Miltoniopsis in New Zealand

Group Facilitator—Allan Watson

aj.watson@xtra.co.nz

Group Editor—Alan Locke

lochaven999@gmail.com
8 Grey Street,
Kihikihi
Te Awamutu 3800
Ph 078713721

Vol 2 no 3 December 2019

Message from the Group Facilitator: Allan Watson

With the year nearly at an end and the flowering of Miltoniopsis in full swing there is but one other thing to do. The two A's (Alan and Allan) wish all a Merry Xmas and a Great Growing New Year.

The past year has been interesting in terms of Mps growth and development. We are now being recognized as an integral part of the International Odontoglossum Alliance with them requesting permission to attach our newsletters to the web site menu, as well as having the American Orchid Society requesting opportunity to publish a couple of articles in the future and last but not least being requested to provide a number of feature articles for the 2019 Orchid Council of New Zealand Year book. I think orchid growers out there that have not heard of Miltoniopsis are now few and far between.

Unfortunately it was not all success as our breeding program did not succeed as we anticipated. The reasons we think we now know and understand so as the say if you fall off the horse best to get back on and try again. So yes I have started with six new attempts with more to follow.

Many thanks to those that provided articles for publication and we look forward to more in the future. Do not be afraid to publish your mistakes as that show we all learn by sharing our experiences.

Enjoy the summer months and the flowers it produces catch up in the New Year.

Allan

Editor's Ramble.

We have been hearing a lot about Fern Fibre in recent times so, is it all that it is cracked up to be? Also most people outside New Zealand can't get it, although I believe it may be available in the USA.

The answer, I believe is, in the main, yes, it is. Most people find that they are getting improved root and leaf growth and better flowering.

We need to remember that growing media is but one part of a growing system, the others are light, temperature (both maximums and minimums) humidity, feeding, aspect and water. If that is not enough, there is one more, a secret factor—the grower. If you gave each grower the same conditions, you would get a wide range of results from good to bad. Probably the part of a growing system to be most affected by the grower would be watering. Most growers either over or under water, few get it right. I heard of a case recently of a person who was not happy with the performance of a Phalaenopsis. When asked how often was it watered, replied that it got 20cc per week—a classic case of severe under watering.

While most of us are not that bad, we still need to assess our performance in this area. If you hand water, do you find that you tend to tackle the task a day or days after when it should be done in which case you are under watering. It may be that work or other pressures in your life may dictate when you have got time to water. If you are a person that tends to water before it is necessary then you are probably over watering.

If you have automatic watering, there are traps here, failing to increase as the weather warms up or decrease as the temperatures fall can lead to over or under watering. If you use a dipper system and a medium to coarse bark, you can find that the water is going down through the centre of the media and not getting to the outside where most of the roots are. Using fibre either 100% or as part of the mix will go a long way to countering this

So getting back to Fern fibre, some of the improvement that has been seen is the fact that the fibre is holding more water and so countering under watering. It would also appear that the fibre will last longer than other products. Having farmed land above 1000 feet, I often found tree-fern stumps of this species on land that was cleared 30 or more years ago and they were still sound showing that they are very slow to decay. People are doing trails to determine this, so more on this at a later date.

Conclusion :- I believe that most people will get benefit from fibre with genera that like to be moist all the time and including it in the mix of genera that like to dry out between watering's could be useful if you are an under waterer.

If you are an over waterer then use with caution

****

Mitoniopsis Hybridization update

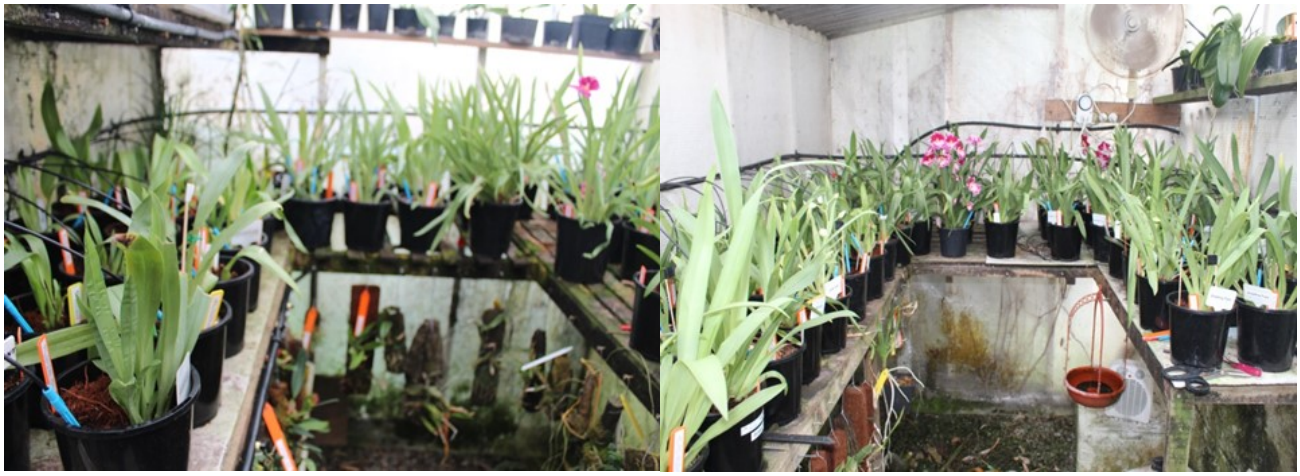
Last years breeding program resulted in about 15 pods making it to the lab. While it is too early to rate the success of our efforts, we have learnt a few tips on ideal pod harvesting times and handling which will help for this season's breeding.

So why not give it a go and see how you get on, Allan Watson is already well into it. You could try crossing Miltoniopsis with other members of the Oncidium alliance. This is more difficult to get results, but the outcome could be very worth while.

