

"MOSAIC VIRUSES"

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SOME USELESS/ USEFILL INFORMATION

Newcastle Rain fall

	2017/18	2018/19
WINTER	4.5 mm	16.00mm
SPRING:	192.5 mm	140.00mm
SUMMER:	498.0 mm	178.5mm
AUTUMN:	260.5 mm	0.00mm

AS RECORDED BY ALF EVERSON

DATES TO REMEMBER

	ACTIVITY	DATE
1	Clivia Society AGM	11 May
2	NCIG Clivia Show	7 Sept
3	Northern Clivia Club (Pretoria) Show	7&8 Sept
4	KZC CC Show	TBC
5	Jhb CC Show	14&15 Sept

i. In 2020 NCIG will be 20 years old.

We urge all members to purpose suggestions on how we can calibrate the 20 years of existence of the Newcastle Clivia Interest Group. Any and all suggestions can be emailed or forwarded to any of the Committee members as listed on the Membership application for. See at the end of the newsletter.

ii. Your Membership fees for 2019 are due!

KZN CC has increased its membership fees by R20.00 per member. The Interest Group

Mebership fee will thus be **R390.00**. See the application from. (last page).

Banking detail:

Name: Newcastle Clivia Interest G

roup

Bank: First National Bank (FNB)

Acc. number: 270324
Acc. number: 62680889684
REFERENCE: name and surname.

CLIVIA CARE FEBRUARY

To Do's

- Planting out seedlings
- ✓ Dividing and transplanting
- ✓ Add Controlled release fertiliser at root level when potting on. Then re-applied once a year...?
- Why so much fertiliser? Plants are in pots, the water washes out all the fertiliser over time, leaving no food for the plants.
- ✓ Foliage plants need to turn plant (every week) to force the leaves to grow evenly – fan shape.

Feeding

- √ feed Clivia gardenii
- ✓ Foliar feed every 8 to 10 weeks with liquid feeds when you spray for mealy bugs or apply a fungicide.
- ✓ Feed seedlings with liquid feeds like Kelpak, Supranure etc..
- ✓ Feeding Bulb Food (N3 .P9 .K17)



Why is snail and cut worm bait BLUE? Birds see the blue as danger and will therefore not eat/ pick the bait (poison).

3-1-5 Multifeed, 5.1.5, 5.7.5

- ✓ Look out for pests
- ✓ If you use inorganic fertilisers, chicken based ones, be on the lookout for fungus gnats....
- ✓ Around February add soluble potassium sulphate to the mix, also use a controlled release potassium sulphate to stimulate/ improve flowering... Potassium is the (K) on fertilizer?
- √ Remember to wear protective gear when spaying your plants. Johnson and Johnson have protective masks for sale

PLAY IT SAFE

- Wash your hands in cold water with ordinary household soap after working with pesticides. while hot water might seem the better option, it would open the pores and could allow pesticide residues to penetrate the skin.
- ✓ Wash all equipment thoroughly.
- ✓ If you feel nauseous, have a headache, or feel unwell after working with pesticides, call your doctor or nearest poison centre immediately and give them your symptoms as well as the active ingredients contained in the pesticide you were using.

What not to do!

- × over feeding could increase the PH of the soil and will lead to the roots being burnt.
- × over water could cause root rot.

KZNCC AGM FEEDBACK

The KZNNCC AGM was held on Saturday 26 January at PMB.

- 1. It was proposed by NCIG that the rule of "NOVICE" in the Clivia show rules be amended. It was agreed that the rule be amended. Final wording to be confirmed. The Novice now will be allowed to show a plant at any of the KZNCC Interest Groups Shows for a consecutive 3 years.
- 2. The KZNC Club fees for 2020 will be increased by R10.00. This may result in that the NCIG fees to be increase.
- 3. A new committee were elected for KZNCC and is as follow: Chairman: Alfred Everson III Vice-Chairman: Mike Callaghan **Neville Sarawan** Secretary: Treasurer: Jean-Luc Bestel Membership: Randel Payne Advertising: Vacant

Seed Bank Manager: Not voted

need to be amended.

