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For further information please contact:

Paul Hains paul@hainsroses.com

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This Bulletin may suggest some controls for pests and diseases. This does not mean endorsement of a particular company's product. The suggestions are a intended as a guide only and the choice or controls is yours. The information is gained from sources we deem reliable. However, we cannot guarantee its accuracy, and interested persons should rely on their own enquiries.

Inside

Watering and Mulching

Rose of the Month — Elle

Rose Show Tips For Beginners

Striped Roses

My Hybridising Progress

Getting Your Soil Right

Patsy Cunningham, Rhode Island

Most rose growers know that growing great roses requires adequate sun, water, and fertilizer, as well as some basic knowledge of pruning and disease prevention. Growers routinely amend the soil in their planting holes with various organic materials like manure, peat moss and compost. They sometimes forget to consider whether or not their particular soil needs to be further amended to adjust its pH. The pH of a soil tells you whether your soil is acid, neutral (7.0) or alkaline. Roses prefer a very slightly acid soil pH, ideally about 6.5. References vary on the range that roses will tolerate well, running from 5.5 to 7.1. The main reason that 6.5 is a good pH level for roses (and many other garden ornamentals and vegetables), is that most plant nutrients are widely available at this pH. You may want to check out the "Nutrient Availability" chart in the new Consulting Rosarian Manual (available in our library). You can see that Phosphorus, a vital nutrient for root growth, is almost completely unavailable at a pH less than 5.5. The manual also notes that aluminum can reach toxic levels in plants when the pH is below 5.5, a not uncommon situation in our acid New England soils.

Soil Type

It is important to know the type of soil you have in your garden before adding lime. A clay soil needs three times the lime needed in a sandy soil to achieve the same change in pH. Using the simple guide below, you would need to add 375g of lime per square metre to change the pH in your sandy soil from 5.0to 6.5 (1.5 points change)

Sandy soils - Add 250g of lime per sqm to raise the pH one point.

Loam soils - Add 500g of lime per sqm to raise the pH one point.

Clay soils - Add 750g of lime per sqm to raise the pH one point.

Many soils cannot be classified as just sandy or loam soils. Much of Brisbane is "clay-loam", so your quantity of lime should be averaged between the clay and loam numbers. It should also be noted that the more organic material there is in your soil, the more difficult it is to change your pH. A chart on www.which.net indicated that a loam soil high in organic material would require almost 2.5 times as much lime to move the pH 1 point as one low in organic material.

Changing Soil pH

Changing the pH of your garden soil is a gradual process. It takes several months for ground limestone to become effective. Over-liming, while not common in our acid soil, must be avoided as lowering the pH can be difficult. Applying limestone in the fall, or early spring is recommended. Ground limestone is the most readily available and cheapest material for raising pH. Hydrated lime (added at about 75% of the rate of regular lime) works more quickly. The drawback is that it is more caustic and can kill earthworms and burn new transplants. Dolomitic limestone can be used if there is a magnesium deficiency in the soil, but magnesium can easily and cheaply added with Epson salts, so it's not necessary. It also takes longer to break down in the soil. It is the calcium in these lime products that raises the pH. Rain, which is acidic, leaches out or washes away the calcium in soils, leaving it acid. In drier more desert-like climates, the calcium remains in the soil, sometimes making it extremely alkaline. Some other calcium products that can be used are bone meal, crushed shells or marble chips.

Testing Your Soil

You can test your own soil pH by using test strips or a pH meter. Strips can be accurate, but some varieties can be difficult to read. The better ones have 2 or 3 blocks of colour on each strip to help you read them with more accuracy. A pH meter ranges in price from around \$15 to many hundreds. Both with strips and meters, following instructions exactly is the key to good results.

Remember that all of a plants nutrients come to it through its surrounding soil. A loose well drained soil at the proper pH is the key to getting those nutrients to your rose.

Watering and Mulching

Howard E Jones

"water heavy once or twice a week rather than lightly more often" The most important single factor in growing roses, as in growing other plants, is water. If you have good drainage, either natural or man-made, it is unlikely that you will give them too much water.

