

Wally's Weekly News 1st NOVEMBER 2008
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POTASSIUM PERMANGANATE

One of the aspects that I really like about having so much contact with gardeners through out New Zealand is that every now and then, I receive a bit of interesting information (a gardening tip) which not only makes sense but works well for the gardener who uses it. I also enjoy the ability to assist gardeners with their gardening problems when they either email me or phone.

There must be lots of methods used in days gone by, which are effective and non harmful to the environment, unlike a lot of the toxic, chemical, rescue remedies that come and go. (Most go because they are proven, eventually, to be unsafe to our health and the environment)

In my recent book, Wally's Green Tips for Gardeners, I gave as many old and new, safe to use methods, as I could remember while writing it.

I think I got most of them down including the old way of controlling aphids.

For us that used to wash their clothes in the copper boiler, out in the laundry shed, came one very interesting aspect.

We would fill the boiler up with water and underneath the copper light a fire to heat the water to boiling. Once the water was boiling we would then take a cake of the old yellow bar Sunlight Soap and lather up the water. Next in would go the clothes to be washed clean in the boiling soapy water. After boiling for a time one would lift the clothes out with a paddle and put them into a tub of cold water that had Blue Stone added to it. (Copper Sulphate) This would help make the whites, whiter.

After a soak in the blue water we would run the clothes through the hand ringer that was clamped to the side of the tub, into the washing basket and out onto the wires which formed the clothes line for drying.

The last time I used this method was in my early twenties about 40 odd years ago while living in Te Kuiti. Washing clothes was a time consuming chore, unlike today.

Anyway after one finished washing, the copper had to be bucketed out to remove the dirty soapy water, when it had cooled down. Many gardeners would then toss this water over their roses and by doing so would kill the aphids.

How this worked was that the fatty acids, from the soap mentioned, would break down the delicate bodies of the aphids.

Now days we can take the same soap and lather up in some warm water, add it to our sprayer and spray the aphids on the roses or other plants they are infesting. Note dish washing soap does not work only the real McCoy such as the yellow bar Sunlight Soap. In my book I also wrote about **Potassium Permanganate** (Condy's Crystals) to assist in the control of Club Root disease in brassicas, along with the control of carrot rust fly and moss.

Potassium permanganate (KMnO₄) or Condy's Crystals are an oxidizing agent that has been used for many years in aquaculture. It is also used in water conditioning systems and in the plumbing industry. As an oxidizer, it is able to chemically "burn up" organic material. This includes undesirable organic matter such as bacteria, parasites, and fungus in fish, as well as desirable material such as gill tissue and mucus. Because the chemical cannot distinguish between desirable and undesirable organic matter, it is up to the

individual to use the chemical in a manner that results in maximum benefit and minimum harm to preferred parts of the pet fish.

I remember as a boy if we got a sore throat we would gargle with a mild solution of Condys Crystals to kill the germs in our throat.

It was and is still used in foot baths to fix and kill the fungus growth of athletics's foot. Used in a bath where one soaks in a solution for boils and similar problems.

It is the oxidizing aspect that assists in the control of club root where you take a quarter teaspoon of **potassium permanganate** and dissolve in one litre of water along with 3 desert spoons of salt.

This is then added to a further 9 litres of water and you pour one litre of the mix into the planting hole to saturate the soil prior to planting your cabbage etc.

This sterilizes the area where the cabbage's roots are to grow and either preventing the disease spores from damaging the cabbage's roots or reducing the damage so that the plants will mature.

For gardeners that find that they still have a problem with only one application at planting time could about 2 to 3 months later water some of the same solution into the root zone.

Just this week a gardener rang me inquiring about the availability of **potassium permanganate**, which in days gone by was readily available from any good chemist. (Not any more except maybe from the odd one)

I asked the gardener what he wanted the **potassium permanganate** for and he told me that he used it for the control of rust on silverbeet.

Immediately my ears pricked up and I asked him did it work and how did he find out about it?

He told me that he had come across it in a very old gardening book and since then by repeated sprays of a mild solution he had successfully controlled rust on silverbeet.

A mild solution would be a few grains of potassium **permanganate** into a litre of water to colour up lightly, the water to a light purple/lavender colour.

Well if it works on silverbeet it should also work on other plants such as roses, celery, carrots, parsnips along with any other flowers or plants that are prone to rust problems.

I also talked about using Baking Soda with **Raingard** in my book for black spot and powdery mildew problems. So here are two old methods for combating various fungus diseases on plants.

I would not mix baking soda solutions with **potassium permanganate** as the two are likely to interact and I would not use **Raingard** with a **potassium permanganate** solution either.

As mentioned before **potassium permanganate** is not so readily available except from Garden Gloves of Geraldine and better garden centres where they stock a 150 gram jar of the Crystals.

I have also suggested in the past that the formula for club root could be used by gardeners at twice the amount of potassium **permanganate** and salt into the same 10 litres of water to sterilize soils where soil borne diseases are present. In the past a number of gardeners have used Jeyes Fluid for this purpose but now days it is another product that is difficult to find.

The stronger solution should be applied to moist soils at the rate of 2 to 3 litres per square metre.

Leave for a week or so then flood the area with water to wash away.

Seeing that potassium **permanganate** helps with the control of rust gardeners might like to experiment further by using it on other plant disease problems.

I would be very interested to hear of the results.

Problems ring me at 0800 466464 (Palmerston North 3570606)