Growing and Caring for Roses

Ursula Schuch Ph.D.
Plant sciences Department
University of Arizona
Tucson, AZ 85718
Growing and Caring for Roses

• Overview of types of roses
• Cultural practices
  – Selecting and planting
  – Fertilizing and irrigation
  – Pruning
• Trouble shooting
Types of roses:

- Floribundas and Polyanthas
- Grandifloras
- Hybrid Teas
- Shrub roses
- Climbing roses
- Miniature roses

Many cultivars in each type category
Floribundas and Polyanthas
Many blooms per stem, shrub rose

Grandifloras
Cross between hybrid tea and floribunda
Masses of large flowers.

Hybrid tea
Most popular, long stem with single flower
Floribunda  Hybrid tea  Floribunda

Climbing floribunda  Polyantha
**Shrub roses**

Catch all class of cultivars not belonging to old garden roses or modern roses.

**Miniature roses**

Small size, excellent for containers.
Rose selection

- Select a plant that will fit the space size wise and if climbing has support
- Select plants that are adapted to your climate (heat resistance in AZ more important than cold tolerance)
- Select plants that are resistant to diseases and insects
Rose grades

No. 1 – three or more canes pencil thick (5/16 inch)
No. 1½ – two canes pencil thick

5.2 Hybrid tea, tea, grandiflora, rugosa hybrids, hybrid perpetuals, moss, and climbing roses (Minimum standards)
Planting roses

• Select healthy plants, if packaged or bare root plants are dry, immerse in water for a few hours.
• Plant in mid-December through January in Southern and Western Arizona, in March and April in Northern Arizona.
• Containerized plants can be planted year-round.
• Plant in fertile, well-drained soil
• Plant where roses receive sun for 6 hours or more
• Air circulation is important
• Eastern exposure is good for climbing roses
Planting roses

• Spacing (distance in feet)
  Polyanthas 1 - 1.5
  Miniatures 1 - 2
  Shrubs 2 - 4
  Hybrid teas, Old garden, Grandifloras, Tree roses 3 - 5
  Climbers 6 - 10
Planting bare root roses

• Soak entire rose bush in water for 8-24 h
• Dig hole 18-30 inches wide and deep to accommodate root ball
• Add 1 cup sulfur and 1 cup triple superphosphate and mix with soil
• Fill hole with cone shape of 1:1 native soil : forest mulch or 1:1:1 of native soil : compost : sand, perlite or pumice.
• Spread roots over soil cone, bud union should be 2” above soil line, cover with remaining soil and firm.
• Cut canes to a length of 8-10 inches, top buds facing outward
• Apply 4 inches of mulch on soil surface around the plant
• Water every day for one week.
Superphosphate + Sulfur

Canes 8-10 "

graft union

mulch
Transplanting Roses in Containers

- Plant any time of year
- Dig hole as deep and twice as wide as container
- Use same soil preparation as for bare root plants
- Keep root ball intact, straighten root bound roots
Transplanting existing roses

• Best time to transplant healthy roses is during dormancy (Dec. – Mar.)
• Cut canopy one third to one half back
• Move as much of the root ball as possible
Maintaining Roses - Irrigation

- High water users
- Avoid water stress and salt buildup
- Water slowly to 2-3 feet depth
- Irrigation schedule depend on soil characteristics, weather, and microclimate
- Summer: 3-4 times a week (3-4 gal./plant)
- Spring and fall: 2-3 times a week
- Winter: once a week or less
- Container roses: more frequently
Maintaining Roses - Mulching

- Once a year after pruning add organic mulch 4 inches thick to a rose bed
- Mulch adds organic material, attenuates soil temperature, suppresses weeds
- Mulch eliminates the need for cultivating which could damage feeder roots
Maintaining Roses - Fertilizing

• Roses need frequent fertilizer applications.
• Apply slow release fertilizer every 6-9 weeks (temp.) in small dosages from Feb – June and Sep - mid Oct. in low desert, Mar – Sep at higher elevations.
• Miniature and container roses require less fertilizer

15-5-3 (3 mo.)  Organic fertilizer  (6-6-4)  (8-4-4)  12-16-12 (8 wks)
Pruning Roses

• **Why pruning?**
  – Winter: stimulate new growth in spring
  – Summer: stimulate more flowers

• **When to prune?**
  – Throughout growing season remove spent flowers
Maintaining roses - Summer pruning

• Prune out dead and diseased wood, weak and crossing canes.
• Moderate pruning involves leaving 5-12 canes about 18-24 inches tall.
• Dead head flowers down to the next leaf with 5 leaflets.
• Learn about how to prune individual types of roses.
Cut canes above a bud slanting away from bud

Remove spent flowers to the newest 5-leaflet leaf
Winter pruning

**When?**
- Prune in late winter before or when buds begin to swell (Dec. – Feb.)

**What?**
- Remove dead wood
- Remove crossing branches rubbing against others
- Remove old, unproductive canes.
• Moderate pruning involves leaving 5-12 canes about 18-24 inches tall.

