nitrogen deficiency in vegging. the 2nd picture is nitrogen def in flowering; **This is completely normal for mid to late flowering; as you would want your plant to naturally yellow at the end. DO NOT add nitrogen supplement to fix the problem; just let the plant yellow as cannabis does towards the end of flowering.** The last picture is one that is caused by TO MUCH Nitrogen.

(Picture 1 is a Nitrogen Deficiency in veg)(Thanks to m&m for letting me use the pic)

(Picture 3 is Mine)





Picture 4 shows nitrogen deficiency, caused by ONLY overwatering, in order to fix this; you must stop watering so heavily/frequently.
(Photo Credit: Trichome Design)



Phosphorus (P) Mobile Element and Macro Element

Benefit: Phosphorus does a lot of things for the plant. One of the most important parts of Phosphorus is: It aids in root growth and influences the vigor of the plant and is one of the most important elements in flowering as well helps to germinate seedlings. Phosphorus is an essential plant nutrient, and since it is needed in large amounts, it is classified as a macronutrient. Phosphorus is a MAJOR important nutrient in the plants reproductive stages. Without this element the plants will have a lot of problems blooming without proper levels of Phosphorus.

When your plants are deficient in phosphorus, this can overall reduce the size of your plants. Not enough causes slow growth and causes the plant to become weak, to little amount of Phosphorus causes slow growths in leaves that may or may not drop off. The edges all around the leaves or half of the leaves can be brownish and work its way inwards a bit causing the part of the leaves to curl up in the air a bit. Fan leaves will show dark greenish/purplish and yellowish tones along with a dullish blue color to them. Sometimes the stems can be red, along with red petioles that can happen when having a Phosphorus deficiency. This isn't a sure sign of you having one though, but can be a sign. Some strains just show the red petioles and stems from its genes.

So pretty much the overall dark green color with a purple, red, or blue tint to the fan leaves is a good sign of a Phosphorus deficiency. Having Cold weather (below 50F/10C) can make phosphorous absorption very troublesome for plants.

Many people get a Phosphorus deficiency confused with a fungus problem because the ends of the leaves look like a fungus problem, But the damage occurs at the end of the leaves. side of the leaves and has a glass like feeling to it as if it had a ph problem. Parts affected by a phosphorus deficiency are: Older Leaves, Whole plant, Petioles.

Too much Phosphorus levels affect plant growth by suppressing the uptake of: Iron, potassium and Zinc, potentially causing deficiency symptoms of these nutrients to occur def in plants. A Zinc deficiency is most common under excessive phosphorus conditions,

As well as causing other nutrients to have absorption troubles like zinc and copper. Phosphorus fluctuates when concentrated and combined with calcium

Problems with Phosphorus being locked out by PH troubles

Cold wet soils, acid or very alkaline soils, compacted soil.

Soil

Phosphorus gets locked out of soil growing at pH levels of 4.0-5.5

Phosphorus is absorbed best in soil at a pH level of 6.0-7.5 (wouldn't recommend having a pH of over 7.0 in soil) Anything out of the ranges listed will contribute to a Phosphorus deficiency.

Hydro and Soil less Mediums

Phosphorus gets locked out of Hydro and Soil less Mediums at pH levels of 6.0-8.5.

Phosphorus is absorbed best in Hydro and Soil less Mediums at pH levels of 4.0- 5.8. (Wouldn't recommend having a pH over 6.5 in hydro and soil less mediums.) Best range for hydro and soil less mediums is 5.0 to 6.0. Anything out of the ranges listed will contribute to a Phosphorus Deficiency.

Solution to fixing a Phosphorus deficiency

Some deficiency during flowering is normal, but too much shouldn't be tolerated. Any chemical or organic fertilizers that have Phosphorus in them will fix a Phosphorus deficiency. If you have a phosphorus deficiency you should use any N-P-K ratio that is over 5. Again Peters all purpose 20-20-20 is a good mix. Miracle grow Tomato plant food, Miracle grow All purpose plant food (Only mixing at ½ strength when using chemical nutrients, or it will cause nutrient burn!) Other forms of phosphorus supplements are: Bone meal, which is gradual absorption, I suggest making it into a tea for faster use, where bone/blood meal is slow acting, but when made into a tea it works quicker! Fruit eating bat guano, which is fast absorption, Worm castings, which is gradual absorption, Fish meal, which is medium absorption, Soft Rock Phosphate, which is medium absorption, Jamaican or Indonesian Guano, which is fast absorption. Crabshell, which is slow absorption. Tiger Bloom, which is fast absorption.

Here is a list of things to help fix a Phosphorus Deficiency.

Chemical

Advanced nutrients Bloom (0-5-4)
Vita Bloom (0-7-5)
BC Bloom (1.1-4.4-7)
GH Flora Bloom (0-5-4)
GH Maxi Bloom (5-15-14)
GH Floranova Bloom (4-8-7)
Dyna-Gro Bloom (3-12-6)
Fox Farm Tiger Bloom (2-8-4)
Awesome Blossoms

Organic

Dr. Hornby's Iguana Juice Bloom (4-3-6)
Advanced Nutrients Mother Earth Bloom (.5-1.5-2)
Fox Farm Big Bloom (.01-.3-.7)
Earth Juice Bloom (0-3-1)
Pure Blend Bloom (2.5-2-5)
Pure Blend Pro Bloom (2.5-2-5)
Buddswell (0-7-0)
Sea Island Jamaican Bat Guano (1-10-0)
Indonesian Bat Guano (0-13-0)
Rainbow Mix Bloom (1-9-2)
Earth Juice Bloom (0-3-1)
BIO BLOOM (2-6-3.5)
AGE OLD BLOOM (5-10-5)
ALASKA MORBLOOM (0-10-10)
METANATURALS ORGANIC BLOOM (1-5-5)

Any of these will cure your phosphorus deficiency. Affected leaves will not show recovery but new growth will appear normal.

Now if you added too much chemical ferts and or organics, (which is hard to burn your plants when using organics) You need to Flush the soil with plain water. You need to use 2 times as much water as the size of the pot, for example: If you have a 5 gallon pot and need to flush it, you need to use 10 gallons of water to rinse out the soil good enough to get rid of excessive nutrients.

Note: Blood Meal, Dried Blood, Guanos, Kelp Meal, Cotton Seed Meal, Peat Moss, Sulfur and fish meal are all acidic and can bring your pH down, so if you add these please monitor your pH when using those.

Note: Bone Meal, Rock Phosphate, Wood Ashes pretty much all ashes, Shellfish Compost and Crab Meal are all alkaline and can make your pH go up, so if you add any of these please monitor your pH.

Picture 1 is a Phosphorus deficiency during vegetative growth.
Picture 2 is what a phosphorus deficiency looks like in flowering.
Picture 3 shows phosphorus being locked out due to cold temps for the seedling

(Picture 1 is Mine)



Photo Credit: TikTok420



Picture of Phosphorus being locked out from cooler temps.



Potassium (K) Mobile Element and Macro Element

Potassium plays a big role as well. Having good amounts of potassium in your plants helps in having sturdy and thick stems, disease-resistance, water respiration, as well aids in photosynthesis. Potassium is also found in the whole plant. It is necessary for all activities having to do with water transportation. Potassium is necessary for all stages of growth, especially important in the development of Buds.

Having too little of Potassium in your plants causes the plants leaves to show retarded growth and show a scorched tip and edges around the leaves. Plants may stretch and your branches can be easily broken or weak. Don't get this deficiency confused with iron, because it almost acts like iron but to tell the difference in the two is: for potassium the tips of the leaves curl and the edges burn and die. Older leaves may show a red color and leaves could curl upwards. Dead patches (Necrosis) can happen on the margins of larger fan leaves thus, the leaves will eventually die off and turn brown. The Older leaves will show different patches of color (mottle) and turn yellow between the veins, following by whole leaves that turn dark yellow and die. The plants overall growth slows down, mostly when they are in

vegetative stage. To little amount of potassium also slows the growth of buds during flowering stages. Dark edges will appear around the edges of the leaf when the deficiency is starting to happen. When your Relative humidity is low, you can almost bet your going to soon get a potassium deficiency from your plants perspiration. Potassium can get poorly absorbed when having too much Calcium or ammonium nitrogen, and maybe cold weather. Having to much sodium (Na) causes potassium to be displaced. SO keep those in mind... Parts affected by a Potassium Deficiency are: older leaves and leaf margins.

When you have too much Potassium in your soil, it can lead to big troubles, like salt damage and acid fixation of the root system, as well as too much potassium can cause a calcium deficiency. Your fan leaves will show like a light to a dark yellow to whitish color in between the veins. Due to a molecular imbalance, potassium toxicity can cause a reduced uptake and lead to the deficiencies of Mg, and in some cases, Ca. Also leads to the other nutrients to not be absorbed properly leading to lots of other deficiency such as: magnesium, manganese, zinc and iron and can cause problems with calcium as well.

Problems with Potassium being locked out by PH troubles

Soils with excessive Leeching and High ph soils and or water. Soils that are potassium fixated. An excess of kitchen salts (sodium) in the root system/enviroment.

Soil

Potassium gets locked out of soil growing at ph levels of 4.0-5.5

Potassium is absorbed best in soil at a ph level of 6.0-9.5. (Wouldn't recommend having a ph of over 7.0 in soil) anything out of the ranges listed will contribute to a Potassium deficiency.

Hydro and Soil less Mediums

Potassium gets locked out of Hydro and Soil less Mediums at ph levels of 4.0-4.5, 6.0-6.5.

Potassium is absorbed best in Hydro and Soil less Mediums at ph levels of 4.7-5.3, 6.7-8.5. (Wouldn't recommend having a ph over 6.5 in hydro and soil less mediums.) Best range for hydro and soil less mediums is 5.0 to 6.0. Anything out of the ranges listed will contribute to a potassium deficiency.

Solution to fixing a Potassium deficiency

Any Chemical/Organic nutrients that have potassium in them will fix a potassium deficiency. Again Peters All Purpose plant food 20-20-20, will cure the potassium deficiency, Miracle grow Tomato plant food, Miracle grow All purpose plant food. (Only mixing at ½ strength when using chemical nutrients, or it will cause nutrient burn!) Some other supplements of potassium are: Wood ashes, which are fast absorption, Kelp Meal, which is medium absorption, Greensand, which is slow absorption, granite dust, which is slow absorption. Sulfate of Potash, Sulfate of Potash Magnesia, Muriate of Potash, which are medium absorption. FOXFARM GROW BIG HYDROPONIC CONCENTRATE, which is fast absorption. (FFGB can bring your ph down as well) Earth Juice Meta-K, which is fast acting. (Can bring down your ph as well) Leaves will never recover, but the plant will show recovery after about 4 to 5 days when using a fast acting nutrient.

Note: Wood Ashes, can make your ph go up a bit, so please monitor your ph when using it.

Now if you added to much chemical nutrients and or organics, (which is hard to burn your plants when using organics) you need to flush the soil with plain water. You need to use 2 times as much water as the size of the pot, for example: If you have a 5 gallon pot and need to flush it, you need to use 10 gallons of water to rinse out the soil good enough to get rid of excessive nutrients.

Picture 1 and 2 shows a Potassium deficiency (Thank You General Ganja for letting me use Picture 1!)



Last edited by MynameStitch; 10-28-2010 at 09:36 AM.. Reason: New Title

37 members found this post helpful.

04-30-2005, 02:14 AM

#2

MynameStitch

Dr. Doolittle

ICMag Mentor



Join Date: Mar 2004
Location: Wildlife Prairie Park
Posts: 4,620



Magnesium (Mg) - Micronutrient and Mobile Element

Magnesium helps supports healthy veins while keeping a healthy leaf production and its structure. Magnesium is significant for chlorophyll-production and enzyme break downs. Magnesium which must be present in relatively large quantities for the plant to survive, but yet not to much to where it will cause the plant to show a toxicity.

Magnesium is one of the easiest deficiencies to tell... the green veins along with the yellowness of the entire surrounding leaf is a dead giveaway, but sometimes that's not always the case here. In case you have one of those where it doesn't show the green veins, sometimes leaf tips and edges may discolor and curl upward. The growing tips can turn lime green when the deficiency progresses to the top of the plant. The edges will feel like dry and crispy and usually affects the lower leaves in younger plants, then will affect the middle to upper half when it gets older, but It can also happen on older leaves as well. The deficiency will start at the tip then will take over the entire outer left and right sides of the leaves. The inner part will be yellow and or brownish in color, followed by leaves falling without withering. The tips can also twist and turn as well as curving upwards as if you curl your tongues.

Excessive levels of magnesium in your plants will exhibit a buildup of toxic salts that will kill the leaves and lock out other nutrients like Calcium (Ca). Mg can get locked out by having too much Calcium, Chlorine or ammonium in your soil/water.

One of the worst problems a person can have is a magnesium def caused by a ph lockout. By giving it more magnesium to cure the problem when you are thinking you are doing good, but actually you are doing more harm then good. When the plants can't take in a nutrient because of the ph being off for that element, the plant will not absorb it but it will be in the soil... therefore causing a buildup. A buildup will be noticed by the outer parts of the plant becoming whitish and or a yellowish color. The tips and part way in on the inner leaves will die and feel like glass. Parts affected by Magnesium deficiency are: space between the veins (Interveinal) of older leaves; may begin around interior perimeter of leaf.

Problems with Magnesium being locked out by PH troubles

Light Acid Soils, soils with excessive potassium, calcium and or phosphorus

Soil

Magnesium gets locked out of soil growing at ph levels of 2.0-6.4

Magnesium is absorbed best in soil at a ph level of 6.5-9.1 . (Wouldn't recommend having a ph of over 7.0 in soil) anything out of the ranges listed will contribute to a Magnesium deficiency.

Hydro and Soil less Mediums

Magnesium gets locked out of Hydro and Soil less Mediums at ph levels of 2.0-5.7

Magnesium is absorbed best in Hydro and Soil less Mediums at ph levels of 5.8-9.1

(Wouldn't recommend having a ph over 6.5 in hydro and soil less mediums.) Best range for hydro and soil less mediums is 5.0 to 6.0. Anything out of the ranges listed will contribute to a Magnesium deficiency.

Solution to fixing a Magnesium deficiency

Any Chemical/Organic nutrients that have Magnesium in them will fix a Magnesium deficiency. (Only mixing at ½ strength when using chemical nutrients or it will cause nutrient burn!)

Other nutrients that have magnesium in them are: Epsom salts, which is fast absorption. Dolomite lime and or garden lime (same thing just called different) which is slow absorption. Sulfate of Potash, Magnesia which is medium absorption. Worm Castings, which is slow absorption. Crabshell which is slow absorption. Earth Juice Mircoblast, which is fast acting. (a must buy!! Has lots of 2ndary nutrients).

Now if you added to much chemical nutrients and or organics,(which is hard to burn your plants when using organics) You need to Flush the soil with plain water. You need to use 2 times as much water as the size of the pot, for example: If you have a 5 gallon pot and need to flush it, you need to use 10 gallons of water to rinse out the soil good enough to get rid of excessive nutrients.

