

Peter Henssler. OAM

FERTILIZER

Gardening measurements break down approximately & general gardening hints.

¼ Teaspoon	= 1.25 mls	1.25grams
½ Teaspoon	= 2.5 mls	2.5grams
1 Teaspoon	= 5 mls	5 grams
½ Tablespoon	= 10mls	10 grams
1 Tablespoon	= 20 mls	20 grams

Fertilizer rates for vegetables

Yates thrive 5 grams 5lts, ½ strength 5 grams 10 lts. I use this weekly at ½ strength for growth and fruiting.

Hortico 5 grams 5lts, ½ strength 5 grams 10 lts. I use this weekly at ½ strength for growth and fruiting.

Fertilizer rates for Orchids

Grow & Flower 2mls/1ltr, ½ strength 1 ml/1ltr. I use this as a general fertilizer and flower assistance.

Peters Professional Blossum Booster

15 grams 20 ltr, ½ strength 7.5 grams/20 lts. I use this at ½ strength after the growth period to get beautiful flowers.

Horticultural Solutions (HSO) 12

Growth

5 grams to 5/lts, ½, Strength 5grams 10/lts. I use this about six (6) times, a year at full strength during the growth period but you will see later in the writing I also use many other growth fertilizers.

Horticultural Solutions (HSO) 22 Flowering assistance

5grams 5/lts, ½ strength 5grams/10lts. I use this about six (6) times, a year at full strength during the flower period but you will see later in the writing I also use many other flowering fertilizers.

Horticultural Solutions (HSO)

Paphiopedilum mix

5grams/10lts, ½ Strenght 5grams/20lts. I use this about 30-35 times a year. It is used only on Paphiopedilums.

Campells Blue (Growth)

15 grams /5lts, ½ Strenght 15grams/10lts. I use this about 20-25 time a year at ½ strenght.

Campells Yellow (Flowering)

20 grams/7lts, ½ Strenght 20gram/14lts. I use this about 20-25 times a year at ½ strenght.

Epson Salts is Magnesium Sulphate

1gram/1ltr. I use this about 20-25 times a year. I use this for cell growth and keeps the cells open for photosynthesis. ["makes plants grow bushier, produces more flowers, increases chlorophyll production, and deters pests (including slugs)."]

Calcium Nitrate

2 gramsw/1ltr. I use the about 20-30 times a year. I use this during the growth period.

Condy's Cyrstals

5grams/50lts, ½ strenght 2.5grams/25lts. I use about ten (10-15) times a year for snails, slug, or any other ground/root eating pests for orchids.

It also kill pathogens in potting mix and vegetables garden. I mix with epson salts with condy's crystals together to sweeten vegetables when I think I should use at ½ strength 25 litres in my silvan pump **2.5 grams.**

Powerfeed (Seaweed Solution)

2mls/1ltr. I only use this about (8-12) times a year because if use to often on orchids there is big chance to get flowers break. Vegetables I use this about fortnightly at ½ strenght for growth and boost the fruit. I used for snails, slug, or any other root eating pest. It also kill pathogens in potting mix and vegetables garden.

Seasol:

The amount is 2mils per 1 litre for enhanced root growth in Orchids.

Fungus control

I use Agfos at 1.7mils per litre once a month.

Condy's Crystrlis:

1 I use Condy's Crystrlis for Soil Enhancement, Slug and Snail deterrent as they do not like this mixture.

2 A preventive, mix with Epson salts with Condy's Crystrlis is a deterrent for the small snails in Orchid Pots, and can be used for many times to enhanced vegetable garden beds and growing plants.

Sprayer units I use.

I use three (3) different types of sprayer units a 25 litres electric unit, hand pump sprayer of 8 litres and a watering can of 9 litres.

Pump up 8 litres unit is 0.1per 1 litre =0.8 grams

Molasses; I use for nematodes

I use the molasses at 200mils in nine lts watering can, I put this mixture when I plant vegetables to keep the nematodes at bay. I plants look like they are wilting I give them another dose of this mix.

Using information with the above chart calculations of Soluble Powder/Chemicals compounds made easy.
I have reserched the above from Orchid Newsletters and Google serches.

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Condy's Crystals; 1 Teaspoon 5 grams to 50 litres used for snails, slug, or any other root eating pest. It also kills pathogens in potting mix and vegetables garden. August I mix Epsom salts with Condy's crystals together
 25 litres silvan pump 2.5 grams... FOR 8 litres unit is 0.1 per 1 litre = 0.8 grams, make it like the colour weak tea

Molasses; I use for nematodes

HORTICULTURAL SOLUTIONS (HSO) 12 is 5 grams to 5 litres of water = 40 grams to 40 litres of water at ½ strength is 20 grams to 40 litres.

