



## NEWSLETTER    March - April 2019

### President's Notes

The Society participated in the February Garden Clubs' Fair at South Perth once again and we were rewarded with good publicity for the Society, reasonable plant sales and abundant camaraderie. A further sweetener for our stall was two dozen bottles of home grown "organic" honey donated by Richard Williams which proved to be our best seller. It was good to see Keith and Shirley Robinson on their own stall selling home grown "biodynamic" daffodils and other spring flowering bulbs. Autumn flowering chrysanthemums and spring flowering bulbs; what more could you want, apart from some rest.

I am starting to see buds on my chrysies which is a nice change from just green leaves. OK, there have been a few yellow ones as well which has prompted an article for this edition. I have only disbudded one of the Spray plants so far so I am learning, albeit slowly. Make sure you tie a red ribbon or similar to a stake in all of your Spray and Cut plants to avoid this error. Singles are not as bad as you will just have extra Show Singles but a disbudded spray is greatly underwhelming.

I have seen a few member's plants and they are looking good, so hopefully those unseen are looking good as well. We have two home opens coming up and who doesn't enjoy a hot cuppa and a sticky beak, with sticky buns.

Ian Blackwell has kindly supplied some fairly extensive cultural notes for this edition. So along with my usual verbiage this Newsletter is a big one. A booklet buster.

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### Breaking News

Gosnells Horticultural Society **will** be holding an Autumn Show this year. The dates are Saturday 4<sup>th</sup> May and Sunday 5<sup>th</sup> May, which is the weekend prior to our Annual Show. They did not have an Autumn Show in 2018 but it has now been reinstated. Many members have exhibited at Gosnells in the past and hopefully a few of you can support them this year as they do a great job. The chrysanthemum exhibits used to be a feature of the show and the Sunnyvale Trophy in particular was highly sought after. This required three each of Exhibition, Decorative, Anemone, Single and Fantasy blooms so was a similar challenge to a State Championship. Even if you cannot spare any blooms you can still have a look around and enjoy a nice lunch or a refreshing drink and snack. I will have copies of the Gosnells Show Schedule at our next get together.

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### Cultural Notes

We had a good turnout for our first meeting this year and were happy to hear everything was on track for our annual show. After the more formal proceedings were dealt with we engaged in some meaty discussion relating to problems members were experiencing.

Carl, myself and Noel are all trying a good number of mums in what we loosely call a hydroponic system and knowing Noel and I had had some difficulties invited us to share that experience with members. It certainly uses some of the hydroponic methods but it is simply a run-to-waste system using coco peat as the medium (substrate) to grow them in. It is not uncommon to mix coco peat and perlite in the ratio of 70% / 30% or 80% / 20% etc but the product we are using is straight coco peat prepared by Hy-Gen. It was recommended to us by the owner Sandro Bombardieri as it would be suitable to use without having to do any extra work other than hydrate it. I have trialled growing in coco peat and perlite substrate (70% / 30%) both in 2013 and 2014 using the 'do it yourself method' we gleaned from Steve Thomas; it is on the web at [www.manicbotanix.com](http://www.manicbotanix.com). The beauty of this method was that I could feed them the same as the soil based (Bailey's Premium) i.e. the pH (in the range 6.5 – 6.8) and EC (Electrical Conductivity - ppm of fertiliser in the mix at around 1.2). Here are a few pics to show you how they turned out: -



While we were aware that the new run-to-waste system normally operated at a lower pH than soil based (pH 6.5 to 7.0) we were not aware that it was so much lower, in the range pH 5.5 to 5.8. In that this was the case it was not long after planting into final pots that the plants began to lose colour. Here are a few pics of Kokka Syozen a week apart & a third one mid February (note this is now over 5 ft and caned) to give you an idea of what they looked like when we discovered our error & after correcting the pH: -

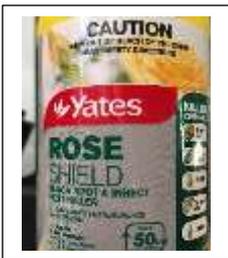


Not a good start, but after three weeks the plant growth had returned to near normal as you can see in the pic above; we will see if any permanent damage was done come flower time. We learnt that the plants are remarkably resilient under this system which lends support to other benefits relating to an automated system. The plants look nice and fresh and seem less prone to pot imbalance & insect attack.

Another issue related to the success rate with cuttings. The mix I have used for the last five years is based on coco peat and perlite (70% / 30%) and I achieve a success rate anywhere in the range of 95% to 98%. It is the same 'do it yourself' method referred to above and gives you the confidence of success every time. I wrote it up for the Nov / Dec 2012 Newsletter (see Society website) so if you are interested, look it up for the detail.