My Miltoniopsis Growing Tool Kit: (This info reflects one growers end result and Southern Hemisphere conditions) by Allan Watson.

As a result of the recent Facebook survey we had a number of people request info as to how, what and when we use certain tools, fertilizers etc. when growing Miltoniopsis.

So here goes this is my story, I hope you find this helpful and my challenge to all readers is to put their thoughts and growing methods in writing. I am suggesting there is no right or wrong way it is more about what works for you. As they say a picture or pictures can speak a thousand words.



Southern End **Northern End**

Miltoniopsis Growing environment

The order in which I present my comment reflects my approach.

Growing Environment: I consider this priority one unless you have the right conditions that suit you and your plants you may struggle. Unlike a lot of the bigger or commercial growers we have to rely on a level of make do.

Temperatures / Humidity: Various documents will say that Miltoniopsis require 14°c to 20°c at night with 85% humidity. I have found that if you can maintain 12°c at night that Miltoniopsis will not suffer. I have heard of growers taking the night temps down to 6°c at night but in my view the plants will suffer a slower response when it comes to their spring time flowering stage. I suggest if possible maintain at least 70% Humidity.

Light: Shade cloth on, shade cloth off, is a chore if you can provide a constant daylight source the plants will thrive and you may find the foliage becomes slightly darker and healthier looking. I suggest between 1000 and 1500 lux this measurement allows for the darker winter days and the lighter summer days. Hand 300mm above the plant casting a light shadow as a simple rule of thumb.

Water and Feeding: I am of the strong view this is the key element in growing this genus. The watering not only provides the medium to carry nutrients but helps in the creation of the humidity bubble which needs to be maintained above 75% any lower I have found the flower buds take longer to open and they tend to force themselves open causing in some cases petal distortion

Pots and Medium: I suspect there will be as many pot sizes and medium mixes out there as there are orchids in a collection. As I said at the start this is my approach.

Pots: When you purchase most Miltoniopsis from a commercial grower you will find that they are in a 3" dia. pot with the roots appearing to grow around the pot. My view is that so far as Miltoniop-

sis are concerned this restricts the growth of the plant by reducing the feed gathering area. I repot my Mps as soon as practical into 1.3L pots unless I wish to create a specimen plant then it is placed into a 2Lpot.

Medium: In the past I was an advocate of using number 3 bark, with a pumice mix. I now, after trialing fern fibre substrate have become converted and subsequently changed, repotting as required all my Miltoniopsis. I have found this medium lasts longer and uses less water to maintain the required humidity.

Fertilizer: It becomes a case of using a quality product produces a quality result. Once again it is not for me to suggest or condemn one over the other. I do however strongly suggest when applying fertilizer that you take note of the ***N-P-K*** factors. All plants get approx. ½ litre per watering/feeding

I tend to use a lower nitrogen number and a higher potassium number when rating my fertilizer. For example I use a **7 -9- 5** as the main grow fertilizer followed by a bloom fertilizer when spikes appear of **3 – 12 – 6** to provide strength to the spikes. It should be noted that the nitrogen level will impact with a rise in the CF factor of your fertilizers.

A valuable tool is a CF meter as this will provide you with an indication as to the concentration of fertilizer you are providing. It takes away the guess work. By measuring the fertilizer CF you can also influence the spiking of your plants. Simply set you show date then back calculate 8 weeks. Up till the eight week mark maintaining a **CF** level of around **4.5** at the eight week mark increase the dosage lifting the CF progressively up to a max level of **8** you can go higher but do not go over **12** as this may cause reverse osmosis in your plant (plenty of growth but no spikes)

In June you will note that I give my plants a supplement boost of Potassium Phosphate on water cycle timeline. This helps with spike stimulation.

Other Tools and resources: In part this section is about the nice to have as these tools make it that much easier to grow.

A measuring syringe: This makes it easier to measure the correct fertilizer to water ratio. I suggest one that can measure at least 60ml as a standard.

A Magnifying Glass: makes it easier to observe any plant conditions that may give you concern such as pest or fungal diseases.

Tweezers / Tooth picks: If you are into hybridization these help with the pollination process.

Conductivity Meter: For measuring the strength of your fertilizers and the Ph. of your water supply. This will allow you to maintain a finer control over your plant growth. You will use less fertilizer saving on cost.

My Growing Timeline: ***This is not gospel it is what worked for me in 2019***

Watering: Means every plant gets ½ a litre of water feed mix per time. You will also note that I apply a timeframe to my Watering / Feed program.

Target Date	September December	**Show Months**	January, June, September, October
Month	**Activity**		**Observations**
February	Start repotting process. Start setting up the following season Hybridizing program. Water and feed every 3 days		Only repot those plants that are showing sign of stimulated growth This may involve splitting plants as well
March	Continue any repotting. Maintain CF level of 4.5 .Start setting up the following season Hybridizing program. Water and feed every 3 days		Only repot those plants that are showing sign of stimulated growth This may involve splitting plants as well
April	Water and feed Grow Fert every 4 days Maintain CF of 5.		Maintain a log of performance re fert levels and CF reading. Should start to see growth
May	Water and feed every 4 days Maintain CF of 5.		Maintain a log of performance re fert levels and CF reading. Should start to see growth
June	Water and feed Potassium Phosphate Fert every 7 days Maintain CF of 5.		This should provide a a growth spurt. Maintain a log of performance re fert levels and CF reading. Should start to see growth
July	Water and feed Grow Fert every 7 days Maintain CF of 5.		If the temps are higher than normal reduce time line between watering
August	Water every 7 days to flush the plants out		If the temps are higher than normal reduce time line between watering
September	Water and feed Bloom Fert every 5 days Maintain CF of 6.		Should be seeing early signs of spiking
October	Water and feed Bloom Fert every 4 days Maintain CF of 6.		Spiking should be on the increase with some even staring to bud up and or even open up. You may even start to make any crosses for the next season.
November	Water and feed Bloom Fert every 4 days Maintain CF of 7.		Spiking and Blooming should become quite noticeable. A good time for any crosses to be attempted
December	Water and feed Bloom Fert every 4 days Maintain CF of 7. If the temps get to be above 18degrees c then increases to every 3 days.		Those plants that are due to flower should be well advanced with this process. A good time for any crosses to be attempted
January	Water and feed Grow Fert every 4 days Maintain CF of 4.5 Start setting up the following season Hybridizing program. Water and feed every 3 days		Early Flowers will be starting to wilt but you should still have a reasonable display

Reasons and lessons learned from some of my actions:

Being asked to participate in two trials to a degree gave me some conflict although the end results are speaking for themselves and are very positive.