HORTICULTURAL SOLUTIONS (HSO) 22 is 5 grams to 5 litres of water = 40 grams to 40 litres = at ½ strength is 20 grams to 40 litres.

AQUASOL for Orchids is 4 grams to 5 litres of water = 32 grams to 40 litres = at ½ strength is 16 grams to 40 litres.

THRIVE SOLUBLE is 8 grams to 4.5 litres of water = 64 grams to 36 litres = at ½ strength is 32 to 36 litres.

MANUTECH ORCHID BLOOMER is (10-15) grams to 5 litres = (80 – 120) grams to 40 litres = (40-60) grams to 40 litres at ½ strength.

Chemical Fertilizer Soluble Chart for the 40 litres **HORTEX HOSE SPRAYER**.

Products	Quantity of chemical powder	Full strength	Half strength	Quarter strength	N.P.K.
Epsom Salts is Magnesium Sulphate	1 grams to 1 litre	20 grams per 40 litres	10 grams per 40 litres	5 grams per 40 litres	
Calcium Nitrate	2 grams to 1 litre	80 grams per 40 litres	40 grams per 40 litres	20 grams per 40 litres	
Campbell's Blue (Growth)	15 grams to 5 Litres	130 grams per 40 litres	65 grams per 40 litres	32.5 grams per 40 litres	30:4:8

ORGANIC RECIPES FOR PEST CONTROL

1. FRUIT FLY: Flies are attracted to moisture, sugars and proteins and these form the base of any bait preparation. The time to place baits is approximately two months before fruit begins to ripen.
 Ingredients: 1 LITRE OF WATER 2 CUPS OF URINE
 3 TEASPOONS VANILLA ESSENCE
 1 TEASPOON OF VEGEMITE 1 CUP OF SUGAR
 Preparation: 1/3 fill small jars and suspend 4 to 5 jars per tree. Renew every 10 days.
 * * * * *
2. GARLIC SPRAY: Garlic is well known for it's medicinal value and is also useful for the control of insect pests such as aphids and some caterpillars.
 Ingredients: 1 FULL BULB OF GARLIC
 2 TABLESPOONS OF PARAFFIN
 1/4 CAKE OF SUNLIGHT SOAP OR 2 CUPS LUX FLAKES
 1 LITRE OF WATER
 Preparation: Finely chop bulb of garlic or put through blender, add paraffin and soak for 2 to 3 days. Dissolve soap in 1 litre of water, add to garlic and paraffin, stir and soak for another 1 to 2 days. Strain residue through pantihose or mosquito net. Dilute 1/2 cup to 4 litres of water. Apply two applications, 10 days apart.
3. NICOTINE SPRAY has been deregistered for commercial use as it is a very potent poison. Home made sprays should be prepared with extreme care.
 Ingredients: 1 2 OZ PACKET OF TOBACCO or 2 PACKETS OF CIGARETTES 5 LITRES OF WATER (1 GALLON)
 Preparation: Simmer the tobacco in 5 litres of water for 30 - 60 minutes. Strain the liquid to remove shreds of tobacco. Mix 1 part nicotine spray to 4 parts water. For greater effectiveness add white oil at the rate of 60 mls to 5 litres of spray.
 DO NOT spray tomato, capsicum or potato plants.
 PLEASE NOTE food crops require at least 3 days withholding period before eating.
4. CONDY'S CRYSTAL (POTASSIUM PERMANGANATE)
 This is a very useful insecticide and fungicide. Used to control aphids and slugs and also useful in controlling powdery mildew.
 Ingredients: 30 GRAMS CONDY'S CRYSTALS
 9 LITRES OF WATER (2 GALLONS)
 30 MLS WHITE OIL
 Preparation: Mix all ingredients together and spray plants once every 10 days when pests are active. Do not mix with soap.
5. BORAX This can be used to control ants and cockroaches.
 Ingredients: BORAX SUGAR or HONEY
 Preparation: Mix equal parts of borax and sugar or borax and honey. Place in lids at the bottom of cupboards. Borax acts as a stomach poison.
 KEEP CLEAR FROM HOUSEHOLD PETS AND CHILDREN.

Campbell's Yellow (flowering)	20 grams to 7 litres	100 grams per 40 litres	50 grams to 40 litres	25 grams to 40 litres	11:13:16
				10 grams to 40 litres	12:12:20
Horticultural Solutions (HSO 22) Growth	5 grams to 5 litres	40 grams per 40 litres	20 grams per 40 litres	10 grams per 40 litres	22:8:12
Horticultural Solutions Paphiopedilum mixture	4 grams to 10 litres	16 grams per 40 litres	8 grams per 40 litres	4 grams per 40 litres	12:5:25
Aquasol Soluble (high nitrogen growth)	4 grams to 5 litres	32 grams per 40 litres	16 grams per 40 litres	8 grams per 40 litres	23:3.9:14
Thrive Soluble (High nitrogen Growth)	8 grams to 4.5 litres	64 grams per 40 litres	32 grams per 40 litres	16 grams per 40 litres	25:5:8.8
Manutec Orchid Bloomer	10-15 grams to 5 Litres	80-120 grams per 40 litres	40-60 grams per 40 litres	20 30 grams per 40 litres	15:5:24