We talked about the fact that buds seem to be coming earlier this year and the implications this may have for our show timing. This year I deliberately took steps to try and hasten the buds as I am always battling to get my blooms fully out for the show. This I have come to realise is in large part due to where I live at the base of the Darling Ranges on the bank of the Canning River. I have tried many different methods to overcome this problem without much success, so this year I decided I would 'throw fate to the wind' and use the stopping and timing dates used in Victoria for their show a week earlier than ours. Essentially this is what I call growing them on the long season requiring a first stop about the end of the third week in October followed by a second stop first week in December. The results so far are interesting as buds began to appear last week in January, not something I have experienced before. Whether this is seasonal or not remains to be seen but I am encouraged to have earlier buds than normal. A word of warning here as there are problems that could be exacerbated resulting from this. Be very aware of the 'neck crackers' they will be more prone to cracking with earlier more powerful buds so be careful with the feeding. Also those cultivars that can have a significant amount of green material dispersed between the petals throughout the bud, this would include a number of the Pockett cultivars like Louisa and T W Pockett and their sports, Kings Pleasure etc; you will need to be careful not to overdo the feeding with these. Another issue is that the plants will grow taller and mine certainly are; however, I still have my trusty milk crates to step on so I can reach the rafters at 2 metres, something to hold on to while I disbud the growing laterals.

There was the usual problem with insect control. One of the main concerns today is mite infestation. Looking back to my earlier years of growing chrysies the main problems were caterpillars (loopers) and aphids, I do not recall having any problems with mites. I have outlined how I manage insect control in previous articles but it won't hurt to go over this again as it is vital to have the nasties under control well in advance of the show.



I use a range of pesticides and fungicides. Rose shield is a good all round spray that includes both, Tau-Fluvalinate 9.6g/l as an insecticide and Myclobutanil 4.4g/l as a fungicide with the added advantage that the constituent fungicide Myclobutanil is systemic and useful against Chrysanthemum White Rust.

I make up my own concoction from Fortune 500 (Chlorpyrifos 500g/L), Malathion (500 g/L Maldison) and Kelthane (Dicofol 150 g/L) :-



This is what I call my 'triple mix'. You might argue that this is an overkill and expensive and you are right, **but it works**. I use Kelthane as a general purpose miticide as one of the concoction ingredients but I was told when I bought some from Mirco's recently that David Grays are taking this off the market and I'm not sure if Garden King still market the same product. I mix all ingredients at full strength as per manufacturers recommendations. With seasonal control of spider mite I spray up front in the season with a product that both kills on contact and also the eggs. You could use Mastermite or I think the better product is Sorceror (Mirco's told me it was no longer available, but I have not confirmed this). With Sorceror there is also less likelihood of bloom damage if an attack occurs at flowering time. I use Baysol for snail and slug control but do not experience problems with these this time of the year.



If I see an isolated outbreak of aphids I use Conguard (15g/l Imidacloprid) immediately they appear. This is the same as Confidor but much cheaper, both are systemic.

Where I live there is a problem with large green grass hoppers. These can do some serious damage late in the season as the plants come into bud and then flower. Interestingly I discovered these usually attacked the plants in the evening so I do a grasshopper patrol about 9.00pm at night.

Each of us has our own pet fertilisers that we use either solid or liquid or both. There is no hard and fast rule to the types of fertiliser you use; however it is a given that you keep your pots in balance concerning salt build up and the pH of the mix. Flushing the pots at least once a month and not fertilising till the next day will do them no harm, in fact I've often thought they look better for it the next morning as if I had fertilised them.

Liming may also be required and for this I use Hydrated lime and Dolomite 63. I mix these in different ratios depending on how severe the problem has become. Equal proportions by volume is fine if there is only a slight upward adjustment to be made. If the problem is a little more severe then Hydrated and Dolomite 63 in the ratio 2:1 by volume. In each case it is applied at the rate of 1 tablespoon per 10" pot. The reason for upping the Hydrated lime instead of Dolomite is that it is more finely ground and becomes available quicker. The downside is that it washes out quicker and leaves a crust on top of the pot which needs to be hand hoed to break it up and let the water through evenly. Mixing the two together by and large avoids this.

This year I started the feeding program using up some 'all purpose' Thrive and at the end of January switched over to Kristalon (12:12:36 + Micronutrients). This has been used by Ron Atyeo & Noel Blunt with soil based 'run to waste' systems over the last couple of years with successful results. It is a bulk commercial product (25Kg) available from Landmark that's about a third of the price per kilo you will pay for Thrive at Bunnings.



As a matter of interest we are also using some additives this year that include Hy-Gen Omegazyme (Natural sea kelp), SiCrop (Silica) and PK Top Up (Phosphorus, Potassium & Trace elements) – see you in the bankruptcy court.

If you want a few tips on staging chrysanthemums for the show, have a look at the April 2014 Newsletter (see Society website), it includes a comprehensive excerpt on the subject from a past New Zealand Chrysanthemum Society Newsletter.

