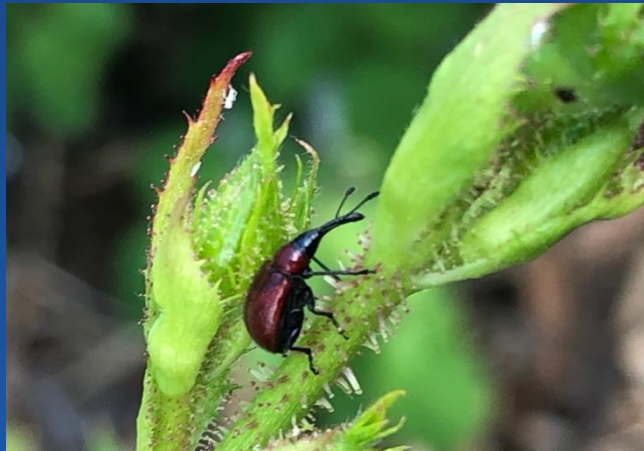


Mid –Year Rose Care IPM to Manage Issues



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Learning Objectives

- Basics Recap: Soil, Deadhead , Water .
Fertilize

IPM ...

- identify... prevent
- Culture ...manage
- Physical Mechanical...reduce
- Biological... get natural help
- Chemical... (last resort)

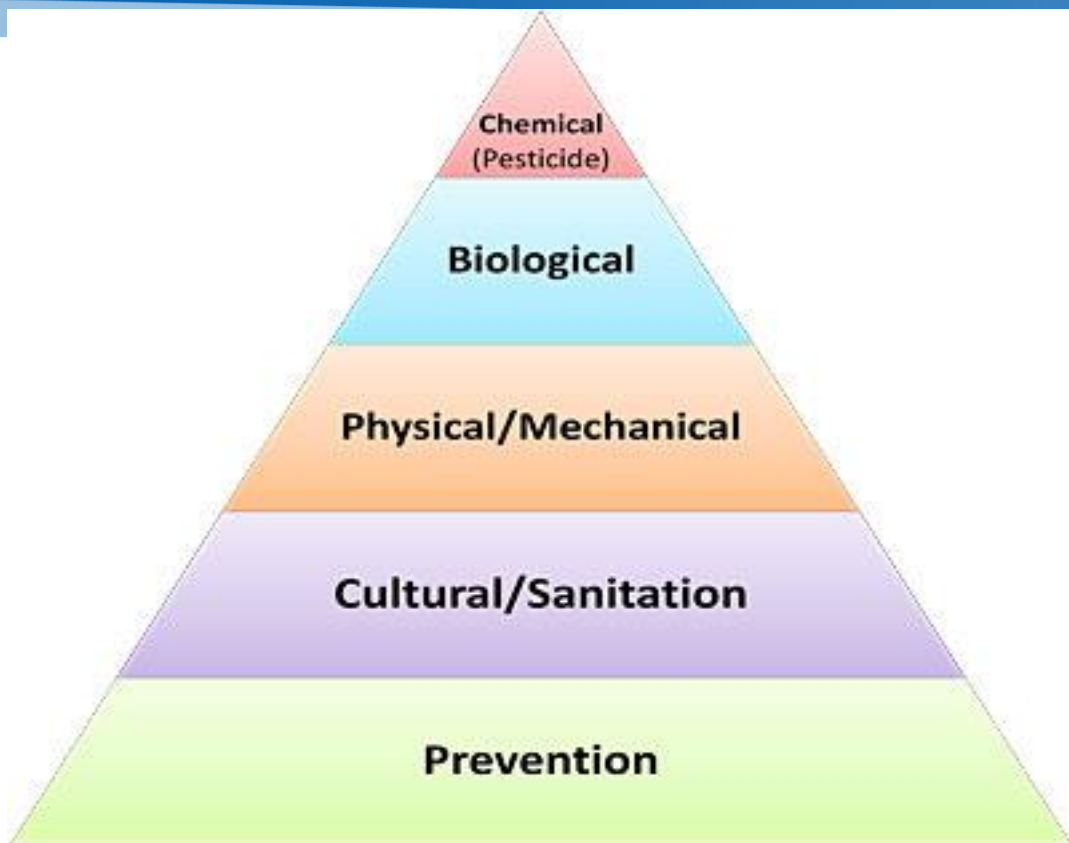


Roses – Summer Care with Less Water, Chemicals and Integrated Pest Management

- Right Plant, Right Place...
 - Buy healthy, disease resistant rose varieties
 - Consider size, fragrance and colors that you like
 - Ask people that know roses what may work in your situation
 - Light/ 5+ hours of sun, air circulation
 - Reduce dust: dust harms some beneficials
 - Great soil – amend with organics
 - Mulch/ don't blow around the roses



The IPM “Pyramid”