I was at the start of the year asked to participate in a fertilizer and a Fern Fibre substrate trial. While I had no issue with the Fert trial I admit a level of reluctance to the Fern Fibre. The results produced clearly indicate these thoughts were of little foundation. The one thing with the Miltoniopsis I can

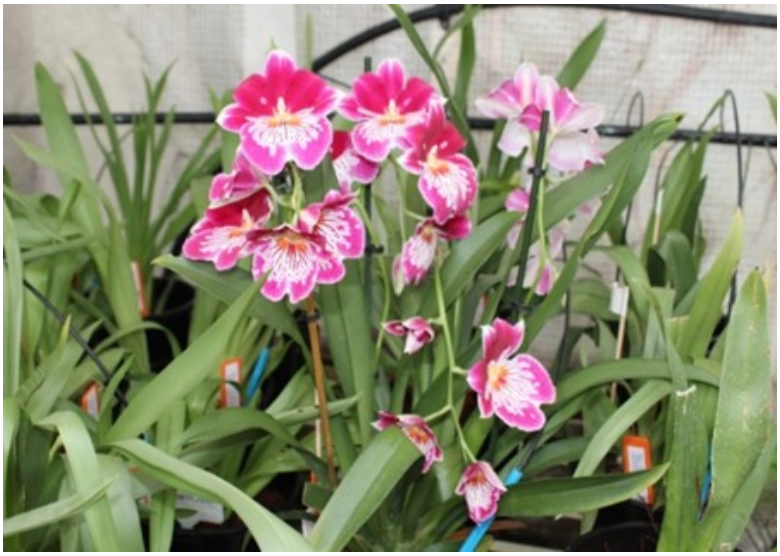
say is the change will be how I ***"grow"*** forward. As the plants in the trial are going into spike I note that those in the Fern Fibre substrate seem to have on average 3 more flower buds per spike than those in the bark pumice mix.

Like every grower I became enthused with the end results to the extent the collection grew by nearly 20% in a year putting an obvious stress on plant accommodation. This is now being sorted by a quality assessment rather than number of plants.

Setting both trials up like a project required dedication and discipline with the creation and maintenance of spread sheets but the info allowed me to relook at data and make change for the better going forward. ***Be prepared to learn from your mistakes.***

On reflection a major mistake during the 2018 flowering season was maintaining low humidity. 60% in the growing environment. This delayed a number of the flowers from opening and had a subsequent negative result on the hybridization program

With a genus specific collection as mine has now grown into I would better prepare myself with a more controlled growing environment. This would be so that I could maintain stable temperature and humidity readings. Both with are important to Miltoniopsis if you want to try and get them to produce multi flowerings during a growing season.



This photo is of Mps Breathless 'From Love' it has 5 spikes with total of 25 flowers. This photo was taken 1week after the first flower opened.

I hope you have enjoyed my story. I look forward to reading yours.

If in New Plymouth you are more than welcome to visit our collection. Which consist of 150 Mps made up of 62 different Hybrids and 2 species.

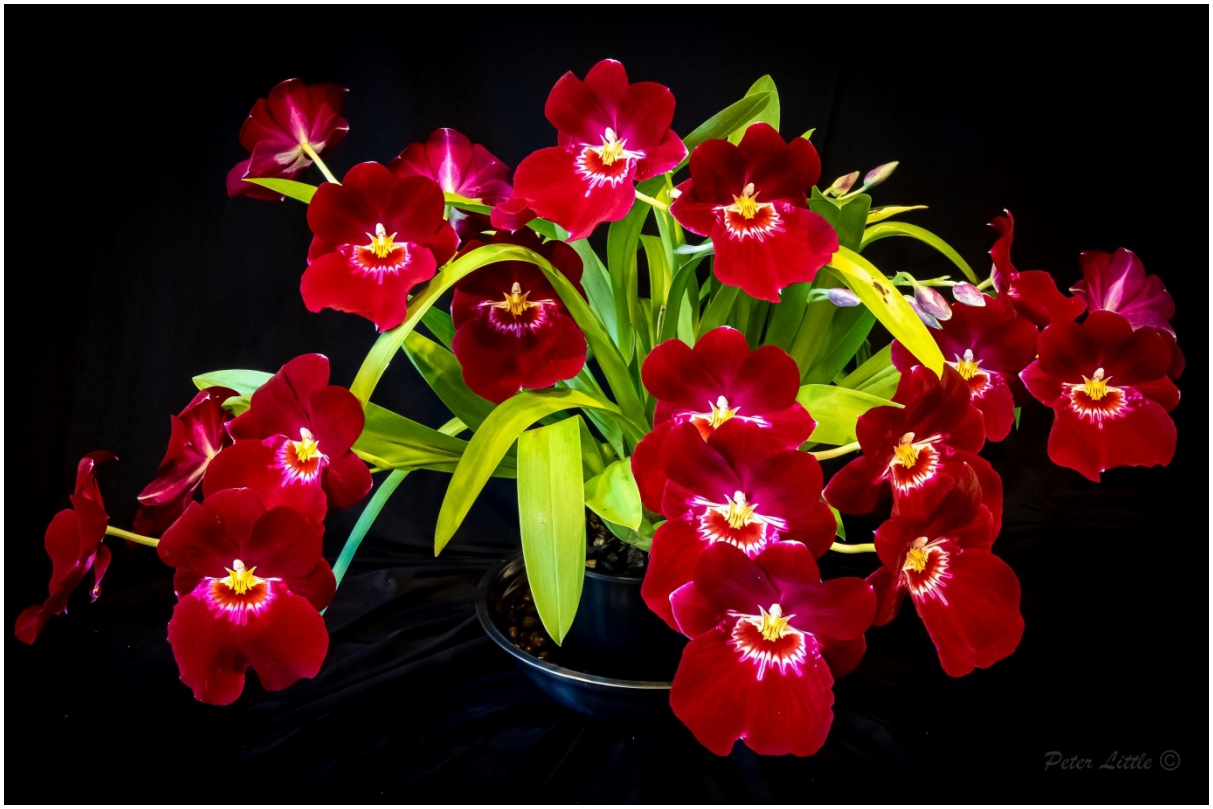
Grower's Corner.

