

Manuscript Carsten Marker - WRC 2018

How to grow roses without Plant Protection Products - July 4th, 2018

SLIDE 1: How to grow Roses the Danish Way

I am here today to talk about how to keep roses healthy - without plant protection products.

I call it the Danish Way. The Scandinavian way.

I would like today to try and show you what I believe could be a way forward for all of you who love ROSES and gardening without the use of **fungicides** or Plant Protection Products.

A fungicide is a product which kills the disease pathogens in the rose plant.

Who would not prefer to grow roses with only a minimum of pesticides?

Or without if possible?

In Denmark the market for organic/ecological products in all walks of life has boomed over the last decade.

-Fruit, Milk, Vegetables and Herbs to mention just a few products.

In the beginning it was a trend only for the **FEW** to go organic now it is a MEGA TREND for the **MANY**.

Also, it is seen as unacceptable by many consumers as well as the "official" Denmark to use pesticides at home in your garden. **To protect groundwater etc. To Save the Bees.**

Many good reasons.

If you want to grow roses without plant protection products you need to embrace old and new ideas.

Hence the need for fertilizer product innovation and to find products which combine new materials.

My goal is to offer you a product range which gives you healthy roses.

My presentation and notes can be found on www.grogreen.dk

It will be translated into Danish as soon as possible.

SLIDE 2: The PROBLEM: DISEASE

The disease on roses we see here in Denmark are: **Mildew, Black Spot and Rust**

We all love pretty roses... I do anyway...

There is nothing worse than roses which don't perform as expected.

I think these diseases are pretty universal and seems to be global problem.

Why diseases: Too little water, not enough fertilizer (NPK), Poor soil conditions,

Weather (too warm, too cold)

-----**Climate change does not help either.**

Even with disease resistant rose varieties, good rose hygiene like removing litter, leaves, more air, cleaning pruners - maintaining good levels of nutrition, giving enough water, we can still see problems with disease.

How to solve the problem with rose **disease problems without a PLANT PROTECTION PRODUCT?**

This is the **context** of my presentation.

SLIDE 3: How to keep Roses healthy without Plant Protection products.

Thank you for inviting me to talk about my passion here today:

“How to develop and sell products which can create healthier and stronger roses”

It is very special date for many reasons!!

- Happy 4th of July to all of you from the USA.
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Anyone here today from the STATES???

- My 20th anniversary too today. Thank you, Marianne and congratulation.

In Denmark we only have very few pesticides left available in garden centers for consumers to buy for the control of plant diseases, to prevent insect damage and for weed control.

The withdrawal of many pesticides to control disease and insects from the hobby market makes it difficult to keep roses beautiful and in good shape.

For my company and myself this has given us an opportunity to bring new products into the marketplace.

I strongly believe in organic NPK fertilizers combined with biological fertilizers which will provide input from beneficial microbes and mycorrhizae fungi to the soil and to the plant.

This will create a healthy soil life, strong growth, and much more robust roses than roses grown only with mineral NPK fertilizers. Already going down this route you are halfway there....

DON'T PANIC GO ORGANIC - Nature will take care of it.

SLIDE 4: Background

A few words about myself:

I am Carsten Marker. I am the happy company owner of E. Marker A/S.

Based in Padborg - South Denmark.

I am 55 years old.

I live in Gråsten together with my family which includes two daughters, a cat, a dog and a horse.

I have a Master's degree in Marketing, English and Economics from Odense University.

For 20 years it has been my privilege to sell a wide range of organic based products into golfcourses, stadiums and garden centers.

I enjoy gardening, golf, mountain biking (only hills in Denmark) and to develop and sell new products.

I have to admit I am not a rose expert with a specialist knowledge of roses and rose varieties.

My approach to roses in terms how to keep roses healthy is a more universal approach which can also be applied to a wider range of plants as well.

However, I do believe gardening is a very healthy way to get exercise and time for yourself.

I can just never stop being excited about growing plants in my garden.

SLIDE 5: Our Brands

Our brands for the retail market in Denmark and Sweden are GroGreen and Osmo.

GroGreen is owned by ourselves. Osmo by a Belgian manufacturer of organic fertilizers.

The trend to go organic has allowed us to focus on the following garden areas with organic and biological products for: Roses, Lawns, Rhododendrons, Grow Your Own, Ponds, Evergreen plants and flowers.