Picture one shows a mid grade magnesium deficiency.

(Picture 1 is Mine)



Calcium (Ca) -Macro Nutrient and an Immobile element.

Calcium is another important element that helps the plants cell walls, cell division in making the plants stems, stalks, branches stronger, as well as contributing to root growth, mostly the newer root hairs, Calcium also helps enhancing the uptake of K in the the plants roots. Calcium moves really slow within the plant and tends to concentrate in roots and older growth.

When plants exhibit a Calcium deficiency the younger leaves are the first to show it as well as older leaves. The Leaf tips will die back, the tips may curl, and growth of the plant is stunted. The plant can show a weakness in the stems and branches, as well as a under developed root system that can lead to bacteria problems with roots dieing off. Having slow plant transpiration rates can aggravate the uptake of calcium. Make sure your soil isn't very acidic, for calcium gets harder to be absorbed through acidic soils, Which leads to having a plant that is deficient in Calcium. The leaf tips, edges and new growth will or may turn a yellow/brown color that happen in spots and often surrounded by a sharp brown outlined edge and then the leaf tips die back. If too much calcium is given at an early stage of growth it can stunt the growth of your plants. Having too much of calcium will also flocculate when a concentrated form is combined with potassium. The parts affected by a calcium deficiency are the roots. Stem or petiole, young or old leaves.

Too much Calcium will lead to other micronutrient deficiencies. Calcium fixation is caused by many types of mediums such as: clay soils, unbuffered coco and humus. The lime tends to bond to these soils very easily. The stems of the plant will not be able to hold the plant up and will exhibit a white brown in between the veins of the leaves when having too much calcium. Also having too much potassium and or nitrogen will cause a calcium lockout.

Problems with Calcium being locked out by PH troubles

Very acidic soils with excessive potassium, dry and or wet soil. Lack of calcium in the soil may cause too acidic soil. This may cause to Mg or Iron deficiency or very slow stunted growth

Soil

Calcium gets locked out of soil growing at ph levels of 2.0- 6.4
Calcium is absorbed best in soil at a ph level of 6.5-9.1 (Wouldn't recommend having a ph of over 7.0 in soil) anything out of the ranges listed will contribute to a Calcium Deficiency.

Hydro and Soil less Mediums

Calcium gets locked out of Hydro and Soil less Mediums at pH levels of 2.0- 5.3
Calcium is absorbed best in Hydro and Soil less Mediums at pH levels of 5.4-5.8 (Wouldn't recommend having a pH over 6.5 in hydro and soil less mediums.) Best range for hydro and soil less mediums is 5.0 to 6.0. Anything out of the ranges listed will contribute to a Calcium Deficiency.

Solution to fixing a Calcium deficiency

To fix a calcium deficiency you can treat by foliar feeding with one teaspoon of dolomite lime or Garden lime per quart of water, Or Any Chemical/Organic nutrients that have Calcium in them will fix a Calcium deficiency. (Only mixing at ½ strength when using chemical nutrients or it will cause nutrient burn!) Or you can take crushed up dolomite lime or garden lime in a gallon of water and water it in the soil. 1 to 2 teaspoons per gallon of water, which will be slow acting. Garden Gypsum, which is medium absorption. Limestone, which is medium absorption, Rock Phosphate and Animal wastes which are both medium/slow absorption. **Note: Caution when using gypsum to an already acid soil (pH that is less than 5.5) can have a very bad effect on different types of plants by effecting the absorption of soil aluminum, which is poison to plant roots.**

Now if you added too much chemical nutrients and or organics, (which is hard to burn your plants when using organics) you need to flush the soil with plain water. You need to use 2 times as much water as the size of the pot, for example: If you have a 5 gallon pot and need to flush it, you need to use 10 gallons of water to rinse out the soil good enough to get rid of excessive nutrients.

Pictures 1-2 shows calcium deficiencies. First one shows late, 2nd one shows early development.





Zinc (Zn) Micro Nutrient and an Immobile element.

Zinc plays a lot of roles in the plants, first off zinc aids in the plants size and maturity as well as production of leaves, stalks, stems and branches. Zinc is an essential component in many enzymes as well as growth hormone auxin. Low auxin levels can be the cause of stunting of the plants leaves and the shoots. Zinc is also important in the formation and activity of chlorophyll. Plants that have a good level of Zinc, can handle long droughts. So that's why Zinc plants an important role how it absorbs moisture.

Zinc deficiencies on some plants will have the Spotting and bleached spots (chlorosis) between the veins first appears on the older leaves first, and then goes on to the immature leaves. It will then start to slowly affect tips of growing points of the plants. When the zinc deficiency happens so suddenly, the spotting can appear to be the same symptoms to that of an iron and manganese, without the seeing the little leaf symptom.

Zinc is not mobile in plants so the symptoms will occur mainly in the newer growths. Having a plant that is deficiency in Zinc can cause small crops, short shoots and have a cluster of small distorted leaves near the tips. Between the veins (Interveinal) yellowing is often combined with overall paleness. Pale or grayish, yellowing between the veins; rosetted weak is the signs of a Zinc deficiency.

With a low level of zinc in your plants, your yields will be dramatically reduced.

Interveinal chlorosis is present in the small, narrow distorted leaves at the ends of really shortened shoots and the shortening between internodes. Leaf margins are often distorted or wrinkled. These nutrients will get locked out due to high pH: Zinc, Iron, and Manganese. These deficiencies will often occur together. Parts affected by a zinc deficiency are young leaves and petioles.

Having an excess of Zinc is very rare, but when it does happen it can cause wilting and in worse cases death.

Problems with Zinc being locked out by PH troubles

High ph, Low organic matter, High Phosphorus levels in the soil, and or lack of nitrogen.

Soil

Zinc gets locked out of soil growing at ph levels of 4.5-4.7, 7.5-9.5

Zinc absorbed best in soil at a ph level of 5.0-7.0 (Wouldn't recommend having a soil ph of over 7.0 in soil) Anything out of the ranges listed will contribute to a Zinc Deficiency.

Hydro and Soil less Mediums

Zinc gets locked out of Hydro and Soil less Mediums at ph levels of 5.7-8.5

Zinc is absorbed best in Hydro and Soil less Mediums at ph levels of 4.0-5.5 (Wouldn't recommend having a ph over 6.5 in hydro and soil less mediums.) Best range for hydro and soil less mediums is 5.0 to 6.0. Anything out of the ranges listed will contribute to a Zinc Deficiency.

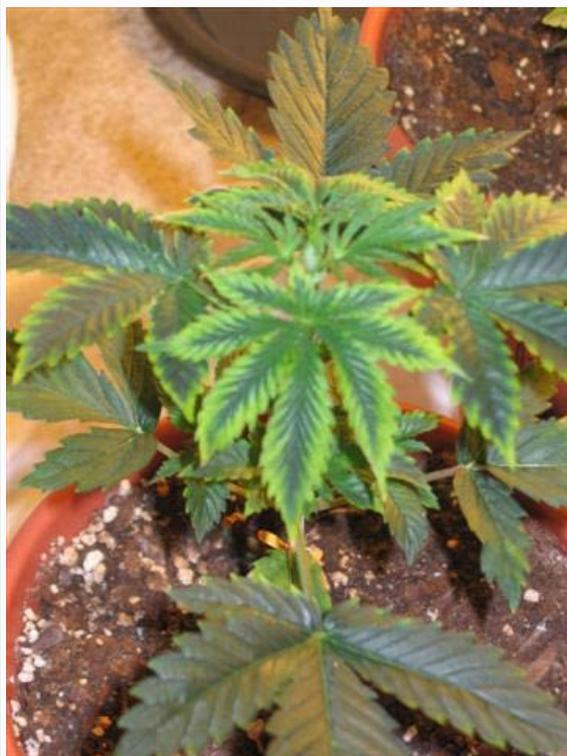
Solution to fixing a Zinc deficiency

Any Chemical/Organic nutrients that have potassium in them will fix a Zinc deficiency. (Only mixing at ½ strength when using chemical nutrients or it will cause nutrient burn!)

And any of the following nutrients will fix a zinc deficiency: Zinc sulfate, zinc chelated, or zinc oxides are adequate fertilizer sources for zinc. Or you can bury galvanized nails in the soil. (Make sure you take off the sharp point at the end to prevent roots from being damaged) Garden Manure, which is slow acting. Greensands, Cottonseed Meal are both medium/slow absorption as well.

Now if you added too much chemical nutrients and or organics, (which is hard to burn your plants when using organics) You need to Flush the soil with plain water. You need to use 2 times as much water as the size of the pot, for example: If you have a 5 gallon pot and need to flush it, you need to use 10 gallons of water to rinse out the soil good enough to get rid of excessive nutrients.

Picture 1 is a zinc deficiency in vegetative growth.



Overgrow Refugee Forever

[The Complete Guide To Sick Plants, pH and Pest troubles!](#)  Updated! 7/15/2010

[Stitch's Grow Pictures Thread](#)

Quote:

HeadyPete: Any "hydro guy" that advises you to spray anything, let alone a foul smelling, sticky oil on your buds should be bitchslapped right out of business.

Last edited by MynameStitch; 03-19-2006 at 07:57 AM..

23 members found this post helpful.

04-30-2005, 02:15 AM

#3

MynameStitch

Dr. Doolittle

ICMag Mentor

Iron (Fe) Micro Nutrient and an Immobile element

Iron is an important component of the plants enzyme and is also important for the transportation of electrons while photosynthesis is happening...



Join Date: Mar 2004
Location: Wildlife Prairie Park
Posts: 4,620
A progress bar consisting of 10 small squares, with the first 4 squares filled with green and the remaining 6 squares empty.

Iron reacts with many of the components of nutrient solutions, which will cause a nutrient lockup to occur. If you add too much Iron without adding enough Phosphorus, you can contribute to a phosphorus deficiency, so watch out how much iron and phosphorus your nutrients have. The Leaves on the plant can turn a pale yellow along the growing shoots, while the veins remain dark green. When you have pH imbalance, it can make iron insoluble. The tissue between the veins becomes pale or white, kind of mimics the magnesium deficiency, but not yellow, iron has the white where the yellow would be on the magnesium deficiency. The deficiency starts with the lower and middle leaves, while the new leaves become completely lacking in chlorophyll, but with little or no necrotic spots. The chlorotic mottling on new leaves starts first near the bases of the leaflets, so the middle of the leaf appears to have a yellow mark. Iron is difficult for plants to absorb and moves really slowly in the plant. Harder for outdoor plants to absorb when in hot weather. Parts affected by the Iron Deficiency are: Young leaves and Petioles.

Too much Iron can cause a problem that looks like a pH imbalance, Brown spotting on the top leaves, mainly fan leaves. Can affect the whole plant. Iron Toxicity is rare for pH below 5.5.

Problems with Iron being locked out by pH troubles

Over watering, pests, nematodes, not enough drainage, like not enough perlite. High pH, Soils with low iron, High Phosphorus, Excess Zinc, manganese or copper.

Soil

Iron gets locked out of soil growing at pH levels of 2.0-3.5
Iron is absorbed best in soil at a pH level of 4.0-6.5 (Wouldn't recommend having a soil pH of over 7.0 in soil) anything out of the ranges listed will contribute to an Iron Deficiency.

Hydro and Soil less Mediums

Iron gets locked out of Hydro and Soil less Mediums at pH levels of 2.0-3.5
Iron is absorbed best in Hydro and Soil less Mediums at pH levels of 4.0- 6.0 (Wouldn't recommend having a pH over 6.5 in hydro and soil less mediums.) Best range for hydro and soil less mediums is 5.0 to 6.0. Anything out of the ranges listed will contribute to an iron deficiency.

Solution to fixing a Iron deficiency

Any Chemical/Organic nutrients that have potassium in them will fix a Iron deficiency. (Only mixing at 1/2 strength when using chemical nutrients, or it will cause nutrient burn!) Foliar feed with chemical fertilizer containing Fe or rusty water can work well. Other supplements that have Iron in them are: Iron chelates, Ferric oxide, Ferrous oxide, Ferrous sulfate, all of these are fast absorption. Greensand, Cottonseed Meal is slow absorption, Garden Manure, which is medium absorption. Manure is most common organic iron source to use.

Now if you added too much chemical nutrients and or organics, (which is hard to burn your plants when using organics) You need to Flush the soil with plain water. You need to use 2 times as much water as the size of the pot, for example: If you have a 5 gallon pot and need to flush it, you need to use 10 gallons of water to rinse out the soil good enough to get rid of excessive nutrients.

Picture 2-3 is a more severe case of iron def



Sulfur (S) Micro Nutrient and an Immobile element

Sulfur plays an important role in root growth, chlorophyll supply and plant proteins. Just like iron, Sulfur moves slowly in the plant, hotter temps will make Sulfur harder to absorb like iron. But unlike iron, Sulfur is distributed evenly throughout the plant, mainly the big fan leaves. Sulphur is also a very important element in vegetative growth.

First signs of a Sulfur deficiency are pale young leaves. The growth of leaves will remain slow, but the leaves can also get brittle and stay narrower than normal. Can also have small mutated leaves, along with the buds on top of flowering plants will die off. The growth if the plant can be stunted as well as yellowing of the younger leaves and new growth. Unlike a magnesium deficiency where it starts from the leaves tip and around, sulfur starts from the back of the leaves on forward to the middle of the leaves. The Stems become Hard, thin and may be woody. Some of the plants may show orange and red tints rather than yellowing. The stems will increase in length but not in diameter. Leaves will then be stiff and brittle like glass and fall off soon. Parts affected by a Sulfur deficiency are: The whole plant can be affected as well as young leaves, leaf veins.

Too much Sulfur will cause your plants to be small along with the size of your leaves, along with your leaves being brown and dead looking at the tips. An excess of sulfur can also look like salt damage, restricted growth and dark color damage.

Problems with Sulfur being locked out by PH troubles

Soil

Sulfur gets locked out of soil growing at pH levels of 2.0-5.5
Sulfur is absorbed best in soil at a pH level of 6.0- 9.5 (Wouldn't recommend having a soil pH of over 7.0 in soil) Anything out of the ranges listed will contribute to a Sulfur Deficiency.

Hydro and Soil less Mediums

Sulfur gets locked out of Hydro and Soil less Mediums at pH levels of 2.0-5.5
Sulfur is absorbed best in Hydro and Soil less Mediums at pH levels of 6.0- 9.5 (Wouldn't recommend having a pH over 6.5 in hydro and soil less mediums.) Best range for hydro and soil less mediums is 5.0 to 6.0. Anything out of the ranges listed will contribute to an Sulfur deficiency.

Solution to fixing a Sulfur deficiency

Mix 1-2 teaspoons of Epsom salts per gallon of water until condition improves.

Any Chemical/Organic nutrients that have Sulfur in them will fix a Sulfur deficiency. (Only mixing at ½ strength when using chemical nutrients or it will cause nutrient burn!) Other sulfur nutrient supplements are: Rain water, Ammonium Thiosulfate, which is all fast absorption. Garden Sulfur, Sulfate of Potash, Gypsum.