Our love affair with Miltoniopsis……Peter & Bernadette Little

My orchid collection is not vast. It focuses on a small number of genera. Principally Oncidiums, Oncidium Alliance orchids, Sarcochilus, Tolumina, Cattleyas, Dendrobiums and Miltoniopsis.

Having only a small orchid house, I must say that the Miltoniopsis take up the most space. The reason being that I like them specifically at specimen size where they make the most spectacular displays

I regularly bring flowering plants of all my orchids inside to best appreciate their beauty. I believe in my orchid collection, the Miltoniopsis provide the most spectacular display of beauty and longevity. Also some have the most wonderful fragrance.



Miltoniopsis Bert Field 'Leash'

We live close to the coast, south of Geelong in Victoria where it does get very cold in winter but few frosts actually form. A lot of my orchid collection likes warmth. To meet this requirement, my orchid house is an aluminium framed, polycarbonate (8mm) wall, fully enclosed, heated environment. It is heated in winter to a minimum 11 degrees C. As it is a closed environment, the average day time temperature in winter rises to an approx. 25 degrees C.

Fans run 24 hrs a day for air movement with the Miltoniopsis plants being housed on the lower shelves. The orchid house is vented with automatic openers which open from 25 degrees C. On hot days, a misting system is used, working extraordinarily well, keeping the orchid house around 30 degrees C.

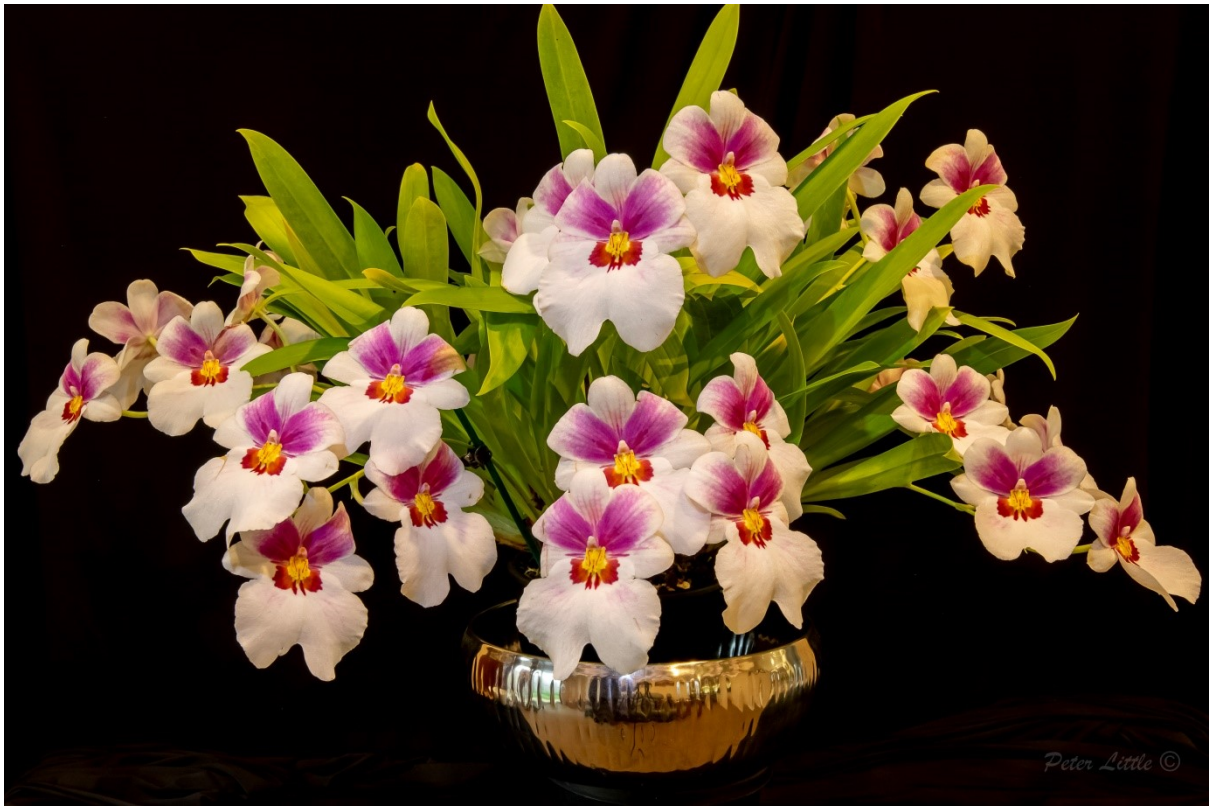
A shade cloth of ALUMINET 55% is placed over the orchid house, being 250mm above the roof line. This is removed from the orchid house during the period from Mother's Day to Father's Day (May to September) to allow more light over the colder months.