Depending upon your soil, rose bushes need at least one inch per week, and two inches would probably be better. I have watered two inches one day and had a cloudburst the next day, which dropped an additional four inches of rain, and the bushes seemed to thrive on it.

Water, water, water, but water heavy once or twice a week rather than lightly more often. You need to get the water deep in the root zone in order to encourage deep rather than shallow roots.

A mulch two to three inches deep around your rose bushes will conserve water, keep the soil from crusting over, prevent run-off and keep the root zone cooler in hot weather and warmer in cold weather. In addition, it will enhance the appearance of your beds and roses.

I prefer pine bark mulch, but many other materials are suitable. It is a personal and economic choice, and pine straw, cedar bark, hardwood chips and peanut hulls also work well as mulch.

Rose of the Month - Elle

Name: Elle (MEIbderos)ffIntroduced: 1999 FrancevHybridizer: MeillanddType: Hybrid TeaTParentage: Purple Splendour x (ChicagoaPeace x Parador)vARS Colour: Pink BlendOBlooms: 50-55 petalsTFragrance: Strong Citrus, Spice Fragrancer

Elle adorned the cover of September edition of "The Queensland Rose." This is a beautiful pink rose with apricot tones in its centre and varies in colour depending on location and conditions.

This rose is always covered in flowers and creates a beautiful scent through the whole garden. We have 5 of them and are taking every one to our new home.

The plant is very disease resistant and has health lush green growth. This one is a 10/10 in the rose world and makes a perfect vase for the house or office. Wait until you get the comments about how wonderful it smells!

Rose Show Tips for Beginners

Ed Bradley, San Antonio, from the Rosette, Houston Rose Society, October 2006



Get some clean buckets or containers to store your roses in. Most exhibitors use 9 litre plastic buckets. Clean them with bleach. Do not use metal. Make room in the refrigerator to hold some roses. Review the Show Schedule (download from www.qld.rose.org.au) and decide which classes you may like to enter; i.e., single specimen, open bloom (HT or Mini or both), etc. Some of the classes are very easy and uncomplicated, which may make them more attractive to the inexperienced exhibitor.

Sharpen your shears. Crushed stems block tiny stem vessels that transport water to the bloom, causing early wilting and tissue decay. Cut stems as long as possible, but not below the origin of the current growth. Keep all of the foliage on the stem, except maybe the last leaf. Cut the blooms in the early morning (8 - 10 a.m.), as

they are more turgid from taking up moisture during the night. Cut stems at an angle to maximize tissue surface exposed to the solution. Remove any foliage that will be below the water level for an extended Place stems into water (or a conditioning solution) at "garden temperature". Do not place in cold water immediately. Use a preservative such as Floralife. available at garden centers or florist shops. Move roses to a cool, dark place for 30 to 60 minutes for the conditioning period. To harden roses, place in a cooler as close to 36 degrees, as possible. Use fresh water every three days.



Striped Roses

Dr Lakshmi Shidharan, India

Striped roses are the Zebras of the rose world. The popularity of striped roses is partly due to their rare occurrence and novelty.

How do striped roses originate? Most of the striped roses owe their origin to spontaneous somatic mutations-changes in the existing genome of somatic or vegetative cell that is destined to become the corolla.



Love In

Floral development is strictly under the control of a number of genes that dictate when and how the different parts of the flower should develop. The color, shape, size, and number of petals are predetermined in the genetic component of the cell. In nature, rarely (mutation frequency in higher organisms is 10 -9) a change or mutation occurs in the ge-Mutation is an exnome. tremely unpredictable event. One can not predict where or when mutation will occur. When mutation disrupts the normal pigment development in flower petals or the pattern of pigmentation, striped rose may be the result. This rare spontaneous mutation is popularly known as 'sport.'