Note: Caution when using gypsum to an already acid soil (pH that is less than 5.5) can have a very bad effect on different types of plants by affecting the absorption of soil aluminum, which is poison to plant roots.

Now if you added too much chemical nutrients and or organics, (which is hard to burn your plants when using organics) you need to flush the soil with plain water. You need to use 2 times as much water as the size of the pot, for example: If you have a 5 gallon pot and need to flush it, you need to use 10 gallons of water to rinse out the soil good enough to get rid of excessive nutrients.

Pictures 1 shows a sulfur deficiency, notice how at the top part the yellow is starting from the backside of the leaf towards the front....





Manganese (Mn) Micronutrient and Immobile Element

Manganese Helps enzymes break down for chlorophyll and photosynthesis production, as well as it works with plant enzymes to reduce nitrates before producing proteins.

Having plants that are deficient in manganese can turn the young leaves into spotted (mottled) yellow and or brown areas on young leaves. Dead (Necrotic) yellow spots form on top leaves, while the lower older leaves will or may have gray specks and or spots. Symptoms can include yellowing of leaves while the leaf veins can stay green. Can also produce a chequered effect. As the plant gets newer growths the plant will seem to grow away from the problem, that's why the younger leaves may be unaffected. On the top of the leaves, brown spots can appear. While the severe areas of the leaves turn brown and wither. Parts Affected by a Manganese deficiency are: Young leaves.

Too much Manganese in the soil will cause an iron deficiency. The blotchy leaf tissue is caused by not enough chlorophyll synthesis. Your plants will seem to have very weak vigor caused by the excessive amount of manganese.

Problems with Manganese being locked out by PH troubles

Soil ph of over 6.5, High iron soils, Low nitrogen Soils, Dry weather and compacted soil.

Soil

Manganese gets locked out of soil growing at ph levels of 2.0-5.0
Manganese is absorbed best in soil at a ph level of 5.5-6.5 (Wouldn't recommend having a soil ph of over 7.0 in soil) anything out of the ranges listed will contribute to a Manganese Deficiency.

Hydro and Soil less Mediums

Manganese gets locked out of Hydro and Soil less Mediums at ph levels of 2.0-4.5
Manganese is absorbed best in Hydro and Soil less Mediums at ph levels of 5.0-5.6 (Wouldn't recommend having a ph over 6.5 in hydro and soil less mediums.) Best range for hydro and soil less mediums is 5.0 to 6.0. Anything out of the ranges listed will contribute to a manganese deficiency.

Solution to fixing a Manganese deficiency

Foliar feed with any chemical fertilizer containing Mn., or mix with water and water your plants with it. Any Chemical/Organic nutrients that have Manganese in them will fix a Manganese deficiency. (Only mixing at ½ strength when using chemical nutrients or it will cause nutrient burn!) Other nutrients that have Manganese in them are: Manganese chelate, Manganese carbonate, Manganese chloride, Manganese dioxide, Manganese oxide, Manganese sulfate, which are all fast absorption. Garden Manure, Greenssand are both good sources of manganese and are medium/ slow absorption.

Now if you added too much chemical nutrients and or organics, (which is hard to burn your plants when using organics) You need to Flush the soil with plain water. You need to use 2 times as much water as the size of the pot, for example: If you have a 5 gallon pot and need to flush it, you need to use 10 gallons of water to rinse out the soil good enough to get rid of excessive nutrients.

Picture 1 shows a manganese deficiency in flowering.



This image has been resized. Click this bar to view the full image. The original image is sized 500x663.



Boron (B) Micronutrient and Immobile element

Boron is important when dealing with maturation, pollen germination and seed production. As well as keeping calcium in soluble forms and keeping the stems, stalks, branches strong. Boron keeps good color on the leaves and helps produce the plants structure. Boron also aids in cell division and protein formation.

Boron deficiencies will show up first in younger leaves (they may turn yellow), then moves up the plant. Boron deficiency can resemble calcium deficiency. Stunting, discoloration, possible death of the growing tips, bud abortion and development. The Roots will show a stunted with swollen short secondary roots, leaves distorted, sometimes bronzed or scorched. Tip of the shoot dies; stems and petioles are brittle. Boron deficiency plants are easy to tell, because of the spotting the leaves show like a strawberry mark and or splashes of the marking. Boron-deficiency symptoms first appear at the growing points. They also can show signs of newer growths turning gray and or dying, bud deformed, curling of the leaves which are often spotted and discolored. Newer growths appear to look like they are burnt. They can show signs

of hollow stems along with yellowish to brownish color leaves. Dead (Necrotic) spots develop between leaf veins, as well as the leaves becoming thick. The leaves will wilt with necrotic and chlorotic spotting. Boron is poorly absorbed with low potassium content. First signs of the deficiency are abnormal growth tips. Having not enough boron can also invite troubles for fungus problems from the internal tissues to rot away, as well as the root hairs along with them being discolored. To avoid having a Boron deficiency try to keep the ph below 7 and to improve the moisture as well as retaining light soils.

Too much boron in your plants can produce a lot of problems. The leave tips turn yellow progressing inwards causing the plant to soon die slowly along with leaves dropping a lot. Can show same signs as if a magnesium deficiency, but only happens on newer growths. Parts affected by a boron deficiency are: Growing points and young leaves.

Problems with Boron Being Locked out by PH troubles

Soil ph under 5.5 or over 6.8, sandy soil, soil with low organic matter and or lack of nitrogen.

Soil

Boron gets locked out of soil growing at ph levels of 2.0-5.0

Boron is absorbed best in soil at a ph level of 5.0-7.0 (Wouldn't recommend having a soil ph of over 7.0 in soil) Anything out of the ranges listed will contribute to a Boron deficiency.

Hydro and Soil less Mediums

Boron gets locked out of Hydro and Soil less Mediums at ph levels of 2.0-5.0

Boron is absorbed best in Hydro and Soil less Mediums at ph levels of 5.0-6.0(Wouldn't recommend having a ph over 6.5 in hydro and soil less mediums.) Best range for hydro and soil less mediums is 5.0 to 6.0. Anything out of the ranges listed will contribute to a boron deficiency.

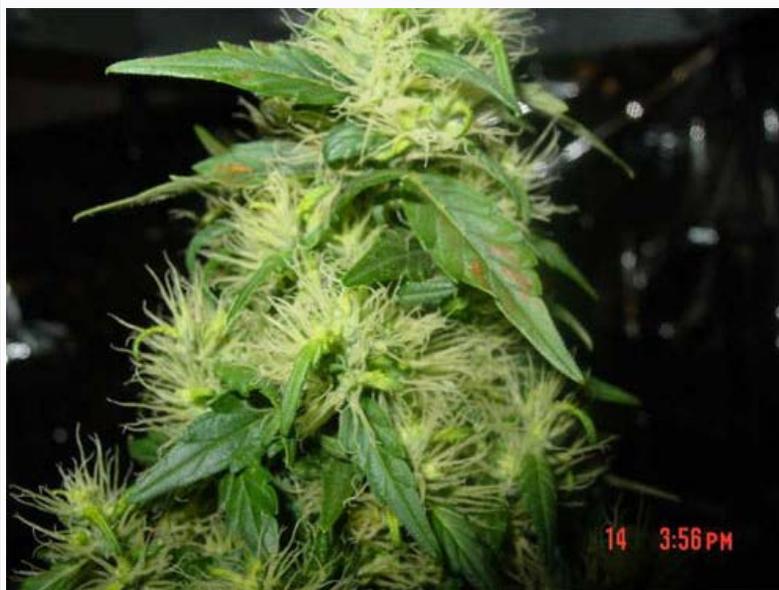
Solution to fixing a Boron deficiency

One of the ways you can fix a boron deficiency is to either foliar spray or water regular. Treat with one teaspoon of Boric acid (sold as eyewash) per gallon of water. (Only mixing at ½ strength when using chemical nutrients or it will cause nutrient burn!) Other nutrients that have boron in them are: Borax, Boric Acid, Colemanite, Sodium pentaborate, Sodium tetraborate, which are ALL fast absorption. Garden Manure, Bone Meal are both good boron supplements, but are slow/medium absorption.

Now if you added too much chemical nutrients and or organics, (which is hard to burn your plants when using organics) you need to flush the soil with plain water. You need to use 2 times as much water as the size of the pot, for example: If you have a 5 gallon pot and need to flush it, you need to use 10 gallons of water to rinse out the soil good enough to get rid of excessive nutrients.

These pictures show a boron deficiency in different stages.

Picture 1 (Contributed by: Turkish)



Last edited by MynameStitch; 02-13-2006 at 08:23 AM..

10 members found this post helpful.

04-30-2005, 02:15 AM

#4

MynameStitch

Dr. Doolittle

ICMag Mentor



Join Date: Mar 2004
Location: Wildlife Prairie Park
Posts: 4,620



Copper (Cu)

Copper plays a big role in producing healthy plants, stems, branches and new growths, as well as for the plants reproduction and maturity. It also assists in carbohydrate metabolism and oxygen reduction.

Copper deficiency plants shows a lack of growth, growth tips die back, green leaves will show a bluish hue and plants may have a hard time showing maturity in vegging stages. Copper deficient plants causes irregular growth and wilting in the newer growths. The Leaves at top will wilt easily along with bleaching (chlorosis) and necrotic areas in the leaves. Leaves on the top of the plant may show veinal chlorosis.(bleaching of the veins)
Growth and yield will be diminished along with spots on the leaves that are necrotic.

To much copper in the system will cause the plant to die, as if it was a poison.Near death the plant will induce iron deficiencies and the root system will decay along with abnormal size of the roots, along with little side branching. Some new growths may not open up, along with becoming thin pale green to a bluish hue. Parts affected by copper deficiency are: new shoots, young leaves, and or the whole plant.

Problems with Copper being Locked out by Ph Troubles

High ph along with highly compacted soil that has a lack of nitrogen.

Soil

Copper gets locked out of soil growing at ph levels of 2.0- 4.5

Copper is absorbed best in soil at a ph level of 5.0-7.5 (Wouldn't recommend having a soil ph of over 7.0 in soil) anything out of the ranges listed will contribute to a Copper deficiency.

Hydro and Soil less Mediums

Copper gets locked out of Hydro and Soil less Mediums at ph levels of 6.5-9.0

Copper is absorbed best in Hydro and Soil less Mediums at ph levels of 2.0-6.0 (Wouldn't recommend having a ph over 6.5 in hydro and soil less mediums.) Best range for hydro and soil less mediums is 5.0 to 6.0. Anything out of the ranges listed will contribute to a copper deficiency.

Solution to fixing a Copper deficiency

One way to treat a copper deficiency is by foliar feeding with Copper Sulphate, Cu sulfate, Cu chelates, Those 3 can also be used in soil. Any Chemical/Organic nutrients that have copper in them will fix a copper deficiency. (Only mixing at ½ strength when using chemical nutrients or it will cause nutrient burn!)

Other nutrients that have copper in them are: Granular, Garden Manure, Greensand.

Now if you added too much chemical nutrients and or organics, (which is hard to burn your plants when using organics) you need to flush the soil with plain water. You need to use 2 times as much water as the size of the pot, for example: If you have a 5 gallon pot and need to flush it, you need to use 10 gallons of water to rinse out the soil good enough to get rid of excessive nutrients. Damaged leaves will NOT recover.

Picture 1 is a copper deficiency, (it may look like a over fertilization (nitrogen) but look at the bottom of the leaves, notice how they are yellow and a bit of white, also some of the fan leaf tips are brown and dying off.)



Molybdenum (Mo)

Molybdenum has proteins that help the plant take nitrogen from the air.

A Molybdenum deficiency causes leaves to have a pale, fringed and scorched look, along with weird or retarded leaf growth. Yellowing of middle leaves can occur as well as twisted younger leaves which will eventually die. Molybdenum deficiencies frequently resemble a nitrogen deficiency. A Molybdenum deficiency shows older chlorotic leaves with rolled margins and stunted growth. Looks like a nitrogen deficiency but with the red tips moving inwards to the middle of the leaves. Molybdenum deficiency will usually show up in the older to middle aged leaves, then it moves to the young leaves. Generally a molybdenum deficiency occurs when sulfur and phosphorus are deficient.

Molybdenum toxicity doesn't cause to many problems, but may cause problems when the human ingests it. Excessive molybdenum in cannabis will look like iron or copper deficiency. Parts affected are by the molybdenum deficiency are: Older leaves.

Problems with Molybdenum being Locked out by Ph Troubles

Soil ph that are under 5.5

Soil

Molybdenum gets locked out of soil growing at ph levels of 2.0-6.5

Molybdenum is absorbed best in soil at a ph level of 7.0-9.5 (Wouldn't recommend having a soil ph of over 7.0 in soil) anything out of the ranges listed will contribute to a Molybdenum deficiency.

Hydro and Soil less Mediums

Molybdenum gets locked out of Hydro and Soil less Mediums at ph levels of 2.0-5.5

Molybdenum is absorbed best in Hydro and Soil less Mediums at ph levels of 6.0-8.0 (Wouldn't recommend having a ph over 6.5 in hydro and soil less mediums.) Best range for hydro and soil less mediums is 5.0 to 6.0. Anything out of the ranges listed will contribute to a Molybdenum deficiency.

Solution to fixing a Molybdenum deficiency

One way to fix a Molybdenum deficiency is to foliar spray with Molybdenum, like Miracle Grow All Purpose plant food and Miracle Grow: Tomato Plant Food. These can also be used to mix in with water as well. (Only mixing at 1/2 strength when using chemical nutrients, or it will cause nutrient burn!) Other nutrients that have Molybdenum in them are: I think Peters All Purpose Plant food does, as well as Greensand, Lime. Green sand and lime is slow/medium absorption, while Peters All Purpose Plant Food is fast absorption.

Now if you added to much chemical nutrients and or organics,(which is hard to burn your plants when using organics) You need to Flush the soil with plain water. You need to use 2 times as much water as the size of the pot, for example: If you have a 5 gallon pot and need to flush it, you need to use 10 gallons of water to rinse out the soil good enough to get rid of excessive nutrients.

Picture 1 and 2 is a Molybdenum deficiency in late flowering



Nickel (Ni)

Nickel is required by plants for proper seed germination. Though Ni deficiency symptoms are not well documented, symptoms include chlorosis and interveinal chlorosis in young leaves that can lead to plant tissue necrosis. Other things are poor seed germination and decreases in crop yield.

Terminology

Chlorosis

yellowing of the leaf tissue.

Interveinal Chlorosis

Yellowing in between leaf veins, veins themselves remaining green.

Necrosis

The plant tissue browns and dies. The tissue which has already died on a still living plant is called necrotic tissue.

Last edited by MynameStitch; 02-08-2006 at 01:18 AM..

9 members found this post helpful.