For the sports turf markets we use of own brand TourTurf.

SLIDE 6: Company Approach

We are 6 top motivated staff members who cover Denmark, Sweden, Norway and Germany.

However, over the 20 years we have built up a lot of knowledge and expertise in product development, trialwork, research, innovation and practical use of how to grow healthy plants, turf and in this cases roses with only a minimum input from pesticides.

This is the driving force behind the development of our product range.

Our knowledge of the non-chemical approach comes from the fact that the Danish Golfcourses 15-20 years ago, were imposed restrictions on pesticide use.

Instead of relying purely on pesticides to maintain healthy turf alternatives needed to be developed.

We have been part of this industry change. This is now a global trend. We hope to continue to be part of this for our niche markets in our part of the world.

SLIDE 7:

An example of a product we have developed for the turf market as an alternative to pesticides for snow mould control is our fertilizer product TourTurf FDC Autumn + R Factor **back in 2007/2008**.

The product is registered as fertilizer with 9 % (N) Nitrogen 5 % (Fe) Iron, Chitin, Micronutrients and Essential Plant Oils (**clove oil, citronella and teatree oil**).

The key here to success for disease prevention is the unique nutrient combination with the iron and the plant oils which have antiseptic properties **to keep the turf healthy** on a preventative basis.

The use of the product 4 times in Autumn will enable the sports turf manager to prevent damage from snow mould.

This pathogen creates a lot of damage on golf greens and is very expensive to repair once the grass is infected. We can prevent 80-85 % of the problems associated with snowmould with the use of an integrated approach with correct fertilization and cultural practices.

TourTurf® FDC is a preventative concept for golf courses that wish to use a minimum of fungicides.

The FDC product was researched independently in both the UK and in Denmark. It has become a standard product for many of our customers to use in the autumn winter period.

SLIDE 8: Networking important

As part of an ever-ongoing process for both product development and evaluation of products/concepts/ideas we regularly meet up with suppliers, ourselves and other key people **to brainstorm, to plan and to think ahead. OUTSIDE OF THE BOX.....**

Feedback from customers is also a great way to either improve or to develop new concepts and ideas for new products to take to market.

I just want to mention a very important informal meeting in Copenhagen in 2015 for the development of our GroGreen Feed & Shine for Roses concept.

A coffee **and great cakes [LOTS OF CAKES]** meeting started the process where we wanted to take the knowledge from our product for turf ----**TourTurf FDC.**

And bring this into a context for a foliar product for keeping Roses healthy with the use of micro nutrients and plant oils. For the retail market as we **could see a big need** out there.

Somehow, we just came up with a PLAN for the name Feed & Shine.

The **IDEA AND concept** was born right here in Copenhagen.

SLIDE 9: GroGreen Feed & Shine Roses

The outcome of the Coffee and Cake meeting just mentioned in Copenhagen (2015) saw the launch of GroGreen Feed & Shine for Roses at the Danish Garden Center Tradeshow in 2016.

Took a lot of formulation work , lab trial work to get the final version ready for the market.

GroGreen Feed & Shine for roses is:

- A unique blend of micronutrients: Iron, Manganese, zinc, Copper and Magnesium
- Three specific essential plant oils: TeaTree Oil, Citronella Oil and Clove Oil
- The oils protect the leaves against wind and weather...
- Seaweed added for biostimulant effect
- Blended with surfactants FOR complete leaf uptake.
- And for a nice SHINE of the leaves.

All of the ingredients work together in synergy and is designed to promote healthy growth both

---Above and Below Ground.

Our hope with the concept is to help Rose lovers to grow roses with only a minimum of Plant Protection products.

We want of offer a solution which also can be proven with data.

“The use of the product ONCE A WEEK will prevent micronutrient deficiency in the roseplant, it will stimulate healthy root and plant growth and it will help to keep disease like rust, mildew and blackspot to a minimum”

Use the product PREVENTATIVELY.....And be a Rose HAPPY Gardener.

NON HAZARDOUS.

Slide 10: BELOW GROUND:

Use 100 % organic and biological products in combination for healthy growth and to stimulate a rich soil life.

I think this is the way forward for all rose lovers. It will help you at home in your garden to get the best out of your roses.

Much better than relying on mineral NPK products.

To have well-fed plants is the best defense against disease pathogens and insect damage.