Watering is daily during the late Spring, Summer and early autumn period. At other times watering is

done by checking moisture in the pots to ensure a moist environment is maintained. This usually being twice a week.

My fertiliser practice is an alternate weekly mixture of organic (Strike Back for Orchids by Neutrog) and chemical (Supreme Orchid Fertilizer by AON). Fertilising is done weekly by hand spraying into each pot individually year round.

My growing medium is my own mix of Orchiata bark (9-12 mm), Perlite (Coarse), and Charcoal, mixed in ratio 60%, 20%, 20%.



Miltoniopsis Arthur Cobbledick

The Miltoniopsis have the least pest issues in the orchid house. I'm always on the lookout for mealybugs around the Dens and Sarcs but find they give the Mlts a wide berth.

Like a lot of white orchid flowers, Botrytis spots were a problem on the Miltoniopsis Arthur Cobbledick (above) and others in previous years. Now that I bring the plants into the house just as the flowers commence to open, no more issues.

What more can I say. They are a beautiful but delicate flower which all who see appreciate and desire.

PS. Being so delicate, they are a pain getting them to shows without damaging the flowers.

Anniversary Report from Miltoniopsis: Bark to Fernwood Fern Fibre Trial

With a growing season coming towards an end it seemed fitting to provide a report on the status of the trial Fernwood asked me to participate in despite it not quite being at the 12 month mark.

As I have said in previous posts I was up till the start of this trial a traditional orchid grower. Bark was the only medium for me. The trial required me to remove a number of my Miltoniopsis from the bark medium and place them into Fernwood Fern fibre substrate.

To ensure the trial provided a balanced result 15 pair of Miltoniopsis were selected. All were to receive the same treatment, in other words watered and fertilized at the same time with the same fertilizer and were to be kept side by side in the same growing environment. At the start of the trial on the 25th of February this year this involved 50% of my Miltoniopsis collection. From a growers perspective I felt that commitment was important and worth any perceived risk.

Within a month any doubt or risk was eliminated. Plant growth was obvious to the extent that any further Miltoniopsis added to the collection were re-potted in to the fibre substrate. This action actually extended into other genus I added to the collection overall.

Photo 1 At the 4 month stage of the trial shows clear sign with the Miltoniopsis in Fernwood Fern Fibre, of growth and overall plant development in terms of foliage difference. Leaf growth is stronger and a darker colour. The Plant size has almost doubled. (right)

I adopted a timeline water fertilizer type program via an in-pot water feed system rather than the lifting the pot to test the weight principle. This I feel allowed me to satisfy both mediums. The CF factor was measured, at each water/feed cycle and tracked against a projected rising curve in an effort to ensure optimum feeding.

At 6 months into the trial I decided to remove a test pair of plants from the group and check the root growth. A pair was randomly selected and the results are shown in Photo 2. As shown the plant to the right and the one that was in Fernwood Fern Fibre was clearly well advance to the one that had been in bark. Both plants were returned to their respective mediums so the trial could continue.

At the beginning of September the flower spikes stared to appear with one plant excelling in its flower production and subsequently being awarded an HCC / OCNZ under the Orchid Council of New Zealand judging system. Photo 3 Mps Breathless 'From Love'. With collection of Miltoniopsis now at 100 with 75% of them in Fernwood Fibre the spiking process has started and the flowers being produced are between 10 and 25% larger examples will be presented later in this article.

The first flowering pair within the trial provided visual proof of the value behind Fernwood's Fern Fibre.

This photo is of two plants of Mps Robert Jackson 'Wild Thing' the flower in the left of the photo is from the plant in Fernwood Fern Fibre and the one on the right is from the plant in a Bark/ Pumice mix the size difference is just over 10% increase in size. Both plants were potted up on the 25/2/19 and as they sit side by side in the green house have received the same treatment in terms of growing environment, watering, fertilizer and overall care.

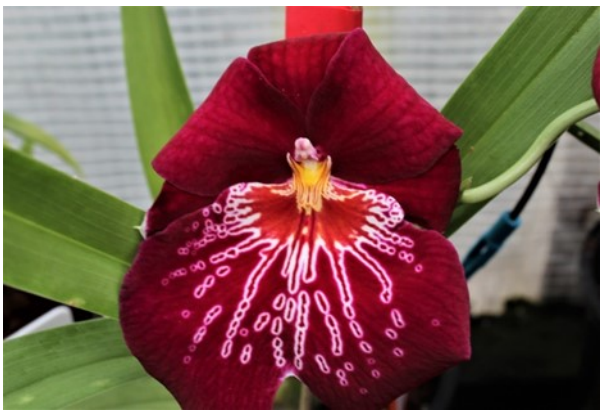
These results so far as my orchid culture habits are concerned, have convinced me that Fernwood Fern fibre is the right growing substrate for my Miltoniopsis. I hasten to add that I am now also trialing other genera within the Odontoglossum alliance in this product.

All 15 pairs of Miltoniopsis within the trial are showing distinct difference dependent on the substrate they are in.

- Fernwood Fern Fibre substrate: Plants appear to have more vigour in their leaf growth with stronger darker leafs.
- Bark / Pumice mix: Plants appear to follow the expected Mps growth cycle but the leaf structure appears to be shorter and colour wise tending to be a lighter green.
- Watering/ Fertilizer: For the purpose of the trial a, in pot water feed system was put in place and the results were randomly sampled to ensure all plants were receiving the same amount of fertilizer and volume of water as per the photo above right.

Accepting a photo speaks a thousand words the following photos are of various other Miltoniopsis outside of the trial group but are all in Fernwood Fern Fibre substrate. The flower size has been the most notable successful end result. Accepting that an average Miltoniopsis flower is about 65mm or 2 1/2 " across, the flower size in the photos below are averaging 100mm or 4" across.