04-30-2005,
02:17 AM

#5

MynameStitch

Dr. Doolittle

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Join Date: Mar 2004

Location: Wildlife

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Posts: 4,620



Part 2

Sick plants that are from bug infestation, ph problems and over watering/under watering

Over watering

Over watering is one of the biggest mistakes new growers make, reason for this is, because they feel the need to give there plant everything and will overdue a lot of things and one of them is over watering. By over watering your plant you soak the roots so much, they can't get enough oxygen and slowly die. The plant shows signs of over watering by: Wilting, droopy look, yellow and or dead leaves falling off, which includes leaves that don't look dead falling off. One of the best ways to tell how NOT to over water is by, picking up the pot when it is dry and then picking up the pot after you water. (This is a reason why it's smart to use light pots.) When you water, you want to water just enough to where you see a bit of water coming out of the bottom, not gushing or pouring out. Just enough to see a little bit, then you know the plant has enough water. To prevent over watering you can either: add more perlite to your soil, add hydrogen peroxide to your water for extra oxygen, all the while killing bacteria if any in the soil. After watering, wait a few days to water. Mj plants like a good watering and then a couple days to dry out in between watering. So it's very easy to over water. Besides the weight of the pot, another way to test if your plant needs water is to stick your index finger a couple inches into the soil. If the soil at the tip of your finger feels almost dry, then it's time to water again. The top of the soil should be allowed to dry out between waterings if it's still moist the plant does NOT need watered. You can also use a moisture meter which will tell you the level of moisture down in the soil. You can buy them at most garden supplies or hydro shops.

Here is a picture of what over watering looks like:

(Picture Provided by ShopVac)



This shows a comparison of under watering and over watering of plants.



Picture 3 shows overwatering of a seedling, and thus nitrogen is not being absorbed due to soggy soil.
(Photo Credit: Trichome Design)



Under Watering

Under watering can show the exact same symptoms as over watering can, they show the droopiness along with the top soil being hard. To avoid this make sure every other other watering you give your plants a good watering, like use a bit more water then you normally do, because sometimes your plants will need a good quenching once in a while. So doing this will help the bottom roots and root hairs get enough water to produce newer growth. For new growers they tend to do both over watering and under watering.

More over watering then anything else, they tend to be to "generous", and then you have ones that are to afraid to water them to much and then they get the under watering symptom. Under watering seems to droop more than over watering does, the fan leaves will droop closer to the stalk and won't be as yellow as over watering looks like, under watering looks like this picture below, only way to stop under watering is to water when the pot feels lite. Make sure few drips of water come out at the bottom of the holes, that way you know the plant has enough water.

 Click this bar to view the full image.



Root Rot

Moved to Diseases section

Ph Problems

One of the first signs of having a slight ph problem is, your plant having part of the leaves kind of twisty, spotty with brown, yellowish, red spots within each other.

Sometimes they don't have to have all the colors, they could just be spots that have yellowish brown, or just reddish brown and can happen anywhere on the plant. Mainly starts on big fan leaves then goes to little leaves.

When this happens you need to check your soil ph, water ph before and after adding your nutrients. One of the biggest causes is adding nutrients like earth juice; they take the ph down quite a bit. Also can happen when you add bone and blood meal to your soil, that will throw the ph off as well, so it's smart to test the mix before putting your plants into the mix. After the spots happen you will soon see nutrients being locked out, when that happens **DO NOT ADD ANYTHING TO FIX THE PROBLEM UNTILL YOU GET YOUR PH FIXED!!** Reason why is, because the plant isn't absorbing that nutrient, by adding the nutrient it is deficient in, you are causing it to have a build up in the soil therefore can cause that nutrient to become toxic to the plant, because of buildup, to much buildup of certain nutrients will lock out other nutrients. In order to fix the problem you will need to first fix the ph and then if the soil is deficient in nutrients you can add it to fix the problem. A digital PH tester is the best tester to use as they are the most accurate. If you can't afford a digital ph meter, then your best bet is to get ph testing papers. DO NOT get soil testers, those are the cheapest junk I ever seen and do not give good readings, so you cant rely on one of those. There are a lot of good ph testers out there, one of them is hanna. That is the one I use and is the best money ever spent! Vast majority of problems with soil ph comes from the soil if it has additives like peat moss, which is HILGY acidic..... and or the water you are using, as well as nutrient deficiencies from using the wrong ph for watering. You want to be careful when adjusting your ph, doing this over a week is the best idea, to fast will cause shock to the plant. If you can't get a hold of a ph tester or ph test papers. If you have some dolomite lime, its always better to use it in soil rather than every time you water, imo and from others (Uncle Ben) That it really doesn't stabilize as many people think it does, Soil pH and micronutrient availability are interrelated. Don't Use to much lime to decrease the soil pH to a point where micronutrients can't be unavailable to plants. The micronutrients affected by pH include iron, manganese, zinc and, not as often copper. The problems when you apply to much lime can make it harder to correct your ph than what you would have when you didn't add as much lime. You can always add more lime, but if you add to much you can't remove it if you put to much lime in the soil. With great soil moisture, lime will work immediately and pH will start to change over a few months. However, it can take up to a year for the real benefit of lime to work. As the soil pH rises, the time it takes for lime to react decreases due to lower levels of soil acids. If you need to change your ph when its to high, if you choose to use lime it will not help as much as you think in lowering your ph, it

would need a lot of lime to lower your pH to a point where it would cause a toxicity to the plants so look elsewhere to use something to lower your pH rather than using lime.

So here at the bottom is a list of some buffers that are good to go with when raising and lowering pH!

Here are some pH buffers when your pH is too high: Use these SOIL PH Adjustments to lower your pH: sawdust, composted leaves, wood chips, cottonseed meal, leaf mold and peat moss. Sawdust, composted leaves, woodchips and, lemon juice, PH DOWN.

Hydro PH Adjustments: PH Down (vinegar and lemon juices are good for soil, but not recommended for hydro use) Phosphoric acid during flowering and Nitric acid for vegetative growth. Thanks goes out to syko2 for that one! (Only quality PH buffers should be used to adjust pH and be sure the buffer and nutrient work's well together.)

Here are some that will raise the pH: use these SOIL Adjustments when your pH is too low: PH UP, dolomite lime, hardwood ash, bone meal, crushed marble, or crushed oyster shells, potassium hydroxide <--- Thank you Uncle Ben!

Hydro Adjustments: PH UP, lime, potassium hydroxide and potassium silicate. (Only quality PH buffers should be used to adjust pH and be sure the buffer and nutrient work's well together.)

Here are a few pictures of pH spotting before nutrient lockout occurs. The last pic is shown is high pH with the twisty leaves. Note the edges are brown, this is a potassium deficiency that is caused by pH lockout. (Sometimes this gets confused with a nitrogen toxicity, so always keep your pH in check and test it often!)

 Click this bar to view the full image.



Props goes to Chemical Burn For the Picture!



Bud Rot

Moved to Diseases section

Fungus

Moved to Diseases section

Last edited by MynameStitch; 07-16-2010 at 02:47 AM..

8 members found this post helpful.

04-30-2005,
02:18 AM

#6

MynameStitch

Dr. Doolittle

ICMag Mentor



Join Date: Mar 2004
Location: Wildlife
Prairie Park
Posts: 4,620



Pest Troubles

Well this isn't going to be a long one, just going to talk about what each bug does, what are its symptoms and how to prevent and kill them.

White flies:

They look just like tiny months, and lay eggs on leaves and or top of the soil. They are a pest in big numbers and are not very hard to get rid of; they can cause damage by sucking sap from the plants and also causes viruses to the plants. While they suck, the plants release honeydew which can contribute to mold on your plants. White flies are not flies they are related to the aphid's family, and this there damage relates to aphid infestation. Your plants will have a spotty look to the leaves, and will droop and loose vigor. Leaves may have a sticky feeling as well. If you are not sure if you have them, you can shake your plants leaves a bit, the white flies will then fly around for a bit before settling back on the plants leaves. White flies like to lay there eggs on the underside of the leaves, just like spider mites. Eggs take around 7 to 10 days to hatch, once hatched the pupate will stay in an area that is good in food and then it feeds on leaves. If your plants are affected during late flowering or close to harvest, please try to use the safest means of control to be safe to your health.

Here are some ways NOT to get them: Do not overwater your potted plants. Allow the soil to dry between waterings and provide good drainage. Another one is to put sticky traps up when you think you may have them, that way when they get stuck you can identify them.

if you already have white flies, you can use insecticidal soap, this will help stop them from flying so it wont infect other plants.

It also stops them from laying new eggs. If you use the soap reapply weekly.

Chemicals

Hot Pepper Wax, Safer Yard & Garden Insecticide (which can be used right to the day of harvest), GNATROL(used in hydro in the water as well as soil), Doc's Neem Pest Soap, Safer Sticky Stakes, TR-11000 Pyrethrum.

Symphilids

Small pests that are tan to white colored and look like centipedes. They are very deadly to the plants, because they burrow down into the roots and damage them by feeding of them. Your plants leaves will begin to die off. They are found mostly in soil composites that have not been cleaned, like soil that has additives in them such as animal manure.

(I know it will smell funny but sterilizing the soil in the oven for 30 min can kill any pests in the soil, heat to 350 for 30 min.) They are easy to tell if you have them, because they come to the top soil when your plant is being watered, if you find you do have them, use Fungus Gnat Killer ("B.T." a non chemical,biological control) in the powdered form. One application should kill it, just to be safe repeat every 7 days to kill off the larvae. Tobacco juice kills them as well! And nematodes.

Picture 2 shows the Symphilids look like..

(photo provided by Diels Alder)



Fungus Gnats

Fungus gnats like to feed on roots of the plants and organic matter. Adults and larvae live in moist, shady areas. The adults lay there eggs on top of the soil, near the base of the stem and takes about 4 days to hatch. The larvae will start by eating the root hairs of the plant then working their way up the plant, Fungus gnats like to eat organic matter so they will be stealing away nutrients from your plants, so its best to get rid of them completely. [color=red. Plants growing in rock wool are more prone to getting a more severe infestation than plants growing in soil. If your plants are affected during late flowering or close to harvest, please try to use the safest means of control to be safe to your health. [/color]

[color=red]Prevent and Control

Prevent indoor entry of gnats by making sure there is no open windows open without screens on. Aug is a bad time for them as they are worst that time of the year.

Put sticky traps on the soil surface to trap the gnats

Put potato slices on the surface of the soil. The larvae like it and will be drawn to it.. After about 4 to 5 days, remove the potato slices with the larvae. To get rid of them you can do a lot of things like either use a NO pest strip, neem oil or putting sand on the surface of the soil will suffocate the eggs and get rid of them as well. Tobacco juice kills them, and works well for re-occurrences!

They can be in or on the soil and can fly. In order to get rid of them you can use neem oil, sand or perlite on the surface again kills them, and no pest strips catch the ones that fly. A chemical product called Zone works very well and is very powerful and works well in Hydroponics/Aeroponics!

Other Products which can be used in Hydroponics/Aeroponics and soil are:

Safer Yard & Garden Insecticide

GNATROL(used in Hydroponics/Aeroponics in the water as well as soil),
Safer Sticky Stakes,

TR-11000 Pyrethrum.
PERMETHRIN dust
Mosquito Dunks

Organic Control

Natrasoap
Pest Oil
Neem Oil
Hot Pepper Wax
Doc's Neem Pest Soap
Sticky traps
Safer's Insecticidal Soap
Neem Oil
Neem 2

Picture 4 shows the fungus gnat.

Picture 5 shows there larvae (Picture contributed by: Chocobot hour)



Spider mites:

Spider mites are by far the worst pest to have, because they are the hardest to kill and can literally kill any plant.

They are by far more active in warmer climates than cold ones, they also suck up from the leaves leaving tiny white spots on the leaves from where they suck on. The damage they do is just like thrips, but with spider mites they pierce the surface of the leaves and can show tiny holes or white speckling damage, unlike with thrips they eat the surface of the chlorophyll. You can tell when you have infestation of spider mites, because you will have distorted growth, shortened internodes and petioles.

When you have bad infestation you will see webbing with larva in them. You get spider mites from either store bought soil mostly when your soil is not sterilized. Most brands do not state weather or not they are, chances are if you buy cheap soil, you have a less likely chance of the soil being sterile. Also, bringing outdoor plants indoors, or getting plants from someone else who was infected with spidermites.

Spider mites live on the plant itself and are under the leaves most of the time and are usually so tiny you can't see them with the naked eye. In order to get rid of spider mites one of the best ways to start to get rid of them is to use NO-Pest strips. NO-Pest strips work well and should always be used with other methods. Neem oil helps get rid of them as well. Also by raising the humidity in your grow room a lot will kill the spider mites off, by them absorbing too much humidity and will burst. You can use soap solution like Safer Insecticidal Soap to get rid of most aphid problems. Use some tobacco juice and chili pepper powder added to this for mites. (see below how to make tobacco juice)

Pyrethrum should only be used in extreme circumstances directly on plants, it starts to break down around a week and is easily washed away with clear water or. If your plants are in flowering and you have spider mites, using safer chemicals is your best bet. The tobacco and pepper soap solution works well and should be used daily, spraying on the underside and top leaves and later the whole plant. Since spider mites are very residual to common products, you have to find or try any number of ones until you get rid of them. Make absolutely sure you retreat as stated, otherwise you will get resistant spidermites and then you have a bigger battle on your hands. Also do not allow pets that go outside a lot to be around indoor plants, mites have been known to be carried in from pets to plants. PLEASE NOTE, below are ways to get rid of spider mites, but no 2 mite infestations are identical, you almost always have to use different products to get rid of them, also make a habit to check for at least a whole month after thinking you got rid of them, that way your chances of the spider mites that became resistant breeding and then having a bigger problem. Make sure you spray your plant down very good and enough and on time.

Here are some more products that may help get rid of spider mites:

Hot Pepper Wax, Safer Yard & Garden Insecticide (which can be used right to the day of harvest), GNATROL (used in hydro in the water as well as soil), Doc's Neem Pest Soap, Safer Sticky Stakes, TR-11000 Pyrethrum. Anything that says dicofol on the back. (should be used in vegging or early flowering)

Avid

GNATROL (used in Hydroponics/Aeroponics in the water as well as soil)

Safer Sticky Stakes

TR-11000 Pyrethrum

Anything that says dicofol on the back. (should be used in vegging or early flowering)

PERMETHRIN dust

Organics

Organocide

Hot Pepper Wax,

Safer Yard & Garden Insecticide

Doc's Neem Pest Soap

Organocide

Bugzyme Natural Pest Killer

Schultz-Instant Insect Spray

Lady Beetles (Beneficial Insect)

Predatory mite (Beneficial Insect)

Pirate Bugs (Beneficial Insect)

Neem Oil

Neem 2

Tabacco Juice recipe

Take 3 strong cigarettes soak them over night in water

Boil it for 2 to 3 minutes, let it cool off and spray the plants 3 to 4 times a week. You can add safer soap if you like to the mixture.

(make absolutely sure you use gloves/face protection while handling and spraying)

Neem oil works very well too!!

ZBQ has an excellent thread on how to use neem oil without getting your plants too oily!!

<http://www.overgrow.com/edge/showthread.php?p=482648> :tup: Your last resort is to use Avid.