Osmo 100 % Organic Rose Feed 6-4-10 + 2 % Magnesium plus 5 % Seaweed –
Approved for organic growing.

Osmo 100 % Organic Plant Activator 3-3-3 with Mycorrhiza and Bacteria –
Approved for organic growing

Use organic fertilizer to feed the soil and the plant at the same time.

Use 4 times a year from Spring to Summer. Use a handful of product pr. plant.

Combine once a year the organic fertilizer with a biological product containing nutrients, mycorrhizae and bacteria to revive the soil and keep the plants happy with the beneficial microorganisms.

This will create a strong healthy root system with a lot power to sustain good plant growth.

Organic products in general will suppress disease pathogens and nematodes in the soil and hence give very ROBUST plants which better can withstand disease pressure.

HOWEVER EVEN WITH THE BEST INTENSIONS TO GO ORGANIC WE FELT SOMETHING EXTRA WAS NEEDED.

Slide 11: ABOVE GROUND:

This where it becomes interesting.

What can we offer to prevent the leaf borne disease typically seen on roses.

Use GroGreen Feed & Shine for Roses every week.

Two versions:

- **READY TO USE 750 ml cost about USD 12**
- **CONCENTRATE 0,5 L cost about USD 30**

You can improve the vigor of your roses by simply spraying the product over the leaves in a 1-100 dilution rate.

Contains micronutrients:

Iron, Manganese, Copper, Magnesium, Zinc - Creates Healthy Growth - Prevents deficiency.

Contains plant oils:

Teatree oil, Citronella oil and Clove oil.

Smells great from the oils and will give the leaves a great shiny and presentable appearance.

Contains surfactants:

to get the nutrients transported into the leaves.

Combine good nutritional products for below and above ground to get away from chemicals to protect your Roses.

USE PREVENTATIVELY to avoid disease problems.

Very Important. Product is registered as a micronutrient fertilizer in Denmark.

SLIDE 12: Documented Results

In order to get some proper data on the concept and to "prove" the thinking behind GroGreen Feed & Shine for Roses we have undertaken quite a large trial in the UK in 2017.

Plants:

4 David Austin varieties; Alba Maxima, Variegata di Bologna, The Fairy, and Kew Gardens

Timings:

Potted in spring, first tested in summer, with this trial conducted 1st Sept to 1st Nov 2017

Targets:

Rose diseases; Black Spot, Powdery Mildew, Downy Mildew and also plant vigour scoring
Product: Foliar applied GroGreen Feed & Shine Roses, containing micronutrients & plant oils

Applications:

3 product application rates of product applied:

1 %, 2 % and 3 % Feed & Shine

Treatments:

6 in total – 3 x product applications, 1 x untreated, 1 x fungicide, 1 x seaweed extract

Numbers:

96 rose plants in total, with 16 plants per treatment; 4 plants of each variety

Layout:

Blocks of 4 plants of 4 varieties in each randomized within treatments (laid out in order)
Assessments: Scoring system 1 – 9 to assess flowering, disease levels, plant vigour and rooting

Analysis:

Owing to trial style, statistical analysis not utilised, instead averaging of assessment scores

SLIDE 13-14-15: Conclusions:

The untreated control treatment showed the poorest performance, demonstrating that some treatment is necessary to achieve higher quality rose plants.

Through the application of both the 1% and 2% Feed & Shine treatments the trial demonstrated benefits to reducing both powdery mildew and blackspot

Strong Rooting in treated vs. untreated plants

There were also additional benefits to plant vigor resulting from applications of 1 % and 2 % Feed & Shine

Fungicide treatment will maintain plant health, though less effective in promoting plant vigor or rooting.

Seaweed extract applications enhances plant vigor, but also appears to contribute to powdery mildew.

In this trial the GroGreen Feed & Shine Roses product showed the required benefits to rose plant health and vigor to be of benefit to all rose growers and both amateur and professional.

Additional Information:

A further trial with Feed & Shine will be conducted in 2018.

SLIDE 16: Thank You

I would like to thank you for inviting me here today.

A very big thank you for taking the time to LISTEN to my presentation.

Thank you to the organizers of WRC 2018. **Thank you, INGER.**

You have done a fantastic job.

My presentation and notes can be found on www.grogreen.dk

See you tonight. Let's party...