

# PROPAGATING HARDWOOD CUTTINGS

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**ARS Master Rosarians**

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# Acknowledgements

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Steve McCulloch

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Owner, Mountain Shadow Nursery

Past President, International Plant Propagator's Society

Consultant – Rose Hybridizers Association

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# U.S. Plant Patent Act

Under the law, the grant of a patent includes the “right to exclude others from asexually reproducing the plant or selling or using the plant so reproduced.” Infringement of the patent includes the propagation or sale of a single patented rose, whether for sale or private use without permission.

# Propagation

- ◆ The multiplication or reproduction of a kind or species

Via

- ◆ Sexual methods
- ◆ Asexual methods

# Sexual Propagation

- ◆ Propagation from seeds
- ◆ Pollen is transferred from the anther to the stigma – this is the hybridization process
- ◆ Fertilization occurs and seeds are produced

# Asexual Reproduction

- ◆ Uses growing plant parts other than the seeds
- ◆ Types of asexual reproduction
  - ◆ Cuttings
  - ◆ Layering
  - ◆ Division or separation
  - ◆ Budding
  - ◆ Grafting
  - ◆ Tissue culture



Photo by Rich Baer

**Seattle Sunrise**



Photo by Corinne Brown

**Hot To Trot**

Lets look at how we could make more of these lovelies!



**Barbara**



**Lynn**



**Judie**

# Cutting - Defined

Any detached plant part which, when grown under favorable conditions, will produce a new plant identical to the parent plant



# Types of Cuttings

- ◆ Root
- ◆ Leaf
- ◆ Stem – segments of stems containing buds are used to produce new plants
  - ◆ Softwood – taken when wood is relatively soft , usually in summer
  - ◆ Hardwood – taken when tissues are mature and woody, typically in fall

# Procedure

- ◆ Gather materials
- ◆ Obtain and label cuttings
- ◆ Prepare rooting media
- ◆ Prepare cuttings
- ◆ Apply rooting hormone
- ◆ Place cuttings in media
- ◆ Protect your cuttings

Let's take a closer look at each step...

# Gather materials

- ◆ Place to plant (can you can leave a year?)
- ◆ Sand
- ◆ If not in ground;
  - ◆ Rooting medium, pots, oasis
- ◆ Rooting hormone
  - ◆ Rootone<sup>®</sup>, Hormodin<sup>®</sup>, etc.
- ◆ Cup, spoon, labels, marking pen/pencil
- ◆ Pruning shears
- ◆ Selected plants to obtain cuttings
- ◆ Water

# Obtain cuttings

- ◆ Take cuttings in late September – November
- ◆ Cut stems pencil sized (length and thickness) for all but minis/minifloras
- ◆ Should have at least 2 sets of leaves
- ◆ Put a label on to identify
- ◆ Plunge in a bucket of water before planting

# One cutting



Cut to pencil length and labeled

# Cuttings Collected



Cuttings identified and in water

# Prepare planting area

- ◆ Select a part of garden relatively free of weeds and that gets some shade
- ◆ Dig a trench 6” deep, keeping one side with a vertical wall
- ◆ Length – allow 6” spacing for cuttings
- ◆ Put a couple inches of sand in the bottom of the trench.

*Note – can be done in pots with oasis as well*

# Getting Trench Ready



6" deep trench with 2" of sand on bottom



# Preparing Growing Container if using pots



- ◆ Check drainage holes
- ◆ Fill partially with soil mix and wet it well
- ◆ Fill container so when you place oasis, the top will be below top of container
- ◆ Insert wet oasis
- ◆ Fill container around oasis with soil mix and water well
- ◆ Repeat for each cutting

# Preparing cuttings

- ◆ Trim by removing lower leaves
- ◆ Leave the upper two sets of leaves
- ◆ Remove prickles (thorns) that will be below the soil level
- ◆ Trim the lower end just below a bud
- ◆ Cut at a slight angle
- ◆ Wound (scrape) lightly below eye

# Preparing cuttings (cont)



Cutting ready to have rooting hormone applied

# Rooting Hormone

- ◆ Rooting hormone, a talc based powder, such as Rootone®<sup>®</sup>, Hormodin®<sup>®</sup>, etc. often helps to promote production of a new root system
- ◆ Spoon out a small amount of powder into a separate container to avoid contamination of the entire supply

# One brand of rooting hormone



Put a small amount in a separate container

# Applying the hormone



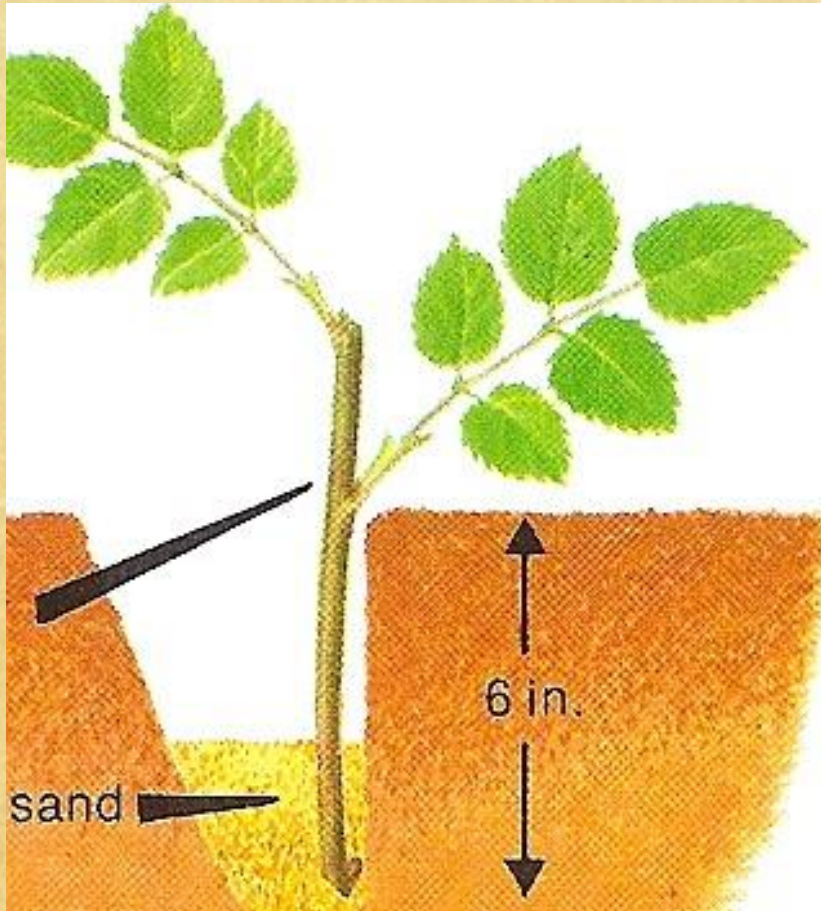
Dip in hormone and tap gently to shake excess –  
just need a light coating

# Plant cuttings in medium



Insert cuttings so bottom set of leaves are just at, or slightly above the soil level

# Side View Drawing



Here is a side view of a cutting placed in the trench



# Back-filling the trench



Gently firm the soil around stems, and water

*Note: Cuttings were planted in mid-Oct*

# When using a container



- ◆ Make hole in oasis with pencil
- ◆ Gently insert cutting down into the oasis, until the bud eye of the bottom set of leaves is just below the surface of the oasis
- ◆ It should go almost to the bottom of the oasis
- ◆ Gently firm the oasis around the stem

# Using an oasis in ground



Follow the same steps as when using a container as in previous slide

# Protecting cuttings



A cover helps retain moisture, and protects in cold weather

# Moisture inside cover



A 50 degree overcast day

# With many cuttings



Use wood blocks – prop up for airflow

# If planted in pots



Use a block of oasis and cover with bottle

# Fall and Winter Care

- ◆ Fall and winter weather is also a factor
- ◆ Be sure and leave the caps off
- ◆ Too much moisture inside and plants will mold!
- ◆ Mulch around protective covers in cold weather
  - ◆ If in pots, move to sheltered area or bury
- ◆ Leave plants alone for a year
- ◆ Then you can dig and transplant



**Mid-February @ 26°**



# Same day in mid-Feb

Four months since planted!



Some nice new growth!



Leaves are still green with new growth in the leaf axil

# The First Day of Spring!



# Mid June

Eight months since planted!



4 of the 5  
cuttings in  
this row  
survived and  
are growing  
and healthy

This is the  
first one to  
bloom

# One year later



Ready for transplanting!

# Requirements for success

- ♦ Be Patient! Varies by variety
- ♦ Most will root this way – give it a try!
- ♦ Don't be too hasty next spring when new growth appears
- ♦ Encourage additional shoot formation and branching by removing buds
- ♦ Keep well watered & fertilize normally during growing season
- ♦ Leave them to grow in their temp home
- ♦ Dig and transplant next fall
- ♦ **Lastly – don't be discouraged!**

**Questions?**

**Thank You!**