Pictures 5 shows spider mites and their larva. Picture 6 shows spider mite damage. Picture 7 shows spidermites larvae and spidermites closeup (Picture contributed by sukalo)



Thrips

Thrips are really tiny, but can be seen by the naked eye. Some may have wings and some may not. Thrips reproduce rapidly, especially in tight places. That is what makes them hard to get rid of when using pesticides. They suck the sap right out of your plant with their piercing mouths, which makes the leaves look like they turned white. You can tell when you have thrips by taking a look at your leaves, the leaves will look as if their chlorophyll has been ripped right off the plant. Plants that are damaged can't be healed thus making it harder for the plant to absorb light. So if left untreated the thrips will kill the plants. Damage also can be seen by the greenish black specks of their poop they leave on leaves. Also the plants will show silver patches from scar tissue. Depending on the severity at first, thrip damage might look like spider mite damage until it increases in damage and then thrips case is for sure when you see the greenness replaced with big parts of white. Thrips also can cause viruses to the plants and any larvae infected will breed more infected pests!. While they suck, the plants release honeydew which can contribute to mold on your plants. **Adults have wings but do not fly well, but rather jump more. There are different kinds of Thrips, some more resistant to chemicals. Thrips can also carry plant pathogens in their mouths and carry it to other plants increasing the chance for your plants to get infected. . If your plants are affected during late flowering or close to harvest, please try to use the safest means of control to be safe to your health.**

Control

One good way to repel thrips for those growing outside is to use garlic, this is a good way to keep them away before you get them. The color yellow attracts the thrips and should be avoided not to have this color around your grow.. If you already have them using neem oil, and or lady bugs can get rid of them. If the infestation is bad then you need to use biological solution like, pyrethrin-like insecticides.

Other Products include:

Chemicals

Hot Pepper Wax, Safer Yard & Garden Insecticide (which can be used right to the day of harvest), GNATROL (used in hydro in the water as well as soil), Doc's Neem Pest Soap, Safer Sticky Stakes, TR-11000 Pyrethrum.

Picture 1 is Thrip damage

Picture 2 is Thrip Larvae (Picture Contributed by: Flatt)





Caterpillars (cutworms, cabbageworms, ect.)

There are several different kinds of caterpillars that may affect cannabis plants, mainly the ones that affect the plants, do almost the same damage, some do more severe depending on the numbers you have eating on your plants. Most caterpillars will do damage by chewing holes in the leaves, the holes will be kind of big, if so you know it's not going to be a smaller kind of pest.

If you find caterpillars have been eating at your plants and you need to get rid of them; there are several non-toxic and least toxic methods to choose from. You can also shake your plant a bit to make the caterpillars fall off your plants. . If your plants are affected during late flowering or close to harvest, please try to use the safest means of control to be safe to your health.

Prevent and Control

Hand picking: Easy way to control them is to pick them up and knock them into a bucket of soapy water. If you are scared about handling caterpillars, you can use some gloves or have someone else pick them up for you.

PERMETHRIN dust

BTK in dust form can be used to kill caterpillars. BTK can also be used to foliar spray your plants. One tablespoon of neem oil added to your BT mix helps stick the mix to the plants better when you are foliar spraying.. BTK is available in liquid form. Apply BTK on all of the leaves both top and underside If you decided using the dust kind, spray your plants down with water before you apply the dust Apply every week to 2 weeks and or after it rains. The caterpillars must eat the BT as they are feeding on foliage in order for the caterpillars to be rid of.

Organic

Insecticidal soaps, neem, oil, and spinosad are the safest insecticides that can be used to control.. Soaps and neem are non-toxic and are great to use when you have a lot of pests and want to be friendly to nature and its animals. Spinosad works very very good in controlling the caterpillar population and is non toxic to wild-life, pets, and humans. It hardly has any impact at all on the plants.

Picture 1 shows caterpillar damage



Slugs and snails (Outdoor Growers)

Both slugs and snails travel by secreting a mucus or slime on which they glide. When you see the slime trail on your plants and have damage, then it was most likely caused by slugs or snails. When your garden is very moist slugs and snails can live for a long time as this is the key to them living a long time. If you keep your garden not as moist and dark slugs and snails cannot live as long. They stay away from the sunlight along with hiding around moist dark areas in the garden. They also hide in Mulches, short stubby plants, boards, and in the soil. They come out mostly at night and on cloudy days. They feed by chewing holes into your leaves and can clip the edges of leaves and flowers. Slugs and Snails are mostly pests of seedlings and herbaceous plants that are close to the ground. In order to confirm the damage was caused by slugs or snails, look for a silvery trail of mucus.

Controls

Snails can cause massive damage to gardens if given a chance. It is very unlikely you will be able to completely rid your garden of them, but try to keep the numbers down as much as possible to keep healthy and undamaged plants. Here are some ways to control slugs and snails.

Reduce slug and snail damage dramatically by watering in the morning instead of the evening.

If you do see any slugs or snails avoid putting mulches and dark hiding cover. Oak leaf mulch will deter slugs and snails.

Handpick slugs and snails at night. Use a bucket to put them into soapy water.

Lay boards down in the garden to trap slugs and snails.

Diatomaceous earth sprinkled around your plants base of the stems will help keep out slugs and snails, but it can also stop other beneficial insects.

Soak the soil with wormwood tea.

Put copper wire around your garden or at the base of your plants. Slugs get a big shock when they touch copper. Just make sure you don't trap them inside your garden when you put copper around your garden.

Beer is good to use, because slugs love beer!. Take a container of beer and bury it in your garden with it just barely above the ground so they can drink it and drown.

And one of our favorite additives.... SALT!

Predators that like to eat snails include: snakes, toads, frogs, fireflies, predatory snails, birds, beetles. The large, black iridescent beetles you see in your yard are predators. Firefly larvae eat on slugs and snails and can literally wipe out the development of them by eating 40 to 60 snails from just 1 larva of a firefly!!

Please be kind to nature and pets and stay away from poison slug baits. If you have seen what it can do to pets you wouldn't want to ever use it again!!!

Poisonous baits are hazardous to all living beings and animals. Slugs and snails can become resistant to baits. So it's better to use other methods and stay away from chemical baits, all the while protecting nature.

Leaf miners

These little creatures are a pain to get rid of, the miners eat and dig squiggly lines into your leaves all the while

planting there larvae in them making it hard to get rid of them. They plant there eggs in the leaves in mid When they hatch they feed off of your leaves untill they get big enough to pupate. Pupation occurs within the leaf or in the soil beneath the plant. After they emerge the entire cycle will start over and you will have a bigger infestation. **You can tell you have leaf miners by looking at your leaves; it will look like someone carved scribble lines all over the plants leaves. Leaf miners also can leave your plant open to pathogens and fungus and low yields from the damage to the leaves. The females dig into the leaves and lay there eggs, the sap that is secreted when the leaf minors do damage attract ants and flies. . If your plants are affected during late flowering or close to harvest, please try to use the safest means of control to be safe to your health.**

Controls

Controls: Natural control for these insects is difficult. You can remove affected leaves and discard them. Chemical control is hard and is ment towards the emerging adults. Since the larvae is well protected within the leaf. Neem oil will work well.

Pictures 3-4 shows leaf miners attack



Scale (Outdoor Problem)

Scale can be found on stems, underside of branches, trunks, young trees or shrubs. They usally emerge from there eggs around March to Aug and make there homes on the plant. They pierce the cells and feed on the sap of the plant. After they have a place on your plant they devlop a very hard shell which protects them from other preadatory insects and chemical compounds to get rid of them. After they develop this hard back the secretion they drip attracts ants. Now since the ants travel over the scales thus dragging it all over your plant spreading the scale from one place to another on the plants. When the secretion falls on leaves it can make a type of mold called *Sooty Mold* which makes the leaves look dirty and black.

Pictures show Scale infestation:
(Photo Credit: Meddev)



Sooty MOLD

The problem with this type of fungi is that it attracts several types of sucking insects, like Aphids, Mealy Bugs, Thrips, and Whiteflies. This mold is so dark that it affects the plant by inhibiting the light from reaching its leaves which stops photosynthesis, which in turn makes the plant die.

Control

The waxy layer that is on scales protects them from insects and other pesticides. In order to get rid of them use a horticultural oil to kill the adult populations throughout the year. If you can combine the oil with the insecticide, such as, Orthene, Sevin, or malathion it can almost wipe out the scale population along with the sooty mold it causes! Neem soil works very well too!

You can do a few things. . . more if your not nearing the end of harvest. .

- 1) take a pack of chewing tobacco, mix it with a gallon of water, let it brew for a day. . spray the plants down as needed. . if your a cigarette smoker no worries spray em down till harvest. . watch for mold. .
- 2) take some safers natural soap, mix it with some water so its a soapy slippery mixture, soak em down. . the idea is to suffocate the bugs in the soapy bubbles. .

Ants

Ants are all over the place indoors and outdoors. Ants can be a pest in your garden, because their homes are underground in the colonies which require them to burrow through and thus causing root hairs and roots to be damaged from their digging.

Though generally they do not cause damage to the leaves from biting they may be eating dead leaf tissue, there may also be a hidden side to ants. Ants can carry aphids to your plants and thus causing the infestation, they can also be attracted to your plants if you already have a pest infestation. Aphids, mealy bugs, white flies can secrete a sticky substance known as "honey dew" which is a sugar concentrate from the plant's sap after aphids have excreted it on the plant. Ants love this and which is why they are attracted to plants that have an infestation. This honey dew that is secreted from pests can attract sooty mold where ever the honey dew is secreted on the plant. (See Sooty Mold for Details) If your plants do not have an infestation of pests, but you see ants you need to get rid of them, because of them being able to carry pests to your plants.

Ants are generally attracted to plants that already have aphids; white flies mealy bugs and scales. You can see ants on the plant and around the soil and in the soil. Your plants may show a different number of problems, but the main damage is not caused by the ants, it's the pests that the ants may bring in or what they are attracted to on your plants.

Prevent and Control

To make sure you can keep ants away from your plants, you need to make sure your plants are free of insects and other pests that ants are attracted to. There are many ways you can deter ants from wandering into your grow area.

Boric acid is an inorganic powder that must be kept away from children and pets. Sprinkling it around your soil will help kill them when you water your plants, while the boric acid gets into the soil. Boric acid will not be toxic to your plants; it is also used for a cure when your plants have a boron deficiency. Do not apply boric acid on the plant itself; this is for soil plants, and areas around your plants that are outdoors.

Sticky traps or tangle foot can help for the upper parts of the plants that have ant infestation. Cucumber parings can also be used as a repellent. Lemon Juice mixed with 50/50 water can be sprayed on the plant as a repellent. Using common herbs like sage, mint leaves, and spearmint. Mixing some of these with water can be used to spray onto the plant. Using peanut butter ball with a bit of sugar on it can be a sticky trap where they can't get out of. You can put it near the soil or small bits on the leaves, or where high infestation areas are on your plants. Watering your plants with apple cider vinegar can make them come up and can also kill the larva in the soil. Flushing well before using methods can help out a lot due to flooding the nest makes them come up out of the nest and killing their larva from drowning. When they come up using a deterrent can chase them away, if not use any one of these items to kill them or deter them. Chemical Control should always be the last resort for cannabis plants. Other ways to combat ants with chemical ways:

Chemical Control

pyrethrin
Malathion Plus
Insect spray concentration
Ant Baits

Ant be gone baits

Organic Control

(Deterrents)

Sage

Instant Grits (causes dehydration)

Cayenne pepper

Citric extracts

Cinnamon

Cream of tartar

Salt

Peppermint

Sage

Spearmint

Cucumber parings

Peppermint tea

Schultz-Instant Insect Spray

(Deterrent and Kill)

Water with apple cider vinegar

Flooding the nest with lots of water

Boric Acid

Orange peels, chopped, or grinded and lay on the soil top.

Orange Guard

Boric Acid mixed with sugar and water added a bit of peanut butter and laid in the soil.

Safer Sticky Stakes

Last edited by MynameStitch; 07-16-2010 at 02:07 AM..

11 members found this post helpful.

04-30-2005, 02:20 AM

#1

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Dr. Doolittle

ICMag Mentor



Join Date: Mar 2004
Location: Wildlife
Prairie Park
Posts: 4,620



Miscellaneous Sick Plant Troubles

This picture is caused by temperature changing from cold to warm, cold nights and warm days.

Some varieties, like equatorial sativas, don't take well to cold weather. If you can keep the roots warmer, the plant will be able to take cooler temps than it otherwise could. Also note that in colder temps, phosphorus gets poorly absorbed and if this happens your plants can show purpling of the leaves and stems, (cannabis has a natural purple color to it's stems, the deep purple is what shows the problem)this is the same example when plants change color in flowering when environment triggers cause the plant to change color, also genes play a role as well.



This picture below shows phosphorus being locked out due to cold temps. (Photo Credit: TikTok420)



Another lockout of phosphorus due to cooler temps

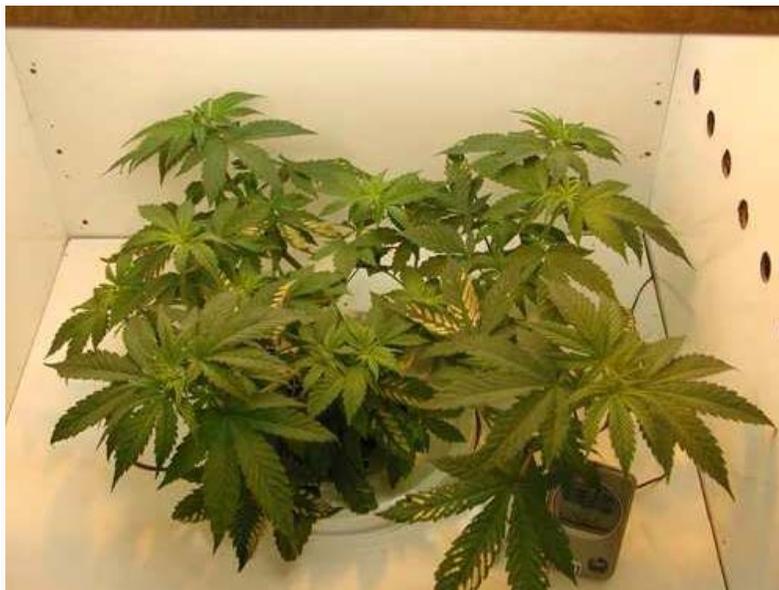


This picture is what light bleaching/ light burn looks like.

Only way to fix this is to Move the lights away from the plant!

Or make sure you dont go over 75 watts a sq foot, or your plant will have to much light and light bleaching can occur anywhere on the plant. (indica species seem to bleach easier than sativas imo.)

(Picture Provided by Boy Howdy)



These pictures is what heat stress looks like.

Only way to fix this is to Move the lights away from the plant!

And get better ventalation, and or add more fans! Heat - If the lights are too close to the plant, the tops may be curled, dry, and look burnt, mimicking a nutrient problem. Your hand should not feel hot after a minute when you hold it at the top of the plants.