• Remove one third to no more than one half the length of previous season’s growth.

• Remove suckers below graft union

• Keep center of shrub open

• Learn about how to prune individual types of roses.
Canes not very vigorous

Stub
Hybrid tea and grandiflora

**Hybrid teas** have large flowers, one per stem, and are 2-6 ft. tall. Most popular. **Grandiflora** (hybrid tea x floribunda) have hybrid tea-type flowers, good for mass color.

- Leave 5-8 canes, more on vigorous shrubs.
- Cut back to a height of 18 to 24 in.
- Cut back new canes by one third.
Floribunda

Floribunda (hybrid tea x polyantha) produce flowers in clusters on vigorous, bushy plants. Good for mass color, hedges, informal borders.

• Leave as many strong new canes as plant has produced.
• Cut back previous season’s growth only by one fourth.
• Can be pruned to hedge effect.
Troubleshooting Rose Problems

- Aphids
- Cane borers
- Thrips
- Spider Mites
- Leaf cutter bees
- Powdery mildew
- Crown gall
- Rose mosaic virus
- Salinity
- Nutrient deficiencies
Aphids

- Suck on new growth and buds starting early spring
- Control with forceful spray of water or spray with soapy water, repeat daily to control population if necessary
- Beneficials: lady beetles and green lacewings
Beneficials
Spider mites

- Small, on leaves
- Sometimes webbing
- Hot, dry weather
- Often increase in numbers if a broad spectrum pesticide killed beneficials
- Damage to buds cosmetic
- Strong stream of (soapy) water
Thrips

- Damage on petals
- Thrips in new buds
- Damage mostly cosmetic
Cane borer

- Tunnels into canes soon after winter pruning
- If hole present, cut back until cane is healthy
- Use wood glue to seal wound if desired
Leaf cutter bees

- Circular leaf cuts
- Damage only cosmetic
Powdery mildew

• Spring conditions, cool damp night, daytime 70F, poor air circulation
• Mostly on leaves as small blisters followed by white or gray powdery spots
• Can attack entire plant
• Remedy with good gardening practices, cleanup of old leaves, pruned material, occasional overhead watering. Use sulfur (not >90F)
Crown gall

- Caused by *Agrobacterium tumefaciens*
- Infects through wounds
- Plant gradually declines as gall develops at base of plant
- Remove and destroy infected plants
- Don’t replant roses in this soil
Rose mosaic virus

- Spreads only through infected stock
- Not transmitted through pruners or shovels
- Weakens plant over many years
- No cure
Salinity

- If soil salinity is too high, excess salts cause leaf injury and dieback.
- Remedy by leaching with sufficient irrigation water to push salts below the root zone.
Effect of high salinity on roses (left) and after leaching (below)
Nutrient deficiencies

- Optimum pH for roses is 6.0 - 6.5, SW soils are 8.0 - 8.5, some micronutrients not available
- Iron deficiency
- Nitrogen deficiency – old leaves yellow first, spindly growth, small and few flowers
- Magnesium deficiency – Edges of old leaves turn yellow, apply magnesium sulfate (epsom salt) to rose bushes
References

University of Arizona
Cooperative Extension Publications
(\text{http://cals.arizona.edu/pubs/garden/})

\textbf{Rose Selection and Planting in the Low Desert} (2003) (13 pp.) AZ1304

\textbf{Rose Care in the Low Desert} (2003) (4 pp.) AZ1305

\textbf{Troubleshooting Problems with Roses} (2003) (3 pp.) AZ1306
Favorite cultivars for the low desert
Low maintenance, repeat bloomers

'Mr. Lincoln'
'Saint Patrick'
'Marilyn Monroe'
'Julia Child'
'Peace'
'Fragrant Cloud'
'Double Delight'
'Rainbow Knock Out'
'Sally Holmes'
'Gemini'
Questions?