Propagation:

Can such somatic mutation be transmitted to offspring? The chances of sexual transmission of mutant trait in the parent carrying the original mutation are very little, unless the germinal tissue (reproductive tissue) is involved. However, initially we can vegetatively propagate the sport by stem cuttings carrying the mutated form of the flower. In this cuttingpropagated plant, the gamete will be either normal or mutant depending on which cell line forms the germinal tissue. A striped rose may, therefore, serve as one of the parents for further hybridization.

Hybridization:

Naturally existing striped rose, a sport, or an induced mutant, all owe their stripes to their genes. As such, a striped rose can most certainly be used as a seed or pollen parent in hy-However, Gabridization. metic sterility is one of the problems in any kind of hybridization. We have to check the ability of the pollen parent to produce viable male gametes and the ability of the seed parent to produce viable eggs before launching on hybridization. An ordinary Rosarian may not have the knowledge or the technique to test this. However anyone can check the ability of the parent to produce seeds and seed viability. Close observation in open pollination will give you some information regarding the seed setting ability. Blindly making crosses between two roses is laborious, sheer waste of time, energy, and money. Even when you have all the sophisticated techniques and knowledge at your disposal, hybridization is still a hit or a miss process. Perseverance is the key to success in hybridization.



The striped Rose 'Scentimental' (above) is the

product of cross between Play Boy (single petal orange blend Floribunda) and the striped rose 'Peppermint Twist.' Most of the miniature striped roses (Stars 'n' Stripes, Pin Stripe, and Roller Coaster) have Ferdinand Pichard as one of the parents. I do not seem to remember the parentage of the lovely striped Floribunda, Purple Tiger.



Abracadabra

Genetic Engineering:

As someone tinkering with genes, I do believe that it is possible to produce striped roses using sophisticated molecular biology techniques. Identification and isolation of the mutant gene for stripes, use of the right plasmid or plant virus vector for cloning the gene, introduction of the cloned gene into the plant genome are some of the crucial steps in this process. Details regarding the exact manipulation of gene are beyond the scope of this article.

Striped roses will continue to hold our attention, not because they are beautiful and exotic, but because, rose growers are like kids looking for a new toy to play with.



Maurice Utrillo



Harry Wheatcroft

"When mutation disrupts the normal pigment development in flower petals or the pattern of pigmentation, striped rose may be the result"



Stars 'n' Stripes



Candystripe

My Hybridising Progress Paul Hains, Mt Gravatt East, Qld

"I have had to cut off the buds to give the plants a chance of recovering"

My wife Toni says I write too much about the Paul and Toni story. I have had many requests for pictures of the front garden and what we have done with it and enquiries about where we are off to next, so I am continuing with my one page of what we are up to for now.

The Hybridising has ground to a bit of a halt at the moment as my seedlings were off site and neglected by me. As a result I

have had a couple of thousand or so deaths though disease and neglect. I have only had a few flowers as I had to cut off buds to give some of the plants a chance at recovering. They are now back at home and on the gravel out behind the house until our move. I have since transplanted those still surviving into tubes.

The move will set me back a year or so in breeding as I should be starting to make my next crosses in only 4 weeks time and all the roses are in pots.

We have now finally bought a house, having cancelled our land contract due to flood issues on that property. We have bought on the top of a hill in Gumdale with 2 1/2acres of mostly cleared land (see pictures). I have 1/2 an acre of land allocated as Paul's work area down the very back of the block. The house will need some renovating and I am constantly thinking about the garden designs for each area.

We have around 130 rose bushes transplanted into pots along with about 100 cuttings and seedlings to plant. All are doing well on drip watering systems.



Below: Paul's work area (1/2 acre) Above: The New House;





Roses in Pots in Toni's Old Rose Garden awaiting their new home



My seedlings in boxes on the ground



Above: Front Roses in Flower; Below: Roses Removed



Queensland Rose Bulletin



Brísbane Botaníc Gardens, Mt Cootha Rose Show with Rose and Craft Sales





Opened by Colín Campbell Saturday 12 pm



www.gld.rose.org.au