Enjoy the trials and tribulations over the coming weeks and every time your mood vacillates, remember you just love growing chrysies. Good luck.

*Jan Blackwell*

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## Why are my leaves yellow?

Unfortunately this is not an easy question to answer as there are many possible reasons. A very detailed presentation is available on the internet entitled Nutritional Disorders in Chrysanthemums by J. P. N. L. Roorda van Eysinga and K. W. Smilde. <http://edepot.wur.nl/427557>

When you look at the photographs in this article however it is not so easy to pick one cause from another. So where to begin?

Firstly, as can be seen from the photographs, significant yellowing is normally due to a deficiency of nitrogen, magnesium, manganese or iron. Deficiencies of other elements do not normally cause yellowing of the leaves.

Excesses of zinc and manganese can also cause yellowing. Zinc and manganese excess is uncommon and can usually be ruled out unless you overdid the trace element powder when mixing your home brew of fertilisers or are growing in galvanised iron containers or accidentally watered your plants with potassium permanganate!

In respect of deficiencies, if you are mixing your own fertiliser then maybe you just left something out. However most growers now use a “compound/balanced/complete” fertiliser either in liquid or solid form so a lack of any element is unlikely. More likely is that a deficiency is due to the element being present but the plant being unable to take it up.

A common cause of problems is incorrect pH of the growing medium. This is less likely if using a good quality potting mix but can occur with some home garden soils and some potting mixes, especially those containing animal manures and peat. In addition any mix or soil can develop pH problems later in the season due to adverse effects from various cultivation methods.

Soil pH test kits can be readily obtained from garden centres and it is worth testing the soil of the most affected plants. If growing in soil based mixes a pH between 6 and 7 is unlikely to result in too many problems and depending on other factors 5.5 to 7.5 may or may not be acceptable.

Excess acidity (low pH) induces deficiency of most major elements including nitrogen.

Excess alkalinity (high pH) induces deficiency of iron and manganese.

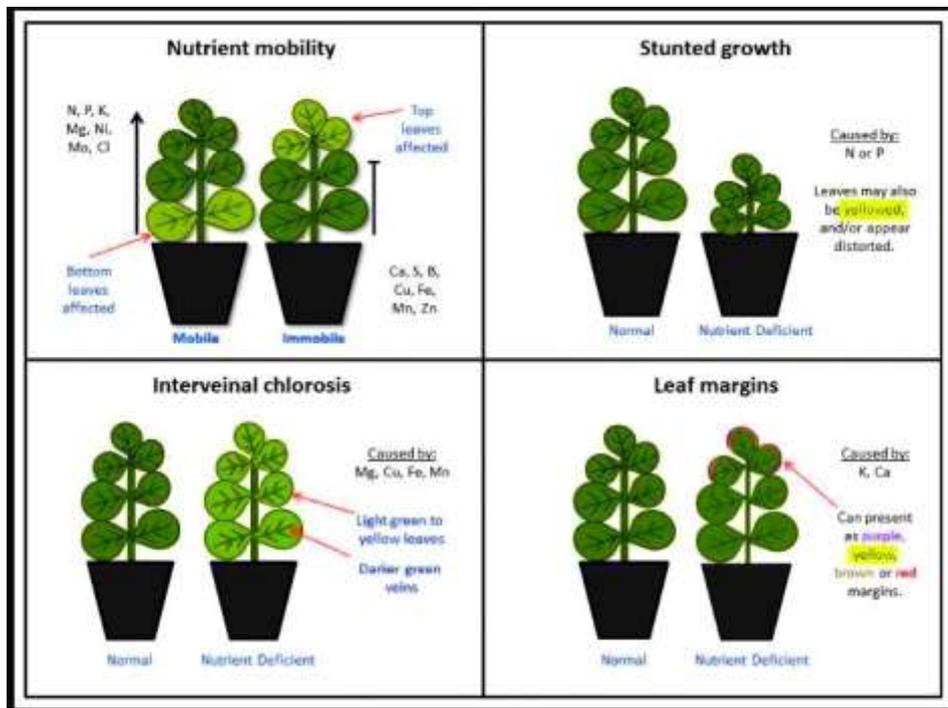
Another cause of problems is overwatering. If prolonged this will damage the root system so that most elements cannot be taken up properly. In addition the most water soluble elements, particularly nitrogen, will be leached out and deficiency symptoms can occur.

So you can have a fair guess at the problem simply by checking pH and water content of the pots.

- High pH will usually indicate iron +/- manganese deficiency.
- Low pH or overwatering will usually mean nitrogen +/- magnesium deficiency

For a more detailed analysis you need to know some other things.