Mps Benito 'Eternity



Mps Drake Will 'Ruby Falls'

Mps Mary Saunders 'Annie'

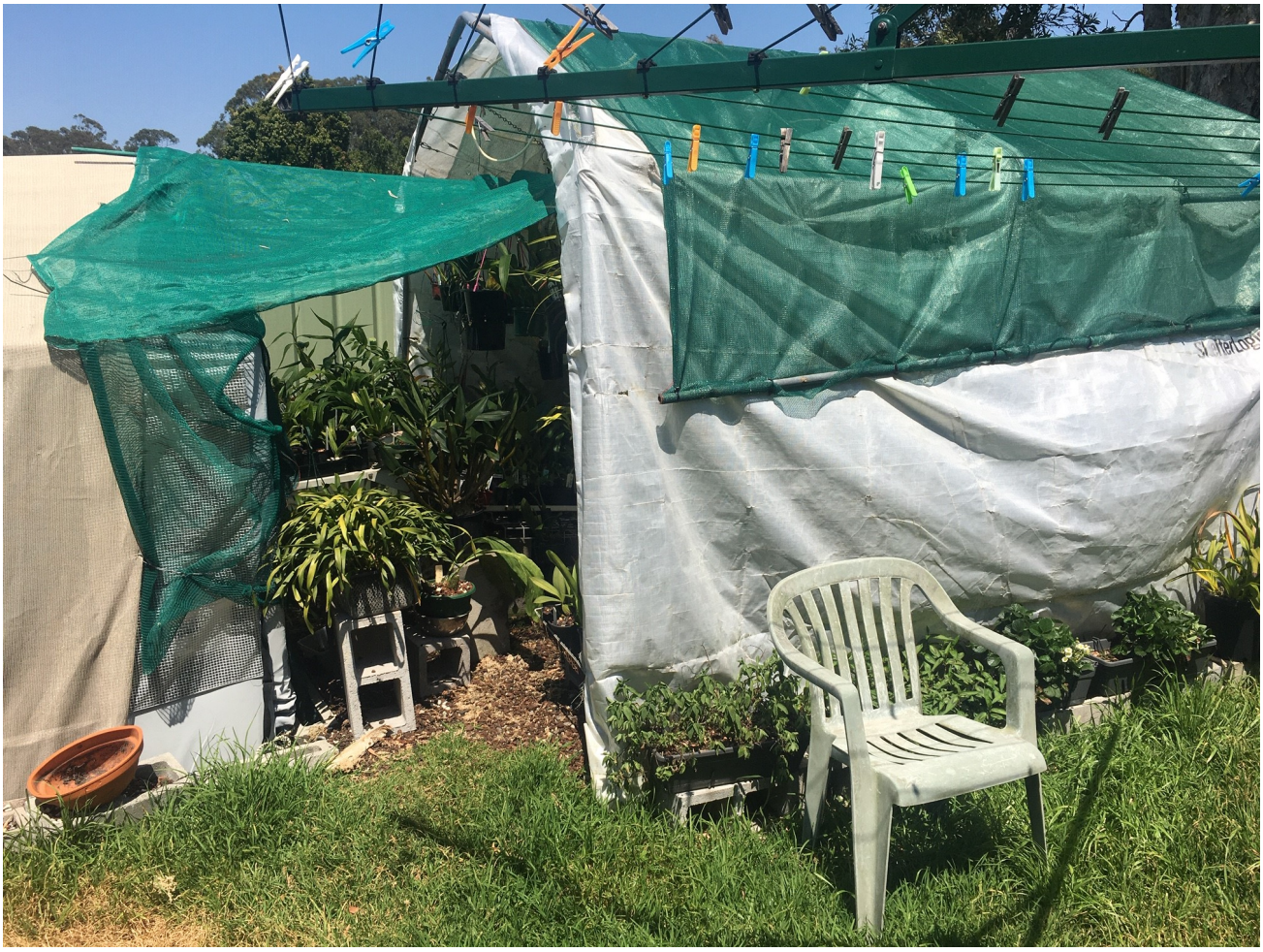
Mps Yoshiko Tempo

So in conclusion for me despite just coming up to the halfway point in the trial apart from the 15 pair that will remain in the trial I will be repotting all my other Miltoniopsis in to the Fernwood Fern Fibre substrate. My intention is to also repot any other orchids that I have in the Odontoglossum alliance into Fernwood's Fern Fibre.

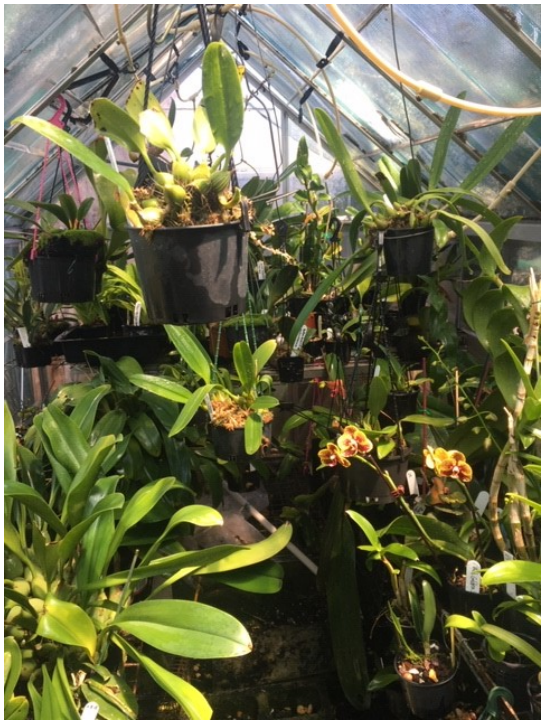
Happy for you to share this information.