Judging Co-ordinator: S Chubb Show Manager: Christo Swart Show Assistant Manager: TBD Conservation and Research:

Felix Middleton

Representatives from:

NCIG: Alfred Everson III Vrvheid IG: Nico Grobler Coastal & Midlands IG: Christo

4. The KZN CC is this year 25 year in existence. This is a celebration and everyone that can assist with suggestions for celebrating this please forward your idea to Alfred.eveson0001@gmailcom.

FLOWERING

Clivia robusta



In many of our climates, Clivia are of necessity houseplants in colder months. Indoors, they should be located where they get morning sun or bright, indirect light, never place a Clivia in an unshaded North facing and West facing windows. A display idea



CULTURAL HINTS FOR JANUARY-FEBRUARY-MARCH

(with Brian Steven)

The following brief guide should help Clivia enthusiasts during the months of January, **February** and March.

▶ PESTS AND DISEASES: These months are the main months that growers must look out for pests and diseases around their clivias, and of course later in the year after winter they could appear again. The following are the main pests and diseases that growers should keep under control.

> PESTS — MEALY BUG:



The main worry for Clivia growers. These bugs are very small 3mm long, creamy white bodied insects covered by threads protruding. They are found on the newer growths. If not controlled can really make a mess of the plant. Light infestations can be controlled by wiping a cotton bud, dipped in metho or a surgical spirit on to the insects. Sprays and dusts can be used for larger outbreaks. Confider is a very successful insecticide.

I have used a much cheaper method, using Yates tomato dust (active constituents Sulphur, copper oxychlo-ride and Spinosad.) The Sulphur and copper are protectant fungicides. Sulphur is also a miticide and Spinosad is an insecticide derived

from natural soil bacteria. The Tomato Dust containing the insecticide carbaryl is not available any more. For those who like to use the natural prays of course Pyrethrum is the insecticide.

> SNAILS AND SLUGS:

These should be kept under control at all times especially now that most areas have had good rain. It is marvellous what a slug or snail can do to a lovely Clivia flower if they get the chance. Check plants and pots regularly, especially during damp weather. Keep them in check with one of the snail baits spread around.

> LILY BORER:



These are black caterpillars with yellow band and can cause major damage to Clivia plants. This caterpillar tunnels into the leaves and stem and if left to its own devices will kill the plant. Kill them by squashing by hand or systemic use а stomach pesticide. Other less prevalent pests are aphids, thrips, and red spider mite. Check with your nurseryman on methods to rid your collection of these.



> FUNGAL AND BACTERIAL DISEASES:



Various diseases occur in clivias such as seed rot, root rot, rust, leaf spot and bacterial rot. We all have had the experience of a young seedling or a semi-mature Clivia plant in our collections "falling over." This problem is usually caused by too wet a potting mix or not enough aeration in the mix. Make sure you have an open mix and watch the watering. Often larger plants can be saved by cutting off the rotting material and dusting with Flowers of Sulphur to dry out the infected plant. If the roots are unaffected by the rot, often the plant will throw new growths. Even the top part of the plant can be planted out after cleaning off the rotted parts. Hopefully it will develop new roots. There are various fungicides like copper sprays, Fongarid and Zineb. Use as directed.

> WATERING:

Liberal amounts of water should be applied during these months (January, February and March) the main growing season, easing off as the temperatures drop towards autumn. Don't let young seedlings in small pots dry out. Of course, in Toowoomba and a lot of areas in Australia. severe water restrictions are in place. A lot of growers have overcome the problem slightly by installing rainwater tanks. It is marvelous what a cheap electric pump can pump from the tank around the garden!

> FEEDING:

During these growing months fertilizer should be applied. Be very careful with young seedlings and only use fertilizers like blood and bone, Nitrosol. seaweed fertilizers or half strength Thrive. For the larger plants the "lazy" fertilizer Osmocote (the 6 months one) is recommended. Some growers use a fertilizer such as Tropic (or equal to Tropic), especially on established clivias in the garden pots. During the summer months phosphorus to strenathen growths and potassium should be applied to stimulate flowers.

> PLANTING OUT SEEDLINGS:

Planting out young seedlings can still be undertaken now, but beware, do not plant out if the weather is hot and humid. Young plants should be planted out when the first leaf is at least 10cm and preferably when a second leaf is on the way.