- a) Some elements can be moved from one part of a plant to another whereas others cannot. So, mobile elements will show deficiency symptoms in the old lower leaves whereas immobile elements will show deficiency symptoms in the young upper leaves. Plant part most affected -
  - i. Young leaves – iron (Fe), manganese (Mn)
  - ii. Mature leaves – nitrogen (N), magnesium (Mg)
- b) Yellowing of the leaves may involve all of the leaf or the leaf veins may remain green. Nitrogen deficiency produces uniform yellowing as does severe iron deficiency. The veins remain green (interveinal chlorosis) in less severe iron deficiency and deficiencies of magnesium and manganese.



From - <https://onfloriculture.wordpress.com/2016/06/14/nutrient-deficiency-refresher/>



So what are the remedies?

- If growing in pots choose a complete fertiliser which contains all the necessary ingredients in the proper proportions. Use little and often.
- Low pH (acid soil) – irrigate with a suspension of dolomite or agricultural lime.
- High pH (alkaline soil) – apply sulphur to the soil and/or fertilise with sulphate of ammonia. Correct iron deficiency with a foliar spray of iron chelate.
- For overly wet soils reduce watering frequency and apply some seaweed extract and complete liquid fertiliser as a foliar feed until good colour returns. In very hot weather spray the plant's leaves with water to cool them down rather than drowning the roots and cover with some shade cloth, or move them to a position sheltered from the afternoon sun.

If all this seems a bit too hard then just try spraying the plant with iron chelate, as iron deficiency is by far the leading cause of problems. However this will not solve the underlying cause (= pH) and so bloom quality must suffer.

A very comprehensive review of nutritional deficiencies and excesses, with diagrams, is available at - <http://loudclouds.co/plant-nutrient-deficiency-chart/> The information is related to cannabis plants but very similar symptoms are seen in other plants including chrysanthemums. The article was written by Jorge Cervantes (a.k.a. George Van Patten) who Wikipedia reveals has been growing cannabis for more than forty years. As he has never gone to gaol, the guy is obviously no dope.

## On the Subject of Buds

As chrysanthemum buds are now showing up you may care to have another look at this article from the WACS 2018 March – April Newsletter. Written by me!

The newsletter is available on our website.



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## General Cultural Matters

The 2018 March – April Newsletter also has some cultural notes that may prove useful for less experienced growers. Additionally our Cultural Guide (on the web-site) is full of useful information. Do not let a season's efforts go to waste by neglecting your plants now. As Ian has noted - "you just love growing chrysies".

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## Editor's Notes



*shan't,*  
*sha'n't,*  
*ne doit pas,*  
*δεν πρέπει*

Well, just one. Can't help myself!

**"The Dope on Dope for Dopes."** - The 'Keep It Simple Stupid' cultural guide for cannabis growers.

OK, just one more for all you visual learners -



## Mentors

**Ian Blackwell** – Kelmscott 93902608

**Ralph Coombes** – Maida Vale 94543373

**Michael Drake-Brockman** – Pickering Brook 92937650

**Ralph Foster** – Armadale 94972420

**Carl Slusarczyk** – Mount Lawley 92721356

**Richard Williams** – Inglewood 92726120

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## Contacts

**Treasurer** – Colleen Ryall 9291 9257 (H) 0400089223 (M) colleenryall@westnet.com.au

**Secretary** – Michael Drake-Brockman 9293 7650 (H) michaeldb@iinet.net.au

**Newsletter Editor** – Carl Slusarczyk 9272 1356 (H) carl.lina.slu@gmail.com

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## Forthcoming Events

**Social Day** – 1:00pm Sunday 31st March 2019 at Michael and Judith Drake-Brockman's home – 136 Merrivale Rd, Pickering Brook (followed by Committee Meeting)

**General Meeting** – Noon Tuesday 9<sup>th</sup> April 2019 – John McGrath Pavilion, Hensman Rd, South Perth

**Social Day** – 1:00pm Sunday 28th April 2019 at Carl and Lina Slusarczyk's home – 6 Regent St West, Mount Lawley (followed by Committee Meeting)

**WACS Annual Show** – Thursday 9<sup>th</sup> to Saturday 11<sup>th</sup> May 2019 at Hawaiian Forrestfield, 20 Strelitzia Ave, Forrestfield (corner of Hale Road) Set up Tuesday 9<sup>th</sup> and Wednesday 10<sup>th</sup> May 2019

**WACS Presentation Function** - Tuesday 28<sup>th</sup> May 2019 at 11:30am for Noon at the John McGrath Pavilion, Hensman Rd, South Perth

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**Website** [www.chrysanthemumwa.com](http://www.chrysanthemumwa.com)

**Facebook Page** Western Australian Chrysanthemum Society

[www.facebook.com/groups/chrysanthemumwa/](http://www.facebook.com/groups/chrysanthemumwa/)

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