Allan Watson

Jeff Ahern's orchid setup on Central Coast Australia



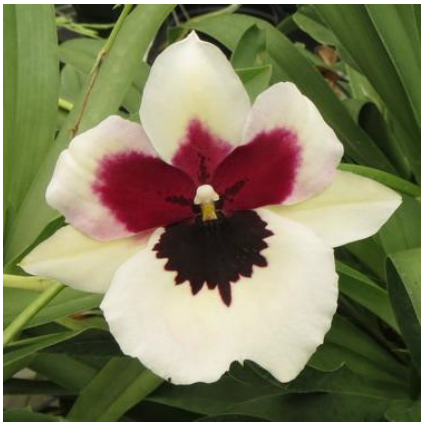
I have been growing orchids since I was 8yrs old, now 68yrs.
My main genre are miltonopsis, paphs, phrags, bulbophyllums, phallies, lycastes.
I have a hothouse and 2 shadehouses.
I belong to Mingara Orchid Society, Paph. NSW and TAPS, the Queensland Paphs Society.
When I lived in Sydney I was a member of Parrammatta Orchid Society for about 25years.



Here are my orchid houses where I have a very fine misting system that comes on from 6am to 6pm every half hour for 30seconds, it keeps the air humid and the orchids just moist. A hothouse that is heated to a minimum of 18degC, good for phallies, bulbophyllums, hardcane dendrobiums also I have a ebb and flo system that runs 24/7, for a lot of my phrags that like running water around their roots.
Polyfilm shadehouse where miscellaneous orchids grow, bulbophyllums, miltonopsis, miltonias, lycastes, New Guinea orchids, masdevilleas, assorted species.
Paph. shadehouse where double layer of 70pc shadecloth, fan to keep air moving.
Specimen shadehouse where coelogynes some lycastes and all my multifloral paphs grow.
This is my setup for my orchids that I grow on the Central Coast of NSW, Australia.

Miltoniopsis Culture

By Sam Cowie – Leaf & Limb



Miltoniopsis or Pansy Orchids are one of the most beautiful orchids in the world, with their wide range of colours, patterns and lush flower texture. Although not one of the easiest to grow, they do grow well if certain cultural practices are followed, even in the sub-tropical areas of South-east Queensland where most people think it's too hot. As always watch your plant, make notes and learn from how it grows and reacts to what you do.

Watering

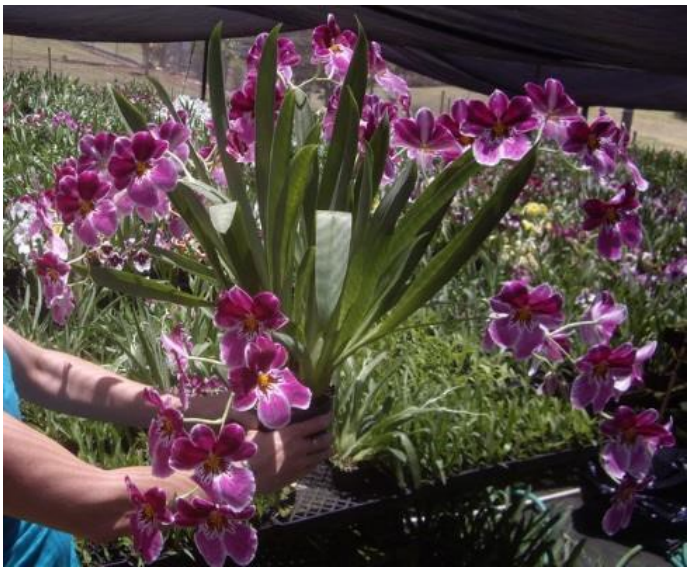
The simple rule is keep them **moist but well drained**. The easiest way to kill your Miltoniopsis is to let it dry out or to sit it in water. Miltoniopsis like to have a cool humid environment around their roots, so the pot in pot technique works well to maintain that. As a general rule we water in the morning every second day in summer and every 4 to 6 days in winter, adjusting as per the weather conditions, potting mix, size of plant and light levels.

Growing Conditions

Miltoniopsis prefer to be grown undercover and don't like to have wet foliage going into the night, this minimises leaf diseases and helps to keep the potting mix moisture levels even. We grow our Miltoniopsis in a greenhouse with a white solarweave cover that provides a 50% shade factor. From mid-spring to mid-autumn, or during hot weather, it's best to increase the shading of your Miltoniopsis to 75%, which can be achieved by pulling across a 50% shadecloth over the top of your greenhouse (if covered in white solarweave). You want enough light to keep the foliage nice and firm, as too much shade creates long lanky and weak foliage, but not too much light that the plant over heats and stresses. Although Miltoniopsis love high humidity you still want air flow around the plant foliage to minimize leaf diseases. Our greenhouse where the Miltoniopsis grow has experienced temperatures up to 42 Celsius and down to 5 Celsius without any major effects on the plants or their growth. As a general rule during hot weather they need increased shade and humidity with good ventilation to stop the plant from stressing too much.

Fertilizing

Miltoniopsis should and will be in active growth year round, so a regular fertilizing program helps. Each spring apply a 12 month controlled release fertilizer like Osmocote. Supplement every second watering with a half strength liquid fertiliser high in potassium that contains calcium and magnesium, like Peters Calmag Finisher. An additional application of magnesium sulphate (Epson salts) at 1 gram per litre once every 3 or 4 weeks will also help, as Miltoniopsis like magnesium.



Repotting and Potting Mixes

Miltoniopsis prefer to be root bound in a pot, as overpotting can create moisture levels that are too wet for them. They will grow and flower in a 105mm pot and I generally don't recommend anything bigger than a 150mm squat pot for even big plants. We grow ours in a coco husk/peat and perlite mix, with a little bit of 10mm charcoal added. This mix retains more moisture than a bark mix but still needs watering every second day in summer for us. If your pH starts to drop top dress the pot with a bit of dolomite.

Pest and Diseases

The major pest is little bush snails that burrow into the potting mix and eat the root tips. Boisduval scale will bother them if the plant is in poor condition, otherwise the occasional mealy bug or caterpillar will cause damage. Your garden centre usually stocks the appropriate insecticide.

Flowering

Although most Miltoniopsis flower in Spring and Summer, we find that Miltoniopsis will flower sporadically year round. Well grown Miltoniopsis will have 2 spikes per growth with 5 to 8 flowers on each spike.

I hope to get the next issue out by March 2020 but much depends on you. I need your input, your experiences, your pictures, your questions.

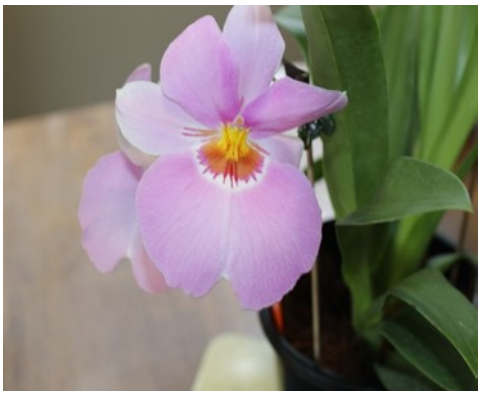
Only with your support can this newsletter continue, so, how about, put pen to paper, get that camera clicking and see what you can do. I can edit it if you want me to.

Send your contributions to lochaven999@gmail.com by 28th February and I will do the rest. Thank You in Anticipation, Alan

Fern Fibre Produces Positive Results

At the risk of sounding like a broken record I say yet again Fern Fibre produces positive results.

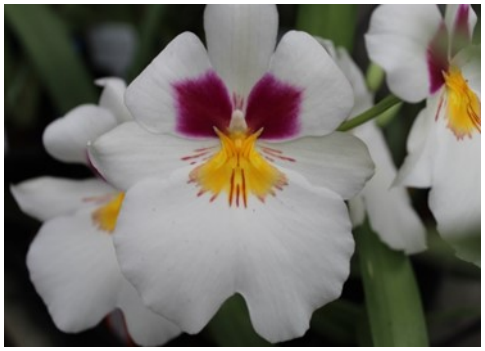
Eight months since starting the trial I am now into the first flowering of the trial plants. At this stage only one pair in the trial has produced flowers but there have been three others to date (early in the flowering season as yet)



The first to flower was Miltoniopsis 'Pink Cadillac' (Mps. Lady Snow x Mps. Second Love). Although the flower was slightly paler than expected it was about 15% bigger than any previous flowering plants in the bark/pumice mix. This is the first flowering for this plant. The other pair plant is in spike but not as yet open.

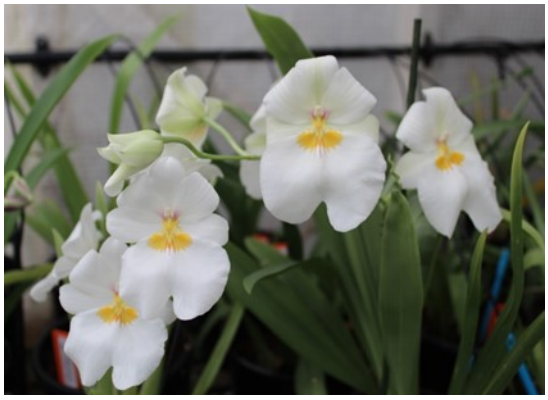
This plant also flowered early in terms of the rest of the collection. (September 2nd.)

Of the 15 pair of Mps in the direct Fern Fibre trial at this stage 14 pairs are all doing well and those in fibre showing sign of multi spike. At this stage only one pair is not doing that great. I suspect recovering still from the shock of being split and re-potted.



This photo is of Mps Herralexandre (Mps. Alexandre Dumas x Mps. Herrenhausen) '189 Smiler' in fibre. The plant has produced a stronger flower than in the previous season with 6 flowers on a spike. Last season there was only 4 flowers per spike. As yet the other plant of this pair in the trial although in spike as yet the buds have not opened.

The third single plant to flower in the trial group was Mps. Hamburg (Mps. Robert Paterson x Mps. Lingwood) 'Red Velvet' although this plant only produced 4 flowers it is its first flowering. The flowers produced however are very strong in colour and texture,



The first pair of trial plants to produce spikes and open belong to Mps. Rene Komoda (Mps. Edwidge Sabourin x Mps. santanaei)' Pacific Clouds' this plant was split back in February to be part of the trial. The photo I have included shows both plants side by side. The flower centre and right are from the plant in fibre. When compared the flowers from the fern fibre plant are stronger, rounder and 10% larger. The fern fibre plant

shows signs of improved development and growth.

The trial when initially started had an open mind approach with notable results not expected for 18 months to two years. Here we are only eight months into the trial and the results can already be seen.

I intend to maintain the 14 pairs in the trial as a control group. I am progressively repotting all my other Mps into Fern Fibre substrate as they finish flowering.

I have had various growers say to me that they are getting results with the mixes they are using and my answer is a simple well done, if it's not broke don't fix it, but if you want to try and improve try fern fibre. Fern fibre is certainly "producing positive results" for me.

Allan Watson

****

Variations resulting from the Miltoniopsis Cloning process.

There has been some comment on Social Media about the great variation in some Miltoniopsis clones to the point of questioning where the plants referred to, are actually correctly named.

The clone that seems to cause the most comment is Mps. Breathless. Here are some of the variations of Mps. Breathless 'Brilliant'. If you thought that you had bought the dark one and found that you had got one of the light ones, you would be disappointed and would believe that it was wrongly named, but it is just part of the range that we are seeing and probably came from the same plant issue. Other Mps. Breathless clones seem to suffer the same variation. This could be due to the cloning process. If the tissue is over cloned then more mutations will occur. The cloning process is open ended and in theory, can go on for ever but after a certain number of plants are produced, the tissue starts to lose its vigor and these sort of variation start to appear.