Plant them out in individual small pots or community pots (several plants in the one pot). The potting mix should be similar to the potted adult plants growing medium. Make sure the seedlings 70% and do not over-water. Use fertilizer as above. DO NOT OVERPOT.

POTTING ON:

If you have seedlings at least 12 months old and are growing well and look healthy, pot them on to bigger pots. Small chopped up pieces of styrene or beads can be placed in the bottom of the pots to lighten the load and help drainage. Remember not to disturb the roots of the plants too much.

DIVIDING AND TRANSPLANTING:

The general opinion is that clivias in warm climates can be divided and repotted any time of the year without detrimental results, but spring and summer are regarded as the best times as they should establish more quickly. Remember if offsets are being removed, handle the plant gently,

pulling the roots apart. Don't forget to dust any cut with Flowers of Sulphur to prevent any rotting.

DEAD AND YELOWING LEAVES:

Keep your Clivia growing areas free of any dead or yellowing lower leaves from your Clivia plants. These leaves can spread fungal diseases. Remember

when handling insecticides and fungicides take precautions and please wear protective gloves and mask.

What is a Virus!

are kept under shade of at least A Virus is a sub-microscopic (tiny) parasitic [sponging] particle of a nucleic acid surrounded by protein that can only replicate within a host cell. Viruses are not considered to be independent living organisms.

> While surfing the internet etc I came across the following:

Sakkie Nel

Insects and pests always attack one of the four youngest leaves of any Clivia plant!

If this is indeed a virus which invested the veins and sap of the plant, why are all the leaves not damaged?

We need to get a solid debate on this one as Stef de Swardt suggested and then colleagues will have to provide their facts please?

Clivia Society

While checking for pests on the Clivia. I came across these leaves in the garden.

Are they infected by a virus? Is this a mosaic appearance?



Is this a deficiency [shortage] or a

See Clivia Yearbook 2018 note Prof Lena.



See below? Destroy



- 1. It looks as though it could be a virus. Can you isolate it from other plants? If so, try feeding it and see what the new growth is like.
- 2. Hard to say based on the photo. I agree. Keep it separate and feed and water it more regularly. It could actually be a case of the plant struggling due to nutrient deficiency.
- 3. Thrips (Thysanoptera)? 4. No, there isn't a Thrips.
- destroy it if it was mine.
- 5. Only necessary at this stage if you cannot isolate it from other plants.
- 6. it's possibly a virus.

Not wanting to risk further spread, plants have been these two removed.

George Mann

Its Tobacco mosaic virus, destroy the plant.



I have a very old yellow clivia (18 years) that I have divided many times and given away. The mother plant suddenly developed a virus. I had to repot it. Is there any chance that any offsets (pups) that develop; will be virus free?

If the mother plant has a virus, I don't know how offsets would not also have the virus--they are all connected.

Rich Obal

What is puzzling is that I also collect amaryllis and they are all clean of virus.

I found one reference that lists cucumber mosaic virus on clivia.

Since I also collect dahlias, I may have infected the clivia with contaminated pruning shears. I have had cucumber mosaic on my dahlias. It is spread by aphids.

I have isolated the plant and treated it with a systemic insecticide. My plant 4. Loos like mosaic virus I would pathology friends tell me that not all viruses are systemic through the phloem cells. **Destroy** the plant immediately before it affects your other plants.

lan Kotzé

The offset may be asymptomatic, they would not necessarily show signs of the virus, but it does not mean they have it.

Since mosaic virus is something that is quite aggressive, especially if it mutates into a strain that affects a



particular plant, I honestly would not virus strain that can infect other clivia. Mosaic virus is more commonly caused by microscopic mites, which is much harder to see and treat. Since there is no cure for mosaic virus, rather cut your losses.

Rich Obal

I am concerned about the pups being asymptomatic. I may have them virus indexed. It's funny that virus infected plants bloom so well. It looks like the damaged caused by n small white insect with a black head...sucks the leaves......give it a systemic poison like Koinor! What do you do when this happens?

Glynn Middlewick

I believe that viruses are more common than thought. I Have Also heard of incidents of contact spread by dogs, by garden tools.

Frits Korting

It cost too much to have it tested. Best is burn the plant soil and all. As you do not want the other clivia's get infected.

George Mann

Kontak Dr. Lena van der Merwe vir meer wetenskaplike informasie. Ek het die bogenoemde al talle kere ge sien in ou virsamelings en het dit ook al sien virspry van plant na plant as n bekende kloon so se bevoorbeel Berties Bronze ewe skielik die blaar kenmerke toon en dan blom met Ella v Zvl tiepe vlekke op blom dan weet mens iets is nie reg nie en dat iets oorgedra het na n plant wat nooit van tevore sulke kenmerke ge toon het nie.

Marius Volschenk

foster the development of a mosaic DR. Lena is n regte genie, sy sal weet en kan help. Hou op hoogte asseblief! Could this be the same problem?

Tobacco Mosaic Virus: symptoms, transmission and management

By Phillip Mphuthi

Tobacco mosaic virus (TMV) can infect a wide range of hosts, and losses of up to 20% have been reported in infected tomatoes. Phillip Mphuthi of the Agricultural Research Council's (ARC) Industrial Crops unit Rustenburg discusses **TMV** detection. prevention and management.



A typical mosaic pattern on flue-cured tobacco leaves infected with tobacco mosaic virus. Photo: Courtesy of JP Krausz

Tobacco mosaic virus (TMV) was the first virus discovered. In 1889. Martinus Beijerinck, found 'tobacco mosaic disease' was caused by a pathogen able to reproduce and multiply in the host cells of the plant. He called it 'virus' (from the Latin virus, meaning poison) to differentiate this form of disease from those caused by bacteria.

Tobacco yield losses due to TMV are currently estimated at only 1%, because resistant tobacco varieties routinely are grown. However, TMV affects **other** crops,



and losses of up to 20% have been mother plant is infected, the more reported in tomatoes.

TMV can be a major problem because, unlike most other viruses, it does not die when the host plant dies and can withstand temperatures. Thus, the virus can survive on implements, trellis wires, greenhouse stakes. benches, containers and contaminated clothing for many months.

the soil surface and infect a new crop planted on contaminated land.

Tobacco products, particularly those containing air-cured tobacco, may carry TMV too.

The virus cannot be transmitted in the smoke of burning tobacco, but smokers, especially those who roll it spreads to the entire plant. their own cigarettes, could possibly carry the virus on their hands and transmit it to healthy plants.

Sap-feeding insects such as **aphids** cannot transmit TMV. However, chewing insects such grasshoppers and caterpillars occasionally transmit the virus. They are not considered important vectors, however.

Transmission

Tobacco mosaic virus is usually spread from plant to plant via the host plant. 'mechanical' caused wounds contaminated hands, clothing or tools such as pruning shears and hoes. This is because TMV occurs in very high concentrations in most plant cells. When plants are handled, the tiny leaf hairs and some outer cells are inevitably damaged and leak sap onto hands, tools and clothing.

Seeds from infected plants can also carry the virus on their seed coats. The earlier the age, at which the

likely it is that the virus will contaminate the seed coat during seed harvesting. When the seed germinates, the virus may enter the high seedling through small cuts caused by transplanting and handling, or during the germination/emergence process. Once inside the plant, the virus releases its genetic code (RNA). The plant mistakes this for its own It can also survive in crop **debris on** RNA and starts to produce viral proteins.

> The virus then spreads neighbouring cells through microscopic channels in the cell walls (plasmodesmata), and eventually enters the translocation system of the plant (xylem and phloem). From here,

Signs and symptoms

Symptoms first appear about 10 days after infection. The plants do not usually die, but growth can be as seriously stunted. In the case of tomatoes, certain TMV strains can cause deformed fruit, non-uniform fruit colour and delay ripening.

Specific symptoms depend on the host plant, age of the infected plant, environmental conditions, the virus strain and the genetic background of

However, common signs include mosaic-like patches (mottling) on the leaves, curling of leaves and the yellowing of plant tissues.

Managing the virus

No chemicals can cure a plant infected with a virus, and TMV is no exception. As mentioned before, however, resistant plant varieties are available.



You will need to consider adaptability, of people, potential yield and resistance to other important diseases when selecting varieties.

TMV Ultimately. effective management involves using virusseedlings plants or and implementing strict hygiene procedures:

- Use new potting mix and new or thoroughly cleaned seedling trays when growing seedlings;
- If infected plants are discovered, either remove and destroy the plants and restrict access to the area, or always work in the affected area last and decontaminate yourself and your equipment afterwards;
- Remove all crop debris from the land, seedling production beds and benches in greenhouses;
- Place tools in a disinfectant solution for at least 10 minutes and rinse thoroughly with tap water:
- Disinfect door handles and other greenhouse structures that may have become contaminated by thoroughly with wiping recommended disinfectants:
- recommended disinfectants, such non-fat milk powder at 20% weight/vol, 10% bleach, and 70% ethanol, after handling tobacco products or TMV-infected plants. recommended that the bleach solution be replaced every four hours).

If you are a seedling producer, ensure that greenhouses are within a Ideal braai-mates clean zone and control the movement

plants, vehicles materials into the greenhouse areas. Treat each greenhouse as a separate unit, with protective clothing, tools, gloves and bins in each. These items should not be moved between units. The ARC's Industrial Crops unit (Rustenburg) has a virus diagnostic laboratory and conducts diagnostic services for nurseries and farmers.

Email Phillip Mphuti at MphutiL @arc.agric.za.

SOMETHING DIFFERENT

RECIPES:



Planning a braai and want something different? Use herbs to 'spice' it up! We don't need an excuse to braai: after all, it's part of our heritage. Thoroughly wash your hands with December's balmy evenings and the end of the year holiday mood just add as carbolic soap, or a mixture of to the enjoyment. But, like all other good things, a braai can become boring if there is no variety. There is no better way to 'spice' up a braai than by adding herbs. Herbs can be Make sure that the solutions are used in rubs, marinades or butter for fresh, and replace regularly (it is the meat, in vegetable or salad side dishes, in salad dressings, and even added to the coals for a delicious aroma.

Meat is always the star of a braai, and a simple rule when using herbs is to match them with the meat as you



would in conventional cooking. Here are some combinations:

Chicken: Rosemary, basil, parsley,

savoury, French tarragon

Lamb: Rosemary, garlic, ginger,

mint, lemon balm, thyme

Basil, coriander, chervil, marjoram, oregano, sage,

thvme

Steak: Garlic, ginger, horseradish,

> chives. parsley, mint.

thyme

Fish: Lemon balm, lemon grass,

fennel, dill, parsley, rocket, French tarragon Herb

butter

One of the nicest ways to enjoy herbs with meat is to simply make herb butter that is served with a sizzling chop or steak.



Pork:

½ cup unsalted, softened butter ½ cup mixed herbs, finely chopped (basil, chives, dill, parsley, thyme or tarragon)

teaspoon coarse sea salt teaspoon freshly ground black pepper

In small bowl. mix all ingredients until the herbs are well combined with the butter. Pack into a ramekin and cover with cling wrap. (Or place on waxed paper and shape the butter into a cylinder. Wrap and seal the ends.) Chill in the refrigerator until firm, for at least an hour. Herb butter can be stored in the fridge for about two weeks or in the freezer for a few months.

KIDS

Gardening is a fun activity for kids. Inspiring children to enjoy plants and gardening, can give them a healthy hobby for the rest of their lives. Teach your kids how to grow their own vegetables and flowers and in turn they learn new skills about the wonderful world of science and nature by engaging their natural curiosity. This is a great way to encourage the youngsters to eat healthy.



Look after your Garden Tools



To keep your good tools clean, try this quick trick.

- 1. Fill a bucket with builder's sand.1
- 2. saturate the sand with vegetable or car oil.2
- 3. Knock off any soil and dig the metal parts of the tools into the oily sand a few times.3

This serves three purposes:

- 1. It cleans off excess dirt,
- 2. It lightly sharpens the blades
- 3. It oils the tools at the same time.
- 4. Hang them up and they are ready for the next time you need them.