Chemical **Last resort**

Biological **Good bugs/birds**

Physical **Pick or wash off/
squish**

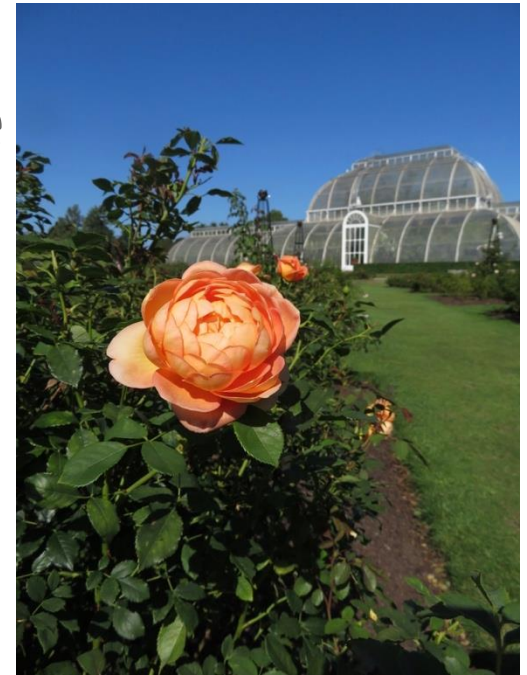
Cultural **Air and light**

Prevention –walk the garden
ID pests/disease, buy
resistant



Walk the Garden- Observe

- Is there fungal disease, especially inside and near the bottom?
- Petal, Leaf or bud damage – can you see a problem?
- Mushrooms ? Honey colored
- Too wet? Too dry? Blind shoots?

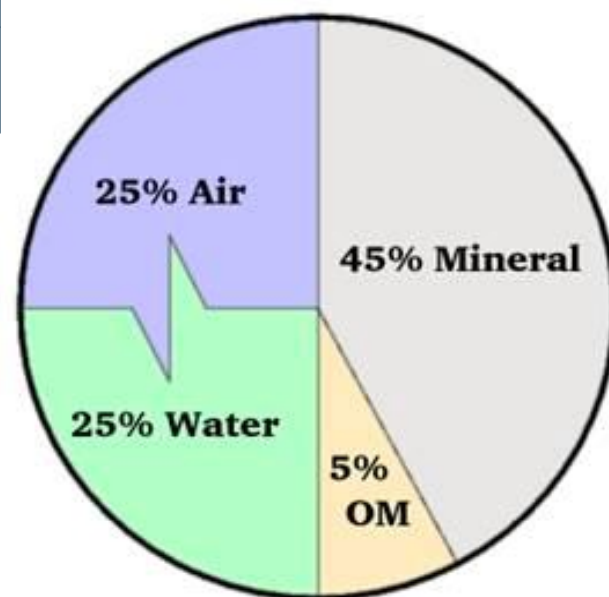
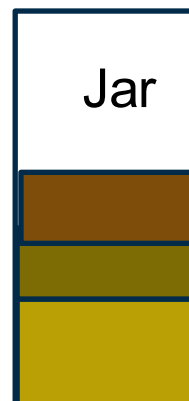


Lady of Shallot
Kew Gardens



Prevention: Great Soil = Strong Plants

- Simple tests - lab tests optional
 - **pH**, 6-7 pH is best
 - **Jar Test** sand settles first, then **silt**, then **clay**
 - **Squeeze test** Clay is like modeling clay, Silt will break easily, Sand crumbles
 - **Smell** test – it should not smell bad
 - **Organic matter** is key



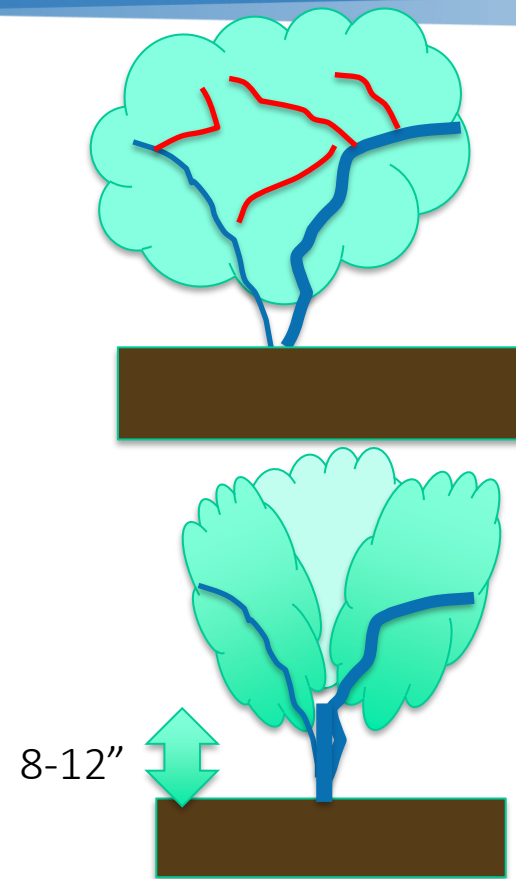
Culture Fertilize Slow release

- Synthetic / chemical fertilizers are often added periodically March – September
- Time-release add the early part of the year. (Urea & Organics are slow)
- Organic fertilizers release slowly as bