

Tropical Rose Society Meeting

January 13, 2026

Our program will begin shortly.

Thank you for choosing to grow with us.

Mastering Rose Soil & Potting Excellence

A Presentation for the Tropical Rose Society of South Florida

Presented by Adrian Rodriguez
President and Consulting Rosarian
Tropical Rose Society of South Florida



WELCOME

Welcome, Fellow Rosarians!

Good evening, everyone! It's wonderful to see so many passionate rose enthusiasts gathered here tonight. Whether you're growing your first rose or your 300th, understanding soil and proper potting techniques is fundamental to our success as rosarians.

Tonight, we'll explore the foundation of rose cultivation—quite literally—as we discuss soil preparation and potting best practices drawn from American Rose Society resources and leading horticultural experts.

"A rose must remain with the sun and the rain or its lovely promise won't come true." — Unknown

🌱 PART I

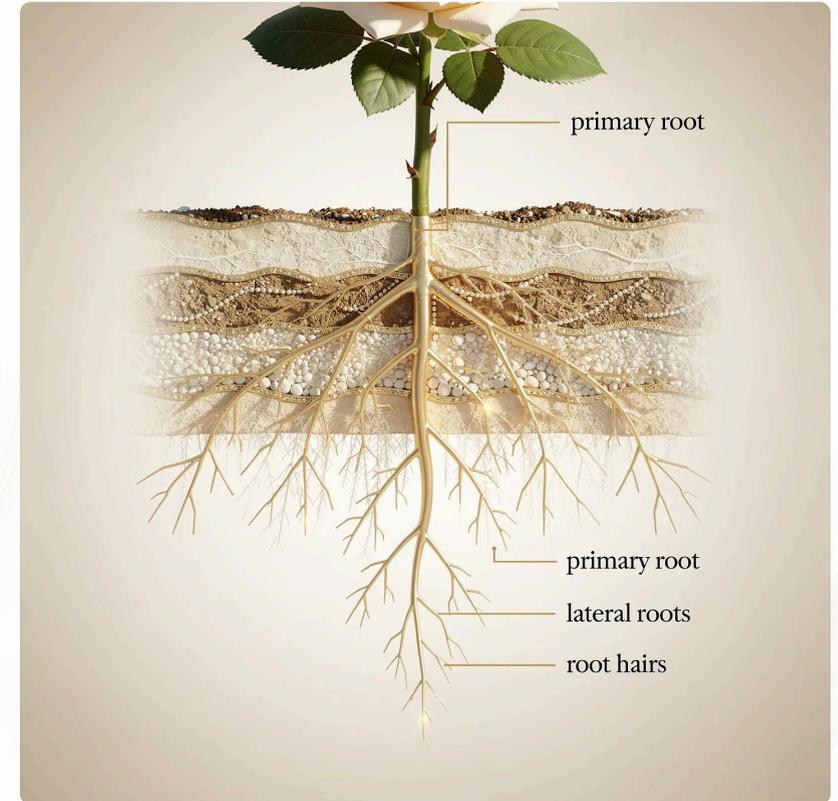
Understanding Rose Soil



The Foundation of Rose Success

According to the American Rose Society and leading rosarians, soil is the single most critical factor in rose cultivation. As Bob Martin, former ARS President, noted in his guidance on planting, the key is understanding what type of soil you're working with before making amendments.

The right soil composition creates the perfect environment for roses to thrive, providing essential drainage, moisture retention, and nutrient availability.



The Ideal Soil Composition

Based on research from ARS Consulting Master Rosarians and university extension services, the optimal soil makeup for roses consists of three equal parts:

One-Third Clay

For nutrient retention and structure

One-Third Coarse Sand

For drainage and air spaces

One-Third Organic Matter

For fertility and microbial activity

This balanced mixture provides roses with the perfect combination of drainage, moisture retention, and nutrient availability.



Understanding Your Native Soil

Audience Quiz #1

If you dig a hole, fill it with water, and the water is still there the next morning, what does this tell you about your soil?

Answer

You have clay soil that needs improved drainage! This simple test reveals critical information about your soil's drainage capacity and helps determine what amendments you'll need.

Soil pH: The Sweet Spot

The American Rose Society recommends maintaining soil pH between **6.0 and 6.5**, with the optimum at 6.5. According to multiple extension services and ARS resources:

- **Too acidic?** Add lime to raise pH
- **Too alkaline?** Add gypsum (hydrated calcium sulfate) to lower pH





Rose Trivia

Did you know that rose fossils dating back 35-40 million years have been discovered at Colorado's Florissant Fossil Beds? Roses have been around far longer than modern humans, who evolved less than 300,000 years ago!

Soil Amendment Strategies



For Clay Soil

South Florida's Challenge



For Sandy Soil

Also Common in Our Region

Different soil types require different amendment strategies. Let's explore both scenarios common in South Florida.

Amending Clay Soil

According to Bob Martin, former ARS President, clay soils hold water and need amendments to improve drainage. The solution:



Add perlite and sand for drainage

These materials create air pockets and improve water flow through the soil



Incorporate coarse organic matter

Helps break up clay particles and improves soil structure



Never use vermiculite in clay soil

It retains too much water and worsens drainage problems



Avoid excessive peat moss

Peat moss holds water, which clay soil already does too well

Amending Sandy Soil

Per ARS recommendations, sandy soils drain too quickly and need different amendments:

Add Vermiculite or Peat Moss

These materials help sandy soil retain moisture longer, preventing rapid drying

Heavy Organic Matter

Compost and decomposed materials improve water and nutrient retention

Clay Content

Adding clay helps bind nutrients and prevents them from washing away

"We can complain because rose bushes have thorns, or rejoice because thorn bushes have roses." — Alphonse Karr



The Simplified Approach: "The Perfect Rose Hole"

In a groundbreaking 2024 American Rose Society article, ARS Consulting Rosarian Satish Prahbu challenged traditional complex soil preparation methods. After observing successful rose cultivation in Denmark—where roses thrived in minimal planting holes along cobblestone streets—he developed a simplified method.

The Simple Formula

01

Dig the hole

Approximately 18" x 18" x 12" deep

03

Mix thoroughly

Combine with the soil removed from the hole

This method makes rose cultivation accessible to beginners while still producing excellent results.

02

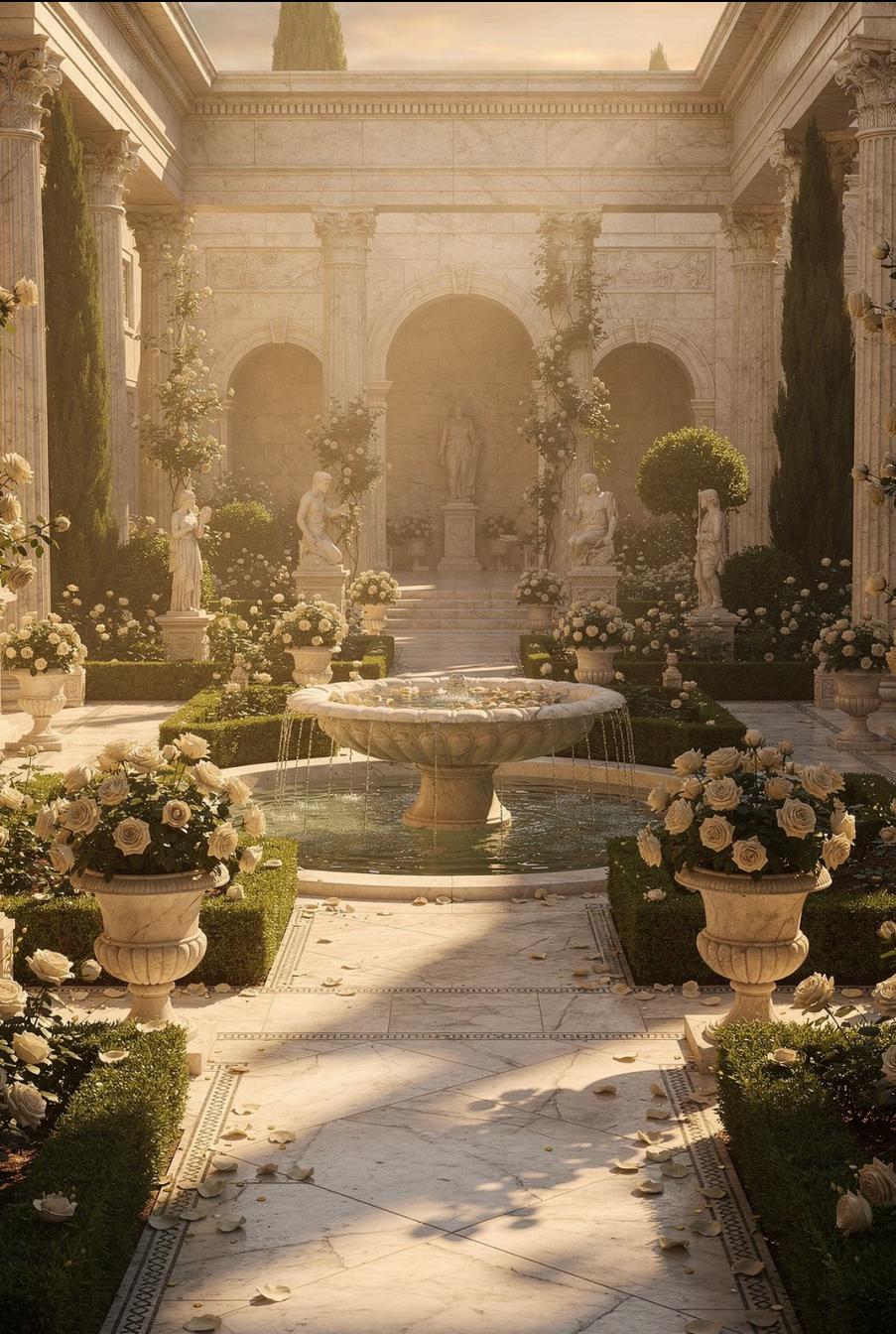
Add potting soil

One cubic foot of quality potting soil (Miracle-Gro, Vigoro, Fertilome, or quality compost)

04

Plant your rose

Works for both bare-root and container roses



Audience Quiz #2

According to Guinness World Records, what is unique about roses as decorative plants?

“ Answer

Roses are the oldest species of plant grown for decorative purposes! Ancient Romans grew them in vast plantations as early as 50 AD.

”

Beneficial Amendments for South Florida

Based on ARS resources and university research, these amendments work particularly well in our tropical climate:

Organic Materials

- Well-aged compost
- Composted tree parts
- Decomposed manure (when available)
- Leaf mold
- Mushroom compost

Mineral Additions

- Triple super phosphate (handful)
- ½ cup bone meal
- Place in mounds at bottom of hole
- Don't mix directly with roots

📌 **Important Note:** Never add fertilizer in direct contact with newly planted roots, according to Denver Rose Society Consulting Rosarians. This is a primary cause of "failure to bud out."

South Florida Soil Challenges & Solutions

South Florida's sandy, often alkaline soils present particular challenges for roses, but there are several effective amendments that work well in our region:



Organic Matter - The Foundation

Work in composted bark, aged manure, or high-quality compost to improve water retention and nutrient content. Sandy soils drain too quickly without sufficient organic matter—add 2-3 inches regularly to established beds.



Sulfur for pH Control

South Florida soils often run neutral to alkaline, but roses prefer slightly acidic (6.0-6.5). Elemental sulfur lowers pH gradually without shocking plants. Apply in spring and let it work over several months. Especially useful if roses show chlorosis (yellowing leaves).



Chelated Micronutrients

Important in higher pH soils where iron and manganese lock up. Foliar applications or soil amendments of chelated iron prevent nutrient deficiencies.



Mycorrhizal Fungi & Beneficial Microorganisms

Improve nutrient uptake and water availability. Help roses access what's already in sandy soil.



Slow-Release Organic Nutrients

Potassium and phosphorus from bone meal, rock phosphate, and fish meal support blooming and root development better than synthetic options in sandy soils prone to leaching.



Deep Mulching

Apply 3-4 inches of aged wood chips to moderate soil temperature in South Florida's heat, conserve moisture, and gradually break down into organic matter.

Ideal Soil Parameters for South Florida Roses

pH: 6.0-6.5 (Optimal Range)

South Florida's native soils tend toward 7.5-8.5, so you'll need regular sulfur applications to maintain the slightly acidic range roses prefer. Even modest acidification improves nutrient availability significantly.

Organic Matter: 3-5% of Total Soil Volume

For sandy South Florida soils, aim toward the higher end—5% or more if possible. This is achievable by incorporating 2-3 inches of quality compost or composted bark annually into the top 6-8 inches.

Drainage: 1-2 Inches Per Hour

South Florida sand naturally drains too fast, which is why the organic matter amendment is critical—it improves water-holding capacity without creating waterlogging. You want moisture retention without soggy roots.

Essential Nutrients

100-150

Nitrogen (N)

ppm during growing season. Roses are heavy feeders, especially in South Florida's extended growing season. Regular fertilization is essential.

25-50

Phosphorus (P)

ppm supports bloom production and root development.

150-250

Potassium (K)

ppm for overall plant vigor and disease resistance.

1K-1.5K

Calcium

ppm and Magnesium: 200-300 ppm balance each other. South Florida soils often have adequate calcium but can be magnesium-deficient.

50-100

Iron (Fe)

ppm is critical. Higher pH soils can show iron deficiency even when it's present, requiring chelated forms.

📌 **Professional Tip:** A soil test through your local UF/IFAS extension office is worthwhile—they can give you precise levels for your specific beds and recommend amendments accordingly.



Visual Indicators of Optimal Soil Conditions

How do you know if your soil amendments are working? Your roses will tell you—but so will the soil itself. Here are the key visual indicators of healthy soil in South Florida:



Soil Structure & Color

Well-amended soil looks darker and richer than raw sand—you should see visible organic matter (decomposed bark, compost) rather than just light tan or white sand. When you squeeze moist soil, it should hold together briefly before crumbling, indicating adequate organic matter. Pure sand won't hold shape at all.



Water Behavior

Water should absorb into the soil within seconds to a minute rather than puddling or running off. After watering, soil should remain moist 2-3 inches deep within an hour, showing it's retaining moisture but not staying waterlogged. Dig down after irrigation—it should feel cool and moist, not dry or soggy.



Root Appearance

When you look at exposed root systems (during pruning or maintenance), healthy roots in good soil are light-colored, fibrous, and numerous. Dark, mushy roots or sparse root systems indicate poor drainage or nutrient issues.



Rose Plant Health

The most telling indicator is the roses themselves. Vigorous new growth with deep green foliage, consistent blooming, and disease resistance all point to good soil. Pale or yellowing leaves despite adequate watering suggest pH or micronutrient problems. Stunted growth or weak canes indicate nutrient deficiency or poor organic matter.



Biological Activity

Good soil teems with life. You should see earthworms when you dig, beneficial insects in the soil, and fungal activity (white threadlike growth in organic matter is normal and healthy). Poor soil looks sterile and lifeless.



Mulch Integration

Quality mulch should be gradually breaking down into the soil rather than sitting on top unchanged. This decomposition is what builds organic matter over time.

Soil Testing Resources in South Florida

Professional soil testing takes the guesswork out of soil management. Here are your local options for getting your rose beds tested:

Primary Recommendation: UF/IFAS Extension Soil Testing Laboratory

What You Get

- Standard Soil Fertility Test: \$10
- Processing: 2-5 working days
- Comprehensive nutrient analysis
- Science-based recommendations

How to Submit

- Get free soil sample bags from your local county extension office
- Download forms at soils.ifas.ufl.edu
- Mail to: 2390 Mowry Road, Gainesville, FL 32611-0740

Local Extension Offices

Miami-Dade County
18710 SW 288th Street, Homestead, FL 33030
Phone: (305) 248-3311
Email: miamidade@ifas.ufl.edu
Hours: Mon-Fri, 8 AM - 5 PM

Broward County
Visit sfyl.ifas.ufl.edu/broward for locations

- ❑ **Special Note for South Florida:** Due to our unique calcareous (limestone-based) soils containing up to 80% calcium carbonate, work with your local extension agent to interpret results. Contact Dr. Yuncong Li at IFAS Tropical REC in Homestead for specialized advice on South Florida's challenging soils.

Alternative Testing Options

Phoslab Environmental

Comprehensive Garden Soil Test: \$96
Includes sample kit with return shipping
Phone: (863) 682-5897
Order at phoslab.com
Best for: Detailed commercial-grade analysis

Haverland AG Innovations

Serves Miami-Dade, Broward, Palm Beach
Specializes in ornamental gardens
Contact for pricing
Best for: Professional show rose operations

UF/IFAS SoilKit Program

Available at local extension offices
Easy-to-understand results
Tailored to lawn and landscape
Best for: First-time soil testers

- ❑ **Pro Tip:** The \$10 UF/IFAS test provides excellent value and science-based recommendations specifically calibrated for Florida soils. Start here, and your local extension agent can help you interpret results for your specific rose beds.





How to Collect a Soil Sample

Getting accurate soil test results starts with proper sample collection. Follow these steps for the most reliable analysis:

01

Choose Your Sampling Sites

Take samples from multiple locations in your rose bed. Avoid areas near buildings, driveways, or where fertilizer has been spilled. For best results, collect 5-8 sub-samples from different spots.

02

Dig to the Right Depth

Remove surface debris and dig 4-6 inches deep for established beds, or 6-8 inches for new planting areas. Use a clean trowel or soil probe to collect samples.

03

Mix Thoroughly

Combine all sub-samples in a clean plastic bucket. Mix well and remove about 1-2 cups of the blended soil for testing. This composite sample represents your entire bed.

04

Dry and Package

Spread soil on clean paper and let air-dry for 24 hours. Don't use heat to speed drying. Place dried soil in the sample bag provided by the extension office.

05

Complete the Forms

Fill out all information on the submission form, including your contact details, sample location, and what you're growing (roses). Be specific about your goals —this helps with recommendations.

06

Submit and Wait

Mail your sample with payment to the lab. Results typically arrive in 2-5 business days via email or mail, with specific recommendations for your South Florida rose beds.

Timing Tip: Test soil in fall or early winter, at least 3-4 months before planting. This gives you time to make amendments and let them integrate into the soil. For established beds, test every 2-3 years to monitor changes.

Microbial Life: The Unseen Partners

According to ARS Consulting Master Rosarian Stan V. Griep, healthy soil microorganisms are essential for rose success.



Break Down Nutrients

Microorganisms convert complex nutrients into forms roses can easily absorb and utilize



Crowd Out Pathogens

Beneficial organisms compete with harmful ones through competitive exclusion



Reproduce Rapidly

They multiply faster than harmful organisms, maintaining soil health



Feed on Disease Agents

Some beneficial microbes actually consume disease-causing organisms

Maintaining healthy microbial populations requires regular organic matter additions.



📄 Rose Trivia

Empress Joséphine, Napoleon's first wife, had one of the world's largest rose collections—over 250 different varieties in her garden! Her passion helped establish many of the rose cultivars we grow today.

"Won't you come into the garden? I would like my roses to see you." —
Richard Brinsley Sheridan

Special Considerations for Our Tropical Climate

In South Florida's unique growing conditions, we face challenges that require special attention:



Drainage is Critical

Our summer rains can waterlog poorly prepared soil



Organic Matter Depletes Quickly

Heat accelerates decomposition



Annual Soil Amendment

Top-dress with compost regularly



Monitor pH Fluctuations

Frequent rain can alter soil chemistry



🏠 PART II

Potting Roses

Why Grow Roses in Containers?

According to multiple ARS Consulting Rosarians, container cultivation offers numerous advantages for South Florida gardeners:



Space Efficiency

Perfect for limited yards and small gardens



Mobility

Move containers for optimal sun exposure throughout the day



Protection

Guards against gophers and root competition from trees



Soil Control

Ideal for areas with poor native soil conditions



Easy Winterization

Simple to protect in cold climates (when needed)



Trial Opportunities

Test new varieties before committing to in-ground planting

Audience Quiz #3

True or False: All roses can be grown successfully in containers.

Answer: TRUE!

While miniatures and floribundas are ideal, even hybrid teas and smaller shrub roses can thrive in appropriately sized containers. Only very large climbers pose significant challenges.

Selecting the Right Container

Size Matters

Based on recommendations from ARS Consulting Rosarians and the Tacoma Rose Society:

Miniature Roses

15-inch pots (minimum)

3-5 gallon capacity

Floribundas & Hybrid Teas

20 inches across at top

14-20 inches deep

15-25 gallon capacity

General Rule: Clay containers should be at least 2-2.5 feet deep and 15-20 inches in diameter for full-sized roses.

Rose Trivia

George Washington was the first rose breeder in the United States! He even named a variety 'Mary Washington' after his mother—a beautiful pale pink rose still popular today.



Container Material Considerations

Plastic Pots (Recommended)

Advantages:

- Most economical
- Longest lasting
- Best water retention
- Lightweight for mobility

Considerations:

- Avoid black or dark colors in hot climates
- They heat root zones excessively
- Ensure multiple drainage holes

Terra Cotta/Clay Pots

Advantages:

- Attractive appearance
- Keep roots cool in summer

Disadvantages:

- Wick moisture rapidly
- Require frequent watering
- Can crack in cold weather
- Heavy and difficult to move

 **Pro Tip from Nashville Rose Society:** Consider using a plastic liner inside decorative clay pots for the best of both worlds.



"Roses do not bloom hurriedly; for beauty, like any masterpiece, takes time to blossom." — Matshona Dhliwayo

Essential Container Features

According to multiple ARS sources, every container must have these critical features:



Drainage Holes Are Mandatory

Minimum one hole, preferably multiple. Drill additional holes if needed. Never use containers without drainage.



Drainage Layer

Add ¾-inch gravel at bottom. Creates drainage plain and prevents root rot.



Wheeled Platforms

Essential for large containers. Facilitates movement for optimal sun. Makes seasonal repositioning easy.



Audience Quiz #4

How many roses are needed to produce just 1 gram of rose oil for perfume?

2,000

Roses Required

That's why rose oil is more expensive than gold or platinum!

The Perfect Potting Mix

Professional Formula (ARS Recommended)

According to multiple Consulting Rosarians, use these proven formulas:



For General Containers

- 75% high-quality potting soil or raised bed mix
- 25% compost
- 1-2 tablespoons soil polymer (like Soil Moist or Broadleaf P4)



Alternative Mix

Santa Clarita Valley Rose Society formula:

- Commercial potting soil
- Nitrohumus
- Super-phosphate
- Soil polymer

 **Important:** Never use clear containers—they allow sunburn of the root system.

Planting Technique for Container Roses

Follow this step-by-step process based on ARS and extension service guidelines:

1

Pre-moisten soil mix

Mix polymer with dry soil. Add water gradually. Achieve uniformly moist consistency.

2

Layer drainage material

Medium-sized bark chips over holes. Cover with 1-2 inches soil mix.

3

Position the rose

Bud union at ground level. Ground level 2 inches below pot rim. Trim roots slightly to encourage growth.

4

Fill and firm

Add soil in layers. Firm gently with hands (never feet). Water thoroughly to settle.

5

Initial care

No fertilizer touching roots initially. Water daily for first 1-2 weeks. Apply granular fertilizer after establishment.

Rose Trivia

The world's oldest living rose bush is over 1,000 years old! It grows on the wall of Hildesheim Cathedral in Germany. The cathedral was bombed during World War II, but the rose survived beneath the rubble and continues to bloom today.

"The rose is a rose from the time it is a seed to the time it dies. Within it, at all times, it contains its whole potential." — Timothy Gallwey



Watering Container Roses

Container roses require significantly more water than in-ground roses, according to all ARS sources:

Daily Requirements

- Water once daily minimum
- Twice on very hot days (morning and evening)
- **Never allow pots to dry out completely**

Water Management

- Check soil moisture daily
- Use "soft shower" wand for gentle watering
- Empty drainage pans within one hour
- Mulch soil surface to reduce evaporation

Polymer Benefits

- Reduces watering frequency
- Maintains consistent moisture
- Use 1 teaspoon per 5-gallon container
- Use 1 tablespoon per 25-gallon barrel

Fertilization for Container Roses

According to multiple ARS Consulting Rosarians, container roses are heavy feeders requiring more nutrition than in-ground roses:

Granular Fertilization

- Apply monthly applications
- Follow package directions carefully
- Keep granules away from stems
- Water in thoroughly

Liquid Fertilization

- 20-20-20 soluble blend
- Foliar application early in day
- Liquid fish fertilizers for root zone
- During active blooming season

📌 **Special Note:** Never fertilize newly planted roses. Wait until significant foliage growth occurs.



Audience Quiz #5

When is the best time to plant roses in containers for South Florida?

Answer: Spring and Fall!

This allows roses to establish before summer heat or potential winter stress arrives. Bare root roses can be planted during our mild "dormant" season.

Repotting and Root Management

According to Nashville Rose Society research:

When to Repot

After 7-10 years in same container, when growth/bloom quality deteriorates, or when roots circle excessively

1

2

Repotting Process

Keep root system as intact as possible. Use completely new soil mix. Can reuse container. Process "reboots" the rose's vigor.

Important Finding: Bare-root roses planted in containers develop better than commercially potted roses that had roots trimmed to fit pots.



Rose Trivia

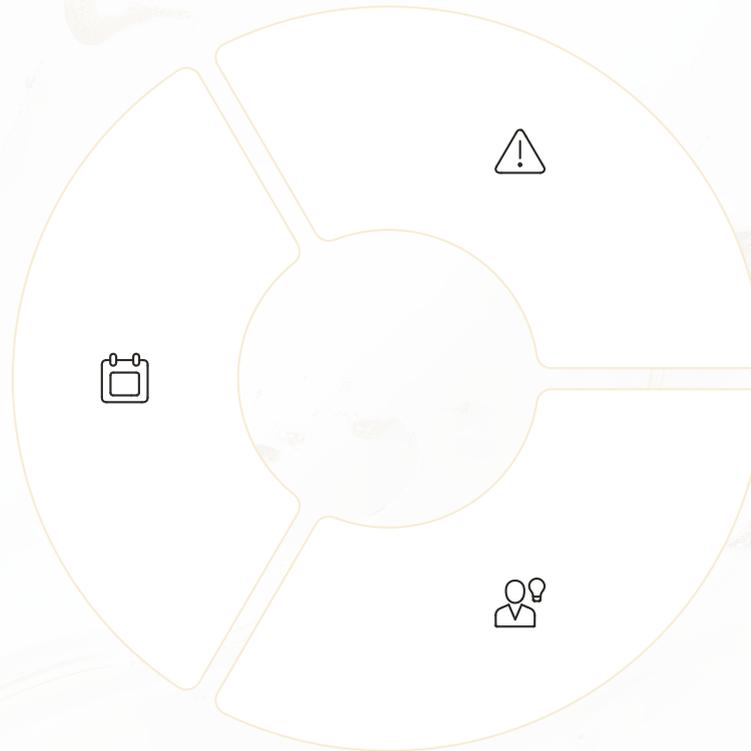
The famous 'Peace' rose was smuggled to the United States in a diplomat's suitcase just before Nazi forces occupied France during World War II. It was introduced on the exact day Berlin fell in 1945 and was presented at the first United Nations meeting as a symbol of hope. Over 100 million plants have been sold, making it the best-selling rose of all time!

"It is the time you have wasted for your rose that makes your rose so important." — Antoine de Saint-Exupéry

Maintaining Container Roses in Tropical Climates

Seasonal Adjustments

Monitor water needs during summer rains. Adjust fertilization based on growth. Protect from strong storms if possible. Refresh top 2-3 inches of soil annually.



Common Problems

Root overheating in black pots. Rapid nutrient depletion. Salt buildup from fertilizers. Moisture stress during dry spells.

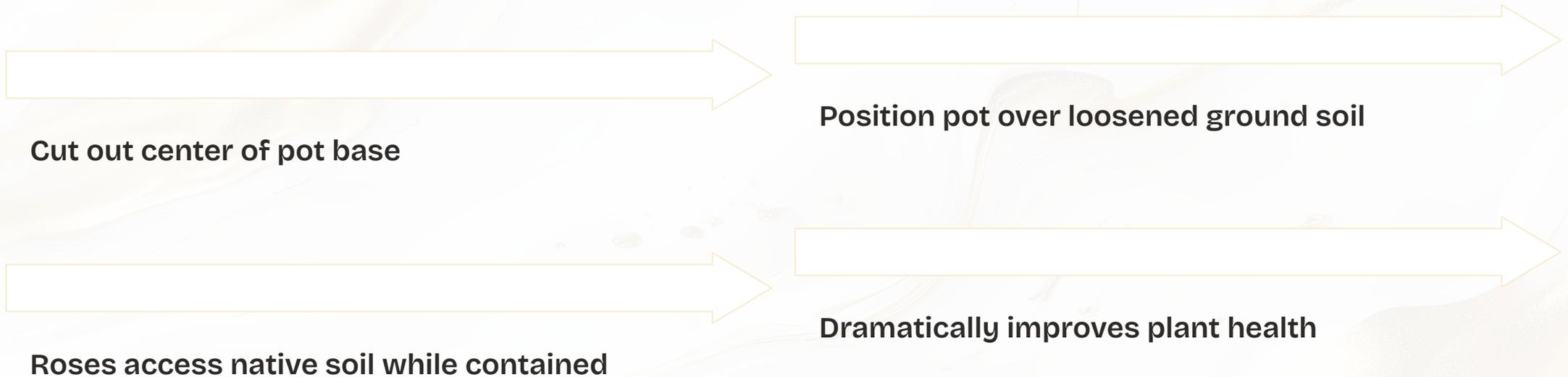
Solutions

Use light-colored pots. Increase organic matter. Flush pots monthly with plain water. Maintain consistent watering schedule.

Advanced Container Techniques

The "Root-Through" Method

Popular in Southern Europe and recommended by Tacoma Rose Society:



Best for permanent placement where you won't need to move the container.

Audience Quiz #6

On what date did President Ronald Reagan declare the rose as the National Flower of the United States?

11/20

November 20, 1986

In a ceremony held in the White House Rose Garden!



Key Takeaways

Soil Preparation

1. Know your native soil through simple drainage testing
2. Aim for the ideal mix: 1/3 clay, 1/3 sand, 1/3 organic matter
3. Maintain pH 6.0-6.5 for optimal nutrient availability
4. Don't overcomplicate – Simplified methods work excellently
5. Feed the soil biology with regular organic matter
6. Adjust for tropics – More drainage, more organic replenishment

Container Cultivation

1. Size matters – Don't underestimate root space needs
2. Drainage is mandatory – No exceptions, ever
3. Soil mix quality trumps expensive containers
4. Water consistently – Drying out is the #1 killer
5. Feed regularly – Container roses are hungry
6. Choose appropriate varieties – Some roses prefer containers

"A single rose can be my garden; a single friend, my world." — Leo Buscaglia

Conclusion: The Art and Science of Rose Growing

As we've explored tonight, successful rose cultivation—whether in containers or in the ground—begins with understanding and properly preparing the growing medium. The guidance from the American Rose Society, university extension services, and experienced Consulting Rosarians all point to fundamental principles:

Quality Preparation

Never wasted effort



Proper Selection

Makes all the difference



Consistent Care

Matters more than perfection



Local Understanding

Crucial for success



Simpler Approaches

Often yield better results

Thank you all for being such dedicated members of the Tropical Rose Society of South Florida. Your passion for roses and commitment to learning ensures that our region continues to produce spectacular blooms despite our unique challenges.

"The sharp thorn often produces delicate roses." — Ovid