Yates Thrive 1 teaspoon=5grams =5litres or 5 grams for watering can is ½ strength and full strenght =10 grams
5 teaspoons for 25 sprayer unit.
Hortico as above

Fertilizer rates for HORTEX HOSE SPRAYER

This term refers to the ratio of nitrogen (N), phosphorus (P), and potassium (K) in fertilizers.

It is always expressed as N-P-K. For example, a fertilizer labelled as 24-6-6 has 24% nitrogen, 6% phosphorus, and 6% potassium

In this example, the remaining 64% of the fertilizer is comprised of inert matter

- High amounts of nitrogen causes lush plant growth with little or no fruits or flowers.
- High amounts of potassium will give you lovely flowers and fruit.
- High numbers of potassium with low numbers of nitrogen in the soluble mix are a better growing option for fruit and flowers.

When using fertilizer on your garden or pot plants including orchids, **I suggest that you use ½ to ¼ strength mixtures at all times.** This is a personal choice.

Soluble fertilizer is the easiest to use in the chemical form (powders) as it mixes and dissolves in one go.

Liquid fertilizes are simple to mix in water cans and apply to garden and pots.

The products that are the easiest to use are Manutec Bloom Booster which is high in (**K**) potassium which is a soluble fertilizer, Power Feed is a (**N**) liquid fertilizer, made of organic Aproducts and the rate is 12 mils per watering can.

Rate is only ½ strength at all times when using fertilizers because any heavier/higher strength is a waste of money and causes plants to suffer flowering and growing problems.

HORTEX HOSE SPRAYER holds **40 litres** on the large of **1 ONE** so the amounts of chemicals is to regulated to **40 litres**

How this calculation is worked out is by filling the tank below the sprayer up with 500 ml from a container that can measure the 500 mls then pour into the tank on number 1/one large scale – then put the applicator on hose spray into 20 litres buckets until the sprayer tank is empty usually filling up 2x20 litres buckets that's is where I came to get the 40 litres quantity. Anyone can do the same idea above on any setting to get the amount they would like to use on their plants.

5 grams to 10 litre = 20 grams per 40 litres and ½ strength is 10 grams to 40 litres

MAGNESIUM SULPHATE & EPSOM SALTS Is used at ½ gram to 1 litre of water = 20 grams to 40 litres of water.

CALCIUM NITRATE Is 2 grams to 1 litre of water = 80 grams to 40 litres of water.

CAMPBELL'S BLUE Is 15 grams to 5 litres of water = 130 grams to 40 litres at ½ strength Is 65 grams to 40 litres of water.

CAMBELL'S YELLOW (flowering fertilizer) Is 20 grams to 7 litres = 100 grams to 40 litres and at ½ strength Is 50 grams to 40 litres.

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Horticultural Solutions (HSO 22)	5 grams to 5	40 grams	20 grams	10 grams	22:8:12

as he used it, his celery would be rust free. I see no reason that the same can't be used on any plants to control rust disease.

Fungus Control

This then can be extended to control of other fungus diseases such as black spot and powdery mildew. These can also be prevented or controlled with the use of Baking Soda. (Heaped tablespoon to a litre of water with one ml of Raingard added)

You could take this a step further and make up a winter-strength solution which would be the same as for club root and spray this over your roses and the surrounding soil to kill any disease spores that may be waiting for spring to attack. Other deciduous plants such as fruit trees could be treated in a like manner for various diseases such as curly leaf, black spot, brown rot and bladder plum.

It's for you as gardeners to decide how effective these solutions turn out to be. They are my own suggestions and I would love to have feedback on any success or failure you may have.

One advantage is that Condyl's Crystals are cheap compared to many other sprays. A number of garden centres stock 150 gram jars of Condyl's Crystals sold under the correct name KmnO_4 Potassium Permanganate. The jars are also available by mail order in areas where garden centres do not stock them. A few chemists may still stock Condyl's Crystals but from my research, few do – and these sell only small amounts (such as 25 grams for a price dearer than 150 grams from a garden centre).

Give it a try in any case, if you see a solution here to one of your problems – and let me know how you get on!

The use of Potassium Permanganate.