(Picture 1 and 2 Provided by Mosfed)





Nutrient Burn :teef:

Nutrient Burn is one of the MOST common mistakes a new grower makes, reason for this is, because a newer grower will use a chemical nutrient most of the time and listen to the directions on the box. This is a NO NO! Depending on the age of the plant, size, strain and soil mixture you are using also has a factor. There is no set guideline when using nutrients, but I can give you a good example to start out with so you will not burn your plants. It's always good to start out light, rather than feed heavy. Remember you can always add more later, but can not take out when you added to much. Chemical and Organic nutrients differ. Chemical nutrients are more readily available and can burn way easier than organics can. Organics are easier for a newer grower to use, most of the time, and lessen your chances of burning your plants.

I recommend not using more than ½ teaspoon of chemical nutrients per gallon of water. Unless the plants are very big 5 feet+, then it's safe to use 1 teaspoon per gallon of water. When your plants first emerge you want to wait at least 2 weeks before feeding your plants, unless your plants are in a soilless mixture, like pro mix. The cotyledons (its first set of round looking leaves) are what give the plant its food until they get the first 2 or 3 sets of leaves. If your plants are in a soilless mixture and are over the first week of age; you can feed a weak amount of nutrients, like ¼ teaspoon per gallon of water. Soilless mixtures are different from soil plants and soilless plants need to be fed more when using this mixture.

I also recommend not feeding more than 1 time a week if using ½ teaspoon per gallon of water for chemical nutrients. You can feed every other day, (this goes for chemical and organics) at very weak amounts, but doing this may contribute to over watering, and for that I do not recommend feeding more than once a week. Some people feed 2 times a week using like ¼ teaspoon per gallon of water.. Use 1/4 strength for first feeding and then go up to 1/2 strength from the 2nd feeding when using chemical nutrients. It's very easy to overdo it. When using organics, depending on which one you're using, I recommend using 1 teaspoon per gallon of water. When the plant gets bigger you can work your way up to using more nutrients when the plants get bigger.

As for soil mixtures, there are a lot of different kinds of soil's out there. Using a rich soil mixture is not recommended for seedlings. Seedlings that are under 2 weeks of age you do not want to start them in rich soil, using a seed starter mixture is one of the safer ways. Seed starter mixtures are weak in nutrients, so it will not burn the seedlings but will provide them enough to get past seedling stage, but the downside is you have to transplant into a better soil mixture after 2 weeks of age. If you decide to start with this mixture, do not put your seedlings into a big pot. Start them out with using a cup or a small pot.

Nutrient Burn causes leaf tips to appear yellow or burnt. They can also be brown and twisted and crispy looking. Depending on the severity it can show many different symptoms and shows on lower part of the plant when its young, at older stages it can move anywhere on the plant.

To fix the problem when you have Nutrient burn, you want to flush out the plants with lots of water.

Soil

Soil should be flushed with lots of water, Use 3 gallons of water per one gallon of soil. Flush very thoroughly, after plant recovers usually after a week, you can resume using nutrients after a week or a week 1/2. When you flush your soil, you flush everything out, a lot of nutrients go with it, including the soil nutrients.

Hydro

Change out the reservoir, flush out any lines and clean out the entire system and replace with plain water for the first hour, then start out with lower parts per million (PPM)

Its good to clean out your system every 2 weeks and replace with fresh water and nutrients. Some people change everything every week!

Ahh, nute burn! Stop this by not adding to much chemical/organic nutrients to your water, foliar feeding. DONT feed more than 1 time a week unless using weak amount, use 1/4 strength for first feeding and then go up to 1/2 strength from then on when using chemical nutrients. Its very easy to overdo it. Causes leaf tips to appear yellow or burnt. NEVER give nutrients to plants that are under 2 weeks of age, at this age the soil nutrients are enough to suppliment them untill 2 weeks of age or more depending on how good your soil is. Using ferts before 2 weeks will almost likley kill your plants.

Pictures below show nutrient burn
(photo 1 credit: Hansi)

 Click this bar to view the full image.





Picture 3 shows recovery of nutrient burn
(Photo Credit: The King Of New York)



Stem Problems

Stem Breakage - Everyone from time to time has had this problem or will. This is when your stem is broken. Stem breaks can come from a number of things: training, dropping something on it, animals, weather. No matter how it happened the most important thing is to not panic.

Solution - Fixing this is not really a problem. Splint it with something and tape it in place. Marijuana has a great ability to come back even after a stem break. Give her a week or so to recover before she will start to grow again. And be more careful next time!

Misc things to know!!

When your humidity is low your leaves can become shriveled. Using humidity around 40-60% is fine for vegging and flowering.

If your plants are stretching than it can be caused by a few things. Not enough light, or it's the wrong kind of light. Stay away from incandescent bulbs they produce more heat than good. Same goes for halogens, they are worthless and cause more heat than anything else. Instead get a HPS, MH, Fluoros or some compact fluoros!

Hps will keep your plant short and stubby while cool fluoros will keep your plant bushy, while soft white will keep your plant tall, Having a mixture will have a tall and bushy plant! Nothing wrong with having mixed spectrums!
Or just go grow outside and save energy!!

Cloning Problems

A lot of times clones will yellow, when trying to root, some yellowing is alright, but if the yellowing is taking over and roots have not shown, you need to check to make sure the growing medium is close and tight to the stem. Allowing any air to get down into the hole will dry out the lower stem and can delay roots growing. Also making sure the medium is moist, but not saturated is important. Lighting does not have to be close when they are un-rooted, after showing roots is when it's important and the light needs to be closer.

Plain tap water that is ph adjusted is just fine till the clones have rooted. Giving any nutrients will kill them until they have been rooted, even then when giving clones nutrients for the first time needs to be a little bit weak.

If you are using a dome for cloning, you want to make sure if you do mist your plants, do not mist them heavily, you don't want to spoil your plants, misting too heavy will delay rooting as well, you want your plants to grow roots to get the water, they will root more slower if the water is readily given to them. Not to mention when you mist them a lot, your plants will have to be "weaned" from there dome. Your plants will droop quickly if taken out of the dome after they have been rooted. In order to stop this, do not mist them so much. If you are having problems with droopy clones, you may want to try an anti droop spray. This will help the plants stop drooping as bad. You can kill clones by not weaning them out of the dome or cause stress and stunt them. I have my own cloning method that stops the weaning process while using a dome, So remember don't soil your clones by misting them daily, making sure your mediums you are using for cloning are moist enough to last through the cloning process, but not saturated. If the temperature in the medium where the roots are at is under 65 degrees, you'll want to use a heating mat. Temps of around 75 to 80 are optimal. Anything over 80F will cause transpiration and dry out your medium too quickly and roots will not have a chance of growing. Colder temps cause roots to slow causing yellowing in the leaves and stunting.

Yellowing on the leaves of a clone is not always a sign of cold temperatures, there could be other problems like medium being too saturated, roots being delayed from cloning method, water temperatures being too warm if using a bubble cloner. Leaves that turn yellow on clone's means it is using stored nutrients from the leaves to help it try to root. Clones that become cold before having a chance to root will less likely root at all.

Some strains are more difficult to clone than others, some can also root faster and some can take much longer. It seems indica dominant strains have a much easier time cloning, where sativa dominant strains are pickier and require "tweaking" your cloning method if you want to get a higher success rate.

Yellowing leaves on cuttings

When unrooted clones start to yellow it means they are either not touching the rooting medium good enough, too much CO2. The vast majority of the time, an unrooted cutting will begin to yellow some of its leaves, starting with its largest oldest leaves, because it is too close to the lights and it needs to be moved farther away. Some yellowing is normal just as the cutting begins rooting and can be a sign of the cutting using its oldest leaves as a food source while it is forming new roots. Plain tap water that is ph adjusted is just fine until the clones have rooted. Giving any fertilizers will kill them until they have been rooted.

Seedlings Stretching

If your plants are stretching than it can be caused by a few things. Not enough light, light not close enough, or it's the wrong kind of light. Stay away from incandescent bulbs they produce more heat than good. Same goes for halogens; they are worthless and cause more heat than anything else. Instead get a HPS, (High Pressure Sodium) MH, (Metal-Halide) Florescent Tubes, or some compact florescent!

HPS will keep your plant short and stubby while cool florescent tubes and compact florescent (blue spectrum) and MH will keep your plant bushy, while soft white will keep your plant tall, having a mixture will have tall and bushy plants!
Nothing wrong with having mixed spectrums!

Or if you can safely, just go grow outside and save energy!!

If you are running in hydro it's good to change your water every 2 weeks TOPS to keep out bacteria growth and to keep your plants with a good supply of fresh water.

A good rule to go by for how much PPM each part of your plants growth has is as follows:

(This is just a guideline and in different situations the ppm would need to be changed)

Seedlings should be around 50-150 PPM

Unrooted clones to be around 100-350 PPM

small plants to be around 400-800 PPM
large plants to be around 900-1800 PPM
Last week of flowering use plain water.

If you see dark or patchy spots on your leaves, that could mean you have mold. Check for dark patchy areas on the leaves and if you do have mold, lower the humidity and get a better ventilation setup going to prevent further occurrences.

And most important.. KEEP YOUR GARDEN CLEAN!!!

PPM = parts per million
EC = electric conductivity
TDS = total dissolved solids
(information provided by syko2)

PPM--EC conversion Chart

Re-printed with Permission from Jorge Cervantes;

EC Hanna Eutech Truncheon CF
ms/cm 0.5 ppm 0.64 ppm 0.70 ppm 0
0.1 50 ppm 64 ppm 70 ppm 1
0.2 100 ppm 128 ppm 140 ppm 2
0.3 150 ppm 192 ppm 210 ppm 3
0.4 200 ppm 256 ppm 280 ppm 4
0.5 250 ppm 320 ppm 350 ppm 5
0.6 300 ppm 384 ppm 420 ppm 6
0.7 350 ppm 448 ppm 490 ppm 7
0.8 400 ppm 512 ppm 560 ppm 8
0.9 450 ppm 576 ppm 630 ppm 9
1.0 500 ppm 640 ppm 700 ppm 10
1.1 550 ppm 704 ppm 770 ppm 11
1.2 600 ppm 768 ppm 840 ppm 12
1.3 650 ppm 832 ppm 910 ppm 13
1.4 700 ppm 896 ppm 980 ppm 14
1.5 750 ppm 960 ppm 1050 ppm 15
1.6 800 ppm 1024 ppm 1120 ppm 16
1.7 850 ppm 1088 ppm 1190 ppm 17
1.8 900 ppm 1152 ppm 1260 ppm 18
1.9 950 ppm 1216 ppm 1330 ppm 19
2.0 1000 ppm 1280 ppm 1400 ppm 20
2.1 1050 ppm 1334 ppm 1470 ppm 21
2.2 1100 ppm 1408 ppm 1540 ppm 22
2.3 1150 ppm 1472 ppm 1610 ppm 23
2.4 1200 ppm 1536 ppm 1680 ppm 24
2.5 1250 ppm 1600 ppm 1750 ppm 25
2.6 1300 ppm 1664 ppm 1820 ppm 26
2.7 1350 ppm 1728 ppm 1890 ppm 27
2.8 1400 ppm 1792 ppm 1960 ppm 28
2.9 1450 ppm 1856 ppm 2030 ppm 29
3.0 1500 ppm 1920 ppm 2100 ppm 30
3.1 1550 ppm 1984 ppm 2170 ppm 31
3.2 1600 ppm 2048 ppm 2240 ppm 32

There are three conversion factors which various manufacturers use for displaying ppm's...

USA 1 ms/cm (EC 1.0 or CF 10) = 500 ppm
European 1 ms/cm (EC 1.0 or CF 10) = 640 ppm
Australian 1 ms/cm (EC 1.0 or CF 10) = 700 ppm

For example,

Hanna, Milwaukee 1 ms/cm (EC 1.0 or CF 10) = 500 ppm
Eutech 1 ms/cm (EC 1.0 or CF 10) = 640 ppm
Truncheon 1 ms/cm (EC 1.0 or CF 10) = 700 ppm

Water

Yes, water does play a huge role when you are trying to grow healthy plants not only does our plants need water, but there are many different kinds of water to use, there is bottled water, Tap water, Reverse Osmosis water (RO) and Distilled.

Out of all these different kinds of water, there's one thing you want to make absolutely sure of and that is making sure any kinds of these water's do NOT have sodium in them.

Sodium will completely lock out any nutrients you have given your plants single handedly. Sodium is the first thing plants take in when taking in nutrients and when this happens, a build up of salts will happen and lock out nutrients in

your soil/hydro setup. The salts stay built up in the soil. Using water that has sodium, like from bottled water or tap water, or from a water softener is what you want to stay away from. If your home has a water softener, then you must either buy bottled water, either from a fill station, or make a bypass valve before the pipe gets to the water softener. Plants suffering from sodium toxicity show a vast amount of problems, depending on how resilient your plant strains are, and how healthy your plants are, plays a great deal in the final outcome. When the plants are young is when they are the most affected, under 3 weeks of age is when the damage can really be done. Sodium causes stunting droopiness and most of the time, nitrogen, magnesium and calcium are the nutrients to be locked out first, twisting and discoloration on the leaves, mostly lower to middle is where it starts. They will always have a droopy look to them even when your soil is kind of dry; the leaves never stay perky when there is too much sodium in the system (Soil/Hydro). Sometimes your plants will not recover and they will not grow, usually it's the younger plants less than 3 weeks of age. In order to fix this problem, it's simple you need to flush your soil out with a lot of clean sodium free water.

Flush with as much clean water as you can 2 x the amount to the size of your pot. So if you have a 2 gallon size pot; use 4 gallons of water to flush it out. If you have hydro system flush out your system with clean water, let it sit for about 15 min. and then flush it out and put more clean water in and apply your nutrients, or whatever you had in your setup.

Hard water

Hard water causes nutrients to not be absorbed properly in your plants, in order to find out if you have hard water you can by test strips from a pool store or hardware store, strips will tell you ph, hard water and other things that may be in your water.

Anything over 200 is considered hard water, but it's the higher numbers like 350 and higher is what you want to be alerted about. If you do have hard water you may want to consider installing a reverse osmosis system. Reverses osmosis system cleans the water, but also removes calcium and magnesium from the water. High levels of calcium and magnesium is what contributes to hard water. If you choose to use a reverse osmosis, you will need to supplement your plants with a little more calcium and magnesium.

Hermaphrodite Pollination

Yes, your female plants can turn into males! The factor is strain induced and or your growing environment conditions. What some seed companies wont tell you when you are growing there feminized strains are; that in order to achieve 100% female success rate, you have to be growing in prime conditions, that is with humidity, you can not add to much water, nutrients, light and such. Feminized seeds are not the only kind that turn into male and female, ANY strain and any plant can turn into a hermaphrodite. If your plants keep turning into hermaphrodites, there are some things you can do: first you need to see if the strain you are growing is prone to turning hermaphrodite. If you are not growing a strain you know about, say you are growing bag seed; you do not know anything about what kind it is, so the best thing to do is not grow it and get some different beans. Next thing you need to do is make sure your growing conditions are good, fresh air, proper nutrients, not to high not to low, your plants have enough light, and making sure your flowering room does not have any light leaks. Light Leaks can cause the plants to become hermaphrodites. Cannabis plants can see the tiniest amount of light, so making absolutely sure your flowering room has no light leaks is also a factor. If your plants have turned into hermaphrodites and pollinated your plants, there is nothing you can do about it, those beans the plant produces will carry the hermaphrodite trait and if you grow them out you may be right back to where you are. You can in fact grow female plants from hermaphrodite seeds, but they are going to be very unstable.

