

Wally's Weekly News 27th JUNE 2009
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A GARDENING BOON; CONDY'S CRYSTALS

Potassium Permanganate (Condy's Crystals) has numerous uses in gardening as well as in other areas.

The origin of the chemical and its common name is as follows:

In 1659 a German chemist, J.R. Glauber, fused a mixture of the mineral pyrolusite and potassium carbonate to obtain a material that, when dissolved in water, gave a green solution (potassium manganate) which slowly shifted to violet potassium permanganate and then finally red.

This report represents the first description of the production of potassium permanganate. Just under two hundred years later London chemist Henry Bollmann Condy had an interest in disinfectants, and marketed several products including ionized water.

He found that fusing pyrolusite with NaOH and dissolving it in water produced a solution with disinfectant properties.

He patented this solution, and marketed it as Condy's Fluid. Although effective, the solution was not very stable. This was overcome by using KOH rather than NaOH. This was more stable, and had the advantage of easy conversion to the equally effective potassium permanganate crystals.

This crystalline material was known as Condy's crystals or Condy's powder.

Potassium permanganate was comparatively easy to manufacture so Condy was subsequently forced to spend considerable time in litigation in order to stop competitors from marketing products similar to Condy's Fluid or Condy's Crystals.

I remember as a boy that if one had a sore throat a mild tincture of Condy's Crystals would be made up to use as a gargle. This would hopefully kill the bacteria which was causing the sore throat.

"The use of a weak solution of Condy's crystals as an antiseptic wash or bath for eczema, vulvovaginitis, vaginal thrush and recurrent urine infection in adults and children is neglected. This safe, simple and effective treatment was used in pre-antibiotic days as a vaginal douche in obstetrics following the birth of the baby." (From a Doctors web site)

Condy's Crystals is great for:

- * club root in brassicas & other susceptible plants.
- * control for moss in lawns
- * carrot fly deterrent.
- * control powdery mildew in gardens.
- * Black spot & mildew on roses. 5 grams to 5 litres.
- * Tomatoes: Occasional watering with Condy's Crystals will act as a tonic improving flavour and colour
- * Sterilize soil.
- Disinfectant.
- Staining Timber.
- Fungus control on fish in tanks and ponds. (very mild solution)

I originally came across the gardening use of Condy's Crystals from a South Island Gardener who told me how to apply the chemical for club root control in brassicas.

Dissolve a quarter teaspoon of Condy's Crystals in one litre of water along with 3 desert spoons of common salt. Once dissolved the coloured mix is added to a further 9 litres of water and stirred to mix.

One litre of the above is then poured into each planting hole where a cabbage or other brassica is to grow. The preparation sterilizes the surrounding soil and reduces damage to the roots from the club root disease.

A number of gardeners like to sterilize the soil in glasshouses or in areas where the same crop is grown year after year such as tomatoes.

There are products such as Basamid that can do this and in the past many gardeners would use Jeyes Fluid which is also a sterilizing agent. The first is rather expensive and the second one is difficult to obtain these days.

My suggestion is to make up the above preparation as for club root but to use only half the amount of water thus doubling the strength of the solution.

This then would be watered over 3 to 5 square metres of soil that you wish to treat. The soil should be moist but not wet prior to application. Leave for a week or so then water the area lightly to force the solution deeper into the soil. About a week or two prior to planting in the area, flood the soil to wash away any residue that maybe left.

For moss control in lawns place one teaspoon full into 9 litres of water and spray over the moss.

Alternative to this for moss, use either Moss and Liverwort Control or Surrender.

To deter carrot fly add a few grains of Condy's Crystals to water to make a light pinky colour and spray this over the young carrot tops.

More recently another South Island gardener told me how he controlled rust on celery.

At the first sign of rust a weak solution of Condy's Crystals would be made up and sprayed over the celery for complete coverage. This would be repeated as needed.

The gardener told me that it worked a treat and as long as he used it, his celery would be rust free.

I see no reason that the same cant be used on any plants to control rust disease.

This then can be extended to control of other fungus diseases such as black spot and powdery mildew.

These later two can also be prevented or controlled with the use of Baking Soda. (heaped table spoon to a litre of water with one mil 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 maybe 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.

How effective this would be is for you as a gardener to find out for yourselves. It is a suggestion from myself and I would love to have feed back on any success or failure you may have.

The aspect is that Condy's Crystals are cheap when compared to many other sprays.

Garden Gloves of Geraldine stock 150 gram jars of Condy's Crystals sold under the correct name KmnO_4 Potassium Permanganate. Available by mail order

A few chemists may still stock Condy's Crystals but from my research most do not any more and the few that do, sell only small amounts such as 25 grams for a price dearer than 150 grams.

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