We know this product as Condyl's Crystals and it has many uses. Although over the years it has been superseded by many other products, such as antibiotics and countless other modern medicines, for example when I was in the Army it was used as a treatment for tired or sore feet, especially as a preventative for Tinea, which was a chargeable disease to contract by Army law. Although some of these were classified as "old Grannies remedies" Condyl's is still used as an astringent, bactericide and as a deodorant. By now you are wondering what this has to do with orchids. I've been using Condyl's for many years and have found it to be a remedy for many problems associated with orchids. When (in my younger days) I was de-flasking I would rinse the seedlings in a solution -about 2 gms Condyl's to 4 1/2 litres of water, a much stronger mix can be used for sterilising used pots. Having scrubbed the pots first in soap and water, fill a container with Condyl's and soak the pots for at least half an hour. (6 gms per litre) If you have a plant that looks distressed, soak it in a mix of 5 gms per litre of Condyl's before placing it in your bush house, (I put distressed plants under a bench, it's a cooler spot and gets quite a lot of air movement but your bush house would be different to mine) but find them a cool spot if you can it helps with their recovery. Also when you are spraying with a fertiliser or insecticide a few grains (note a few grains only) of Condyl's can only do good, as it not only helps fight diseases but the plant uses the small amount of Potassium to make a stronger bloom/s. I must warn you, don't get heavy handed with as the stain of Condyl's is very hard to remove. The best way is to use gloves. Some of you may disagree with the quantities that I use, if so, a smaller amount will do nearly as much for you as the quantities I use. The choice is yours.

The use of Hydrated Magnesium Sulphate.

More commonly known as Epsom salts it contains two crucial elements for plant growth. Sulphur (13%) is necessary to the inner workings of plants but is almost never lacking in soil, thanks in part to synthetic fertilisers. As we don't pot our orchids in soil there is a deficiency of trace elements required by them. In general, magnesium plays a role in the strengthening of the plant walls (you will experience the absence of flaccid growths; also it allows the plant to take in nutrients supplied by us to the potting mix. Magnesium is critical to the flower initiation process in orchids. Below are a few suggestions should you decide to use it. 1. 1teaspoonful to 5 litres every time you water 2. If you fertilise once a week, use 1 tablespoon to 5 litres of your solution. 3. Seasonal application same as above 4. For Phalaenopsis growers the

recommended dose is 5 teaspoons to 5litres of fertiliser mix. Apply this twice in a row in May.

Do NOTmix the two together -EVER

Taking Seedlings Out of a Flask.

WellI've finally got myhands on that orchid that I've wanted for so long, the problem is it's in a bottle and how do I get it out of that and up to flowering size?Not as easy as I would hope. The babies are fragile and delicate, so I check the bottle to see if they are big enough to face the big bold world, if they aren't I place the bottle near a southern window or if you wish to keep it in the bush house in a well-litarea with filtered sunlight, if I want fried seedlings I'd put them in the hottest, sunniest place in the house.When the seedlings are big enough to face the big bad world and if they're in a jar I wash them out with tepid water and keep washing until no signs of the agar (the mix they were growing in), if they are in a bottle, wrap the bottle in newspaper and strike firmly the top of the bottle until it breaks. With much care sort the seedlings from the broken glass and wash thoroughly. I soak mine in a mix of Condys then put the seedlings on a clean sheet of newspaper and allow to dry only until they are damp.7Prepare the work area with a sheet of newspaper on the bench, select your pot that you are going to house them in (clean and sterile of course) prepare your chosen mix, I like very small bark mixed with Perlite and a small amount of shredded Sphagnum. Sphagnum Moss is used by a lot of experienced growe. The babies are fragile and delicate, so I check the bottle to see if they are big enough to face the big bold world, if they aren't I place the bottle near a southern window or if you wish to keep it in the bush house in a well-litarea with filtered sunlight, if I want fried seedlings I'd put them in the hottest, sunniest place in the house.When the seedlings are big enough to face the big bad world and if they're in a jar I wash them out with tepid water and keep washing until no signs of the agar (the mix they were growing in), if they are in a bottle, wrap the bottle in newspaper and strike firmly the top of the bottle until it breaks. With much care sort the seedlings from the broken glass and wash thoroughly. I soak

D.I.Y. White Oil

White Oil, a Horticultural Oil is used for controlling sucking and chewing insects like aphids, scale, mealy bug and citrus leaf miner. It's not a poison, but suffocates the pests - so they can't develop a resistance. It needs to be sprayed on both sides of leaves and stems to work properly.

Recipe

- One cup dishwashing detergent
- Two cups sunflower oil

Add to a clearly labelled jar or other container, close the lid tightly and shake until it becomes white - and presto! Concentrated White Oil.

When ready to use, dilute **one tablespoon** of the concentrate to **one litre** of water. Add to a clearly-labelled spray bottle, shake and off you go!

NOTE - *please do not apply when the temperature is 30 degrees Celsius or over as it may burn your plants.*

<https://www.abc.net.au/gardening/how-to/diy-white-oil/9437342>



Thank You