What you want to make sure though is, when you put your other plants into flowering, you want to make absolutely sure your room is washed down and everything that was in the room be washed down as well, growing equipment, hoses, nutrient bottles, pots, everything. You don't want pollen that stayed behind to pollinate your girls this time around. Washing down everything with watered down bleach or soap will prevent old pollen left on walls and equipment from re-pollinating your plants.

Last edited by MynameStitch; 07-16-2010 at 02:41 AM..

40 members found this post helpful.

12-27-2006, 08:25 AM #8

10k
burnt out og'er
Join Date: Feb 2006
Location: cyber space
Posts: 1,644

This is an excellent compilation of sick plant information MynameStitch 👍
For the sake of making this guide easier to follow...
All readers please post any comments, questions or contributions for MynameStitch to the following thread.
<https://www.icmag.com/ic/showthread.php?t=45517>

08-04-2007, 11:10 AM #9

10k
burnt out og'er

Temporarily unlocked for mynamestitch edits, ammendments, corrections.

Join Date: Feb 2006
 Location: cyber space
 Posts: 1,644



Any member posts added to this thread WILL be deleted...
 So please follow the above link for further discussions, comments and contributions.

tia,
 10k

[Knowing when to water soil container plants. "Lift the pot"](#)

Last edited by 10k; 10-22-2007 at 01:10 PM.. Reason: unlocking temporarily for mynamestitch

07-16-2010,
 01:26 AM

10

MynameStitch

Dr. Doolittle

ICMag Mentor



Join Date: Mar 2004
 Location: Wildlife
 Prairie Park
 Posts: 4,620



Part 3 Plant Diseases/Infections

Stem Canker (Stem Rot)

Stem cankers are what the name is, they form on stems from a fungus similar to white and yellow leaf spot. Weather can affect the way stem cankers can live; wet humid weather is what makes this fungus thrive. Canker fungus is caused and entered the same white and leaf spot fungus enters the plants, it enters through an open cut, wound, pruned wound, or pest infestation that has caused damage by eating leaves or chewing on the stem's or stalks and can be transferred through rain. It can also get in through susceptible plants that have been wounded through environmental factors like animal attacks, pruning, LST (Low Stress Training), and using cutting utensils that are not sanitary that may have fungus or bacteria on them. Damage to the plant occurs in the form of a yellowish-brown discoloration on the lower portion of the stalk. Later, the leaves turn yellow and fall off, and the plant dries out and dies. They form mostly on the stems, but severe cases spotting starts to form on the leaves from internal tissue being cut of nutrients and water. In between nodes is where stem cankers start to form, and move up the plant, around the 3rd, 4th and 5th node is where it will mainly affects the plants. Stems will have brown lesions; eventually have a dark reddish-brown sunken canker in the stem. Sometimes if severe the wound may reopen and appear split in the middle of the area of the wound on the stem and can also create a buldge. The lesions can extend up the plant over 3 or 4 nodes, once this happens the plant starts to wilt from vascular uptake being cut. This gets confused with root rot when the plant starts to wilt, and leaves turn yellowish brown and or spots, because the stem canker does not show itself yet once this starts to happen. Once the stem canker has been observed and if not treated, the leaves will start to wilt with yellow, white and brown spots, similar to white and yellow leaf spot. When plants are affected by this, the plant is more susceptible to more fungus and viral infections, from air borne spores.

Prevent and Control

Preventing stem cankers is about the same way other fungus problems, making sure you treat wounds to your plant with H2O2, making sure your plants are free of pest's and if you use tools to LST (low stress training) your plants pruning, and training, make sure all tools are sterilized before and after using them. Spraying your plant with fungicides in the months or times this fungus spreads. It's very important that you catch this fungus before it gets to bad, once the damage has been done to the plant; the only way to get rid of this is to chop the plant down and treat the area that has been infected. Planting other plants near and or around this area can and will re-affect other plants when a new season starts.

Once your plant does have this, using fungicides until it is gone is crucial; if the canker has worsened foliar feeding is a must to help keep the plants vigor, strength and stamina in fighting the fungus. Stem cankers take over by slowly reducing the plants uptake and thus takes over the susceptibility of the plant and the fungus then takes over and worsens more quickly. Using anyone of these products will help control or eliminate stem cankers. (If the plant is to bad, nothing can save it and the plant must be cut down and tools sanitized to stop the spread of the fungus.) (Note: When using chemical and or organic control methods, do not spray the buds, and for health and safety reasons, stay away from spraying around the buds if all possible.)

Physan 20
 TR-11000 Pyrethrum
 Garden Disease Control
 Multi Purpose Fungicide
 Top Spin

Safer's Garden Fungicide
 Concern Copper Soap Fungicide
 Guardian Angel
 Serenade Garden Disease Control OMRI
 Safer 3-in1 Garden Spray OMRI
 Sulfur Vaporizer
 Organocide
 SM-90
 Any fungicide containing lime sulphur
 Concern Copper Soap Fungicide

Fusarium Wilt

The United States released this fungus in an area; it later had devastating effects on cannabis plants even after winter had passed it stayed in the soil. Seedlings that were planted were killed several years after the fungus was released. This fungus can be air borne and transmitted like other fungus and pathogens, it gets in through susceptible plants that have been wounded through environmental factors like animal attacks, pruning, LST (Low Stress Training), pest infestation and using cutting utensils that are not sanitary that may have fungus or bacteria on them. Fusarium wilt causes internal damage to vascular lines inside the plant and blocks the plants ability to carry water and nutrients. Symptoms included wilting of the plant, leaves becoming necrotic and yellowing wilting of the leaves while the yellowing leaves may look like a nutrient deficiency, this is clearly a mask, with Fusarium wilt, leaves will yellow and stay on the plant, where with a nitrogen deficiency the leaves will yellow and fall off. While not affecting the roots, it does affect inside the plant cell walls, inside the plants walls will reveal a red brown color inside the tissue. Stems will change color from normal green and purple hue, to a dark purple to blackish color. This pathogen can get confused with root rot, because the symptoms this pathogen shows are nearly the same as root rot, but roots are not affected. This clogging effect inside is what causes the external symptoms. While this fungus is traveling inside the plant, the toxins spread to uninfected areas and causing the clogging effect internally, these toxins is what causes the other uninfected tissue to start to show the 2ndary problems, which are slow wilting of the leaves, stem collapse, stem discoloration and overall droopiness (as if the plant is dry and had no water) to parts of the plant, even if they get plenty of water. This fungus is a real killer to cannabis plants, any remaining plants that are survived can be stunted. Fusarium Wilt thrives in warm moist temperatures, which is why southern states have Fusarium Wilt the worst.

Prevent and Control

Fusarium Wilt is by far one of the hardest things for cannabis to overcome, if it ever does overcome it. Your plant health, environment and strain have a lot to do with weather or not Fusarium wilt will take over your plants. This pathogen mainly affects cannabis and hemp family, but can affect other plants but does not show the damaging effect it has on cannabis, like it does on other kinds of plants. This pathogen was breed specifically to attack wild cannabis plants and growers who grow there plants outdoors'. There is no form of organic control for this type, reason for this is, because the fungus is so strong and not susceptible to much of anything unless you get it right when it starts, if you do not get it in time, it thrives in the plants and consumes and kills the plants. There is only a few ways to control this fungus, one is to fumigate the area you are growing in killing the pathogen in the soil while it is dormant, so when you grow in this area again, your plants are much less likely to get it, the only other way your plants could get this if not from the soil, is from airborne spores get in through open wounds on your plants leaves, stems and stalks. Plants that produced seeds when it was infected with Fusarium wilt should not be used, as the pathogen stays dormant on the seed and attacks it when the seedling emerges and causing the "damping off" effect and thus killing the seedling before it even has a chance to grow it's real first set of leaves. Acidic soil helps boost Fusarium wilt. Stay away from acidic soils .Counteract this by using dolomite lime, or green sand Using potassium and calcium enriched organic nutrients can help fight off and prevent Fusarium wilt, excessive amounts of nitrogen, phosphorus can speed up Fusarium wilt.

If your plant gets this it will surely die, the only thing you can do is try to reduce the destruction by foliar feeding areas that are not infected, cut off infected areas discard them away from your growing areas and treat the wound with h202 (Hydrogen Peroxide).

Making sure you clean your tools afterwards is important. Treating with fungicides will not work in controlling this.

Pictures below show Fusarium Wilt infection.

(Photo Credit: Hort)



This image has been resized. Click this bar to view the full image. The original image is sized 733x800.



Powdery Mildew

Mildew spores can be brought into the grow room through air ventilation into your grow room, your cloths, pets and be carried by animals outdoors. and land on the plant infecting other parts of the plant, buds, stems, stalks and leaves, also spores can land on indoor grow room walls, tubes, growing equipment, hoods, ballast's, cords and etc. Spores can remain dormant until environment factors trigger it, like high humidity and cool temperatures, poor air circulation. Powdery mildew in vegetative growth is much easier to rid than in the later stages of flowering. Night time temperatures and moisture triggers spores to be released. The mildew eventually covers and coats the plant thus reducing the process of photosynthesis. If left untreated powdery mildew will infect all plants in your garden and coat your plants in flour like substance and cause leaves to "suffocate" Yellow and die off. If your plants are in flowering, depending how far into flowering, your buds will eventually become infected and will not be able to be used. Buds will have a stale moist smell and will be coated with a white powdery substance that can't be removed no matter what you do. Very early detection in flowering plants that have powdery mildew is extremely important, the longer you wait in flowering the more impossible it gets to eradicate this, due to this, bud size gets bigger in flowering and having high humidity temperatures over 65% can trigger active spores to start, not only powdery mildew, but triggers other problems from it, like bud rot. Not only will you have lower yield, but you won't have any buds, due to the fact mold has crippled your harvest.

Strains vary in susceptibility to molds, just like other pathogens and nutrient requirements and care.

Prevent and Control

Symptoms of your plants having powdery mildew include: white blotches of furry stuff and white spots or splotches that you can wipe off, having humidity that is over 65%, also starts on darker areas of the plant and spreads to the top. Darker areas on your plant that do not get a lot of light will start to show this first, then when spores become active it spreads to everything. The longer you let it go the harder it will be to eradicate, late flowering plants that have this are extremely hard to get rid of, due to bud density thicker in late flowering plants, because of this the mildew attacks the buds which you can't cure mildew once it affects the buds.(also known as Bud Rot)Plants that are stressed from environment factors, or fighting pest's will be taken over more by this mold, due to the fact it's already fighting problems. If you see your stressed plants getting it first, try to isolate the plant and bring down humidity, better air ventilation and or negative air pressure grow room. If you have mildew with your fans running, you will need to take them down and clean them as the fans can spread spores around the room. You will need to wash down everything in your indoor grow room, spores land on everything, so everything needs to be washed with mild hot water and bleach solution. Removing infected leaves from the grow room is critical, carefully removing them and trying to not knock spores into the air is a challenge. Applying a bag over infected leaves and tying it shut then removing it helps out with not knocking up spores in the air. Making sure you use h2O2 on stems that have open wounds from leaves that was removed. DO NOT water when lights are going to be going out, doing this keeps water on the plants soil and causes higher humidity levels, this goes for foliar feeding. Water plants when lights first come on or there is at least 5 hours left of lights on. You want to reduce the amount of humidity as possible if your levels of RH are high, you want to keep your humidity levels around 40 to 50%, and anything over 60% is going to trigger problems. Also keeping plants spaced apart allowing maximum air flow in between plants will help minimize plant to plant infection. Using a dehumidifier can greatly reduce humidity issues. Using a meter that tells your grow room conditions like temperature, RH and time can help combat your problems, by keeping track before and after you water can tell you how much if any your humidity can rise after changes made to the grow room. Sulphur Burner is another way to prevent and kill powdery mildew by vaporizing spores in the air. (Do not apply sulfur when air temperature is near or over 90°F) Controlling your mildew outdoors can be somewhat of a challenge, you can't control outdoor temperatures, or environmental factors, Using Vapor Gard,Wilt Pruf sprayed over the leaves can prevent infection's. You will need to treat your plants with various organic and chemical controls. This list will work for indoor and outdoor growers in killing and preventing Powdery Mildew. Outdoor growers can use Organics List below to help prevent Powdery Mildew of starting, even after it has started using anything below will help kill it off. (Note: When using chemical and or organic control methods, do not spray the buds, and for health and safety reasons, stay away from spraying around the buds if all possible.)

AQ10

Serenade

Plant Shield

Garden Disease Control

Fungicide containing Lime, Sulphur

JMS Stylet Oil

Saf-T-Side Spray Oil

Sunspray Ultra-Fine Spray Oil

Neem Oil

Neem 2

Kaligreen

Safer Garden Fungicide

Concern Copper Soap Fungicide

Guardian Angel

Serenade Garden Disease Control OMRI

Safer 3-in1 Garden Spray OMRI

Sulfur Vaporizer

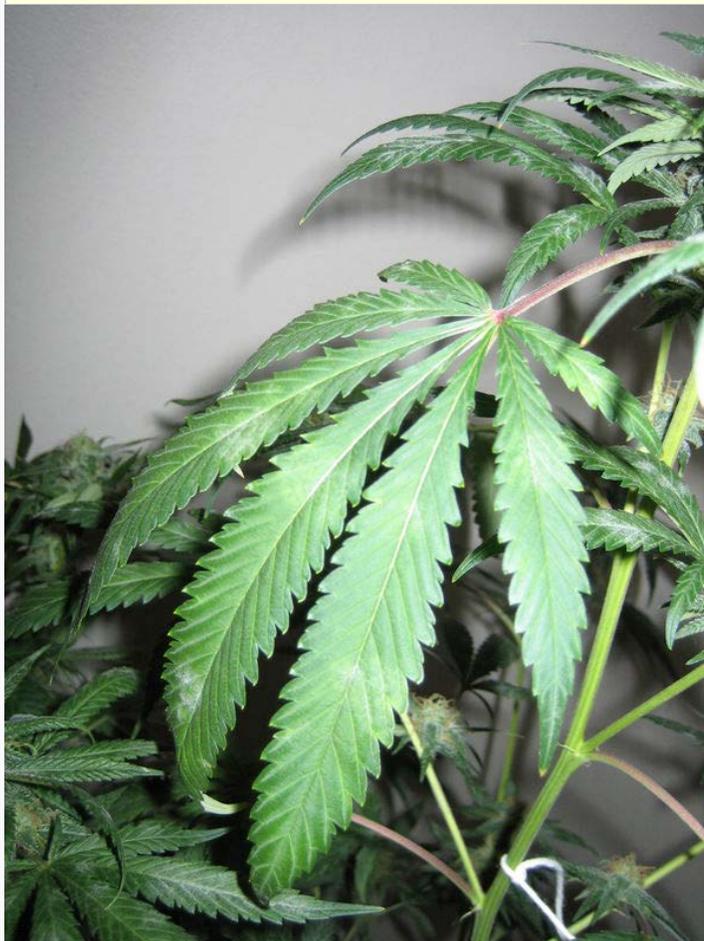
Organocide

SM-90

Malatox
Garden Sulphur
Sulphur Burner
Sodium Bicarbonate
Chi
Mother Nature's Karanja Oil
Concern Copper Soap Fungicide

Picture below shows Powdery Mildew
(Photo Credit: Beach Stoned)

 This image has been resized. Click this bar to view the full image. The original image is sized 600x800.