APPLICATION FOR MEMBERSHIP

Chairperson
Alfred Everson
Cell: 083 304 0826
Home Address: 12 Canary
Street, Aviary Hill, Newcastle,
2940
alfred.everson0001@gmail.com

Vice-Chairperson
Henry Howard
Cell: 083 655 0750
Home Address: 13 Fountain
Road, Hutten Heights,
Newcastle, 2940
cocreativeclivias@gmail.com

Secretary/ Treasurer
Alf Everson
Cell: 082 808 2594
Home Address: 86 Drakensberg
Road, Amajuba Park,
Newcastle, 2940

eversonajg@gmail.com

Additional Member Louis Lötter: Cell: 0781004883 Home Address: R69 VRYHEID 3100 louis.lotter4@gmail.com

APPLICATION FOR MEMBERSHIP / RENEWAL OF NEWCASTLE CLIVIA INTEREST GROUP 2019

Mr Mrs Miss																		
Surname: Initials:																		
First Name:																		
ID Number:																		
Spouse/ Partners name:																		
Home Address:																		
Postal Address:																		
Postal Code:																		
Telephone Number (h):	()														
Fax Number:	()														
Cell Number:	0		-				-										_	
Primary Email:																		
admission as a me and to comply with I wish to renew my m See rear for OPTIO Option 1	the runember	les of rship.			•		, pa.	Poor		0							o. O . ou	
•													R190.00 pa					
□ Option 2												K.	R390.00 pa					
□ Option 3 Junior Me	mber											R	R340.00 pa					
Option 4 Exclusive to Piet Retief Members											R	2 50. (00 	pa				
See rear for Bank	k detail	l.																
Herewith my cash (payable payment made by; 1] depo													R					
<u></u>													Date:					



	Option 1	R190.00 pa
	Full membership fees per annum	
	Includes Membership with Newcastle Clivia Interest Group for 2017:	
	✓ Meetings, Interest Group Workshops and outings	
	✓ Annual Clivia Miniata Clivia Show	
	✓ Please provide reason if only for Newcastle	
	□ Already member with KZNCC □ Other	
	Option 2	R390.00 pa
	Full membership fees per annum	1
	Includes Membership with Newcastle Clivia Interest Group:	
	✓ Meetings, Interest Group Workshops and outings	
	✓ Annual Clivia Miniata Clivia Show	
	Includes Membership at KwaZulu Natal Clivia Club	
	✓ One Clivia Society Yearbook,	
	✓ Three Clivia Society Literary Newsletters	
	✓ Meetings, club workshops and outings	
	✓ KZN Clivia Club Newsletters	
	Option 3 Junior Members	R340.00 pa
_	Full membership fees per annum	110 10100 pu
	 Includes Membership with Newcastle Clivia Interest Group: 	
	✓ Meetings, Interest Group Workshops and outings	
	✓ Annual Clivia Miniata Clivia Show	
	> Includes Membership at KwaZulu Natal Clivia Club	
	✓ One Clivia Society Yearbook,	
	✓ Three Clivia Society Litreerly Newsletters	
	✓ Meetings, club workshops and outings	
	✓ KZN Clivia Club Newsletters	
	Option 4	R250.00 pa
	✓— Limited membership fees per annum	•
	✓ Please provide reason	
	subject to approval by Newcastle Clivia Interest Group committee.	
	→ Includes Membership with Newcastle Clivia Interest Group.	
	→ Includes Membership at KwaZulu Natal Clivia Club.	

Please take note:

Back copies of backdated Clivia Society Yearbooks and Newsletters available from Kwa-Zulu Natal Clivia Club Membership Secretary. Contact: Randal Payne Cell: 083 776 2864

Email: randpay@yahoo.co.uk

Banking details

Name: Newcastle Clivia Interest Group

Bank: First National Bank (FNB)

- Includes Membership at Clivia Society.

Branch code: 270324

Acco number: 62680889684

Member gives permission **YES**/ **NO** to distribute information (e.g. address and contact details) to other Clivia Growers and Clivia Enthusiasts.

Please submit your fee or proof of payment TOGETHER with your application form to any of the Newcastle Interest Group Committee members.

Thank you for your support.

Alfred Everson iii CHAIRPERSON