Damping-Off

Damping-Off is a fungus that is in soil mixtures, it attacks seeds and seedlings before and after it emerges from the shell. Seedlings that get attacked by this fungus usually die, considering the plant doesn't have a fighting chance nor a system setup to help fight the fungus. A range of growth stages the plant can be attacked, up to 8 sets of true leaves, or 3 leaf nodes. Leaves, roots, and stems can be affected. Damping-off can be easily confused by excessive fertilization (Nutrient Burn), high levels of salts from either water or nutrient solution build up, excessive heat or cold, excessive or insufficient soil moisture. The Cotyledons show on the soil surface can wither and die or healthy looking seedlings may suddenly fall over. Infection first starts right below the soil line; once attacked, the seedling and vegetative stage plants will start to rot, lower part of the stem will be soft, brown and or leaves will turn purplish hue and can yellow, brown and then fall over or shrivel up; can be any one of these or show all symptoms. Seedlings, or vegetative stage plants then can start to fall over from stem being so soft and starting to rot inside out, one item contributes to this problem is over watering, putting seedlings, or small plants into a big pot; when you water the soil down lower soaks up excess water and ends up sitting in the middle to bottom part of the soil in the pot. When this happens fungus begins to build up due to them not having a deep enough or a big root system to absorb all the excess water, then it ends up turning into damping-off. Later stages of damping-off in vegetative stage seedling, the leaves will droop and turn yellow, as if the plant was over watered. Stems will be severely weakened and may fall over from being under developed and skinny. Older plants can build up a resistance to damping-off, but if they do not, older plants show long skinny stems, stunted roots, and stem discoloration. The Soil that is rich in nitrogen, r rich mixture, and soggy soils, soil that stay wet for long periods, and warm soil or temperatures. Even hydroponics systems can get damping-off; mediums that stay too saturated, you have less likely chance of getting damping-off in hydroponics systems.

Prevent and Control

In order to help control damping off or preventing it you should try to start seedlings in "starter cups", drinking cups you get from the store; putting drainage holes in the bottom of the cups is extremely important in helping avoid damping-off, allowing excessive water drain so the bottom half of the mixture will not stay wet. This is why cups are great for starter seedlings, you can still over water, but your chances of getting damping off are much less than that of a seedling put into a big pot with lots of soil. Making sure you have holes and a good amount of perlite in your mixture helps greatly, I always recommend cups having drainage holes. Putting seeds into the soil at a low depth helps out, just putting it an inch or 2 at the most helps avoid the fungus. Avoid starting planting in rich soil mixtures, not only can you burn them when they emerge out of the soil, but too much nitrogen can lack root growth and aggravate damping-off. Try using a seed starter mixture, not watering heavily, and avoid watering everyday, seedlings in cups should only be watered a bit every 2 days, seedlings with 2 to 3 sets of leaves in cups can start to be watered more heavily where water starts to drip out the drainage holes, only then you should water like this every 3 days. Over watering is one of the biggest causes of damping-off. Also using soilless-mixtures like peat growing mixed with other stuff can help determent it. If you decide to get mostly soil with peat moss, you must make sure there is dolomite lime added to adjust the p H, otherwise you will have ph issues that can lead to locking out nutrients that are in the soil, but not able to be absorbed because the ph is off. Using sterile soil helps greatly, Allow great air flow and circulation in your grow room, allow the surface to dry before watering again, using moisture meters, or sticking your finger down in the soil near the edge of the pot to test for wetness down in the soil. Testing the soil near the edge of the pot helps to avoid bothering root development.

Once Seedlings that have already emerged from there seed shell and end up getting affected by damping off has a very high chance they will not survive and there is nothing you can do about it, by the time it shows in seedlings, it will already be to far gone. Using a fungicide on the seed before putting it into soil mixtures helps to avoid post emerge damping-off. Vegetative stage plants with a few sets of leaves has a better chance of fighting it off, using a fungicide can help depending on how far along the fungus has spread. Using any of these products below can help avoid or kill damping-off. (If using on seedlings or seeds, use organic based fungicides.) Chemical control should only be used on older plants, not seedlings.

Physan 20
Garden Disease Control
Multi Purpose Fungicide
Top Spin
Captan
Thiram
Apron

Safer's Garden Fungicide
Concern Copper Soap Fungicide
Guardian Angel
Serenade Garden Disease Control OMRI
Safer 3-in1 Garden Spray OMRI
Organocide
SM-90

Root Rot

What causes root rot? Low Oxygen levels. (DO) Desolved Oxygen. Temp's are the main reason for root rot, Low temps will lower the DO levels and high temps will cause low DO levels. Keeping temps between 65 to 72 will allow MAX DO levels or max o2 for roots. (Thank you so much for the information syko2! has provided above!)

Over watering also causes root rot, Root Rot infects parts of the roots, which then spread infecting the whole roots causing death, Root Rot can be caused by to high of temps in hydro as well as over watering. Not enough drainage in your soil can cause Root Rot, even signs of it looking over watered, because the soil holds moisture to long for the roots to dry out. So these 3 things are all connected together. The main one that causes everything is over watering. Once you find out you have root rot, depending on how bad the problem is, you can add H2O2(Hydrogen Peroxide) with your water or hydro setup to kill the bacteria caused from root rot. If the plant is severely taken over by it, there are only a few things you can do, cut off the roots affected by it depending on if its hair roots or tap roots, use H2O2 mixed with water in a different bucket and use it for a dip to help kill off bacteria before putting it back in the system, also note the system needs to be cleaned out if you have root rot.... using products like sm90 will kill off the root rot, using h2O2 in your system does more harm than good, it kills off the bad bacteria and good thus creating a worse off problem after the h2O2 has been overran, h2O2 if used in a hydro/aero system must be replaced everyday due to it disapating from the air. After it disaptes the plants defensive system has been killed off by the h2O2 causing the root rot that was not killed by the h2O2 left and thus overruns the plants root system. So again h2O2 should never be used in the hydro system, be kept in the system, although it is safe to use to rid of algae growth in rockwool and other mediums, but never be used in with the root zones regularly. Sm90 is a good product you can use to kill off root rot. Hydroguard helps protect and there are many other products that work as well, hydroguard is one of the more popular ones that work.

To prevent Root Rot, adding product's like Thrive Alive B-1, See Weed, Super thrive will help protect your plant's from root rot and will help cure root problems. (Again ty so much for giving me the info syko2!!!)

Here is what root rot looks like: 4eBig thanks goes out to buzz, diggerdigzit and Shop Vac! Thanks for the pics guys!

:tup:

First pic is of to high temps in the bubbler: Last 2 pics came from chemical burn root rot first pic, moldy rock wool with root rot.

(Picture Provided by Buzz)

 This image has been resized. Click this bar to view the full image. The original image is sized 480x640.



(Pictures 2 and 3 Provided by Chemical Burn)





(Picture 4 was contributed by Diggerdigzit)



Bud Rot

During the last week or two of flowering, depending on if you use chemical or organics. If you use chemical, you want to flush 1 ½ weeks to 2 weeks before harvest to flush out all of the chemical nutrients that your plant was using. If you are using Organics then you would want to flush about a week before harvest. Giving them plain water is fine, flushing them also improves the overall quality of your bud. Once you start to 'flush' you should check extra careful for bud rot. Bud Rot Happens when the humidity is high, if you have fat dense buds, or if mold spores are in the air. Bud rot looks like a black brownish sludge that can quickly take over your plant and ruin your harvest. The mold spores are air-borne.

Prevent and Control

Removing any dead or dying material from the plant helps prevent bud rot so does decreasing humidity and increasing ventilation. There are also safe anti fungal sprays from hydro shops that help. If you do find gray mould, cut off the infected part of the plant well above and below the effected area and remove it from the grow room. Decreasing the humidity from 55% to around 40% will make a big difference in preventing bud mold. Also having very big buds can cause bud rot, and would advise watching the areas on your plant that have the biggest, thickest and the more dense buds. Try to have medium size buds rather than having big thick buds. Having a dehumidify around when high humidity days can help as well.

To protect them against bud rot for outside. DO NOT foliar spary at night, doing this the heat will not evaporate the water as well because it is night.

Water the plants in the day instead of so close to being night. Same as foliar spraying.

Make sure your plants are stress free as possible and checking plants often can aid in getting rid of moldy bud before the spores spread onto other areas of the plant! Have a lot of air going around the plants for bad ventilation= sick plants and a breeding ground for spores!

Keep leaves away from soil making sure they do NOT touch the soil.

Keep cooler temps at night while plants are on there down time.

If you have gotten bud rot already the best thing to do is cut off the bad buds discard them away from you're grow and apply any of the following: Neem oil, Neem2 which is a ready made solution!

Using high ph water for foliar spray prevents them from spreading as well kills the mold. pythium is another good product to use! There are many other chemicals and organics that work, but these are the most popular and they work very very well!

Fungus

Fungus is another problem when you are in flowering, because they are susceptible to a fungus or bud rot. Growing conditions for fungus are best when temps are between 60 and 80 degrees and the humidity is high. The fungus is very destructive and spreads quickly. These kinds of fungus are air borne and can travel to other bud sites. If you already have been infected by them the best thing you can do is cut off and remove the infected area and then discard out of the grow area, then get a hold of some anti-fungal spray and apply.

Fungi can kill your crop quick, so invest in some SAFE fungicide and spray down the plants as much as you can and as soon as you can. The faster the safer.. If you have had problems with fungus before, do NOT spray them you will contribute to the fungus becoming resistant to the spray/chemicals you are using. Try to keep the humidity down to the range fungus do not grow to well in. Keep a good amount of ventilation around your grow, and if you have plants outside, always keep them quarantined away you're your indoor plants until you know they are safe.

Most fungicides are very nasty and eating them can be very dangerous so its best to use something on them that is safe on plants that you can eat., Safer makes a very safe product that can be found in most stores and hydro shops. it contains only sulfur in solution. Here is a picture of what bud rot looks like when it starts to form.

Control

To control to prevent fungus from forming there are a few things you should do.

DO NOT foliar feed at night, tends to make humidity higher rather than when you water in the day the water has time to evaporate where at night will linger in the air.

Same goes for watering plants at night, wait till the morning or afternoon to water!

Keep a happy plant and will not become prone to infections. Checking plants often can aid in getting rid of any fungus that may attack other leaves and or bud!

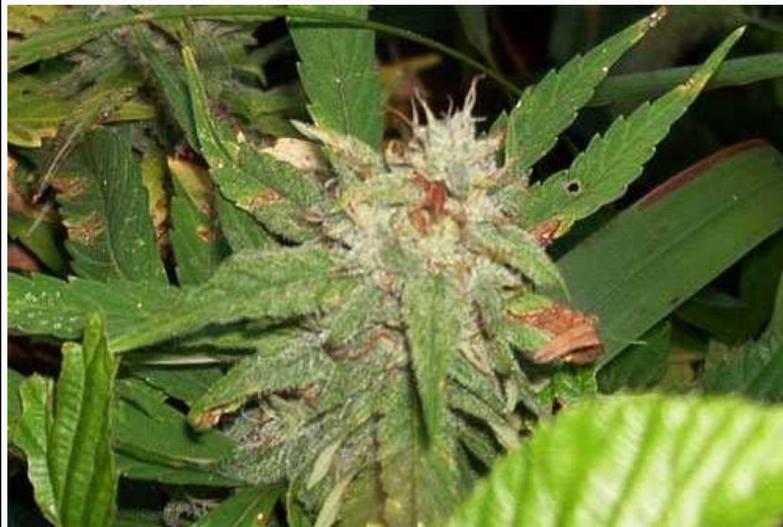
Have a lot of air going around the plants for bad ventilation= sick plants and a breeding ground for spores!

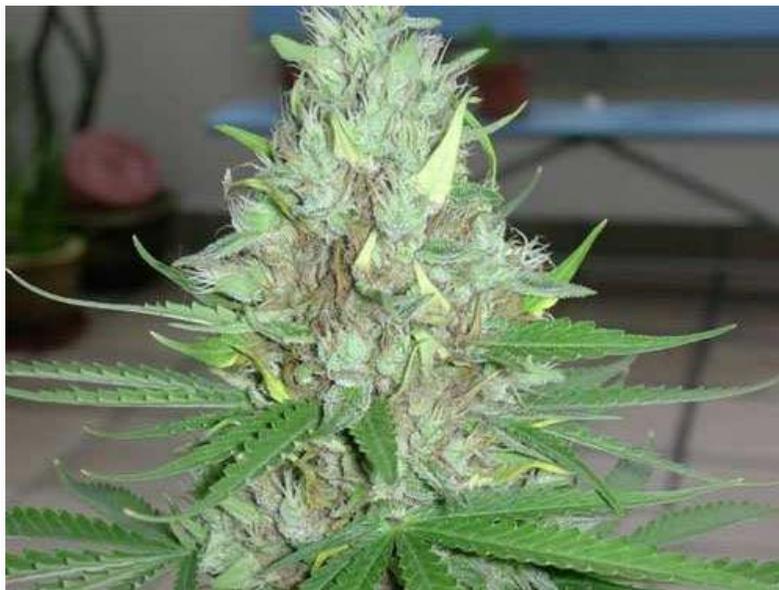
Keep leaves away from soil making sure they do NOT touch the soil.

Keep cooler temps at night while plants are on there down time.

If you have already gotten some kind of fungus there are things you can use: neem2, neem oil works wonders!! Potassium Bicarbonate, Baking soda and for other chemical agents you can use Plant Shield, Serenade and pythium! There are many other chemicals and organics that work but these are the most popular and they work very very well!

BIG THANKS goes out to Bud63 for letting me use the pics!! :tup:





Overgrow Refugee Forever

[The Complete Guide To Sick Plants, pH and Pest troubles!](#)  Updated! 7/15/2010

[Stitch's Grow Pictures Thread](#)

Quote:

HeadyPete: Any "hydro guy" that advises you to spray anything, let alone a foul smelling, sticky oil on your buds should be bitchslapped right out of business.

Last edited by MynameStitch; 07-16-2010 at 02:48 AM..

17 members found this post helpful.

07-18-2010, 01:10 AM

11

MynameStitch

Dr. Doolittle

ICMag Mentor



Join Date: Mar 2004
Location: Wildlife Prairie Park
Posts: 4,620



PLEASE EVERYONE HERE DO NOT POST here , sorry for the caps!

POST HERE FOR HELP <https://www.icmag.com/ic/showthread.php?t=45517>

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27 members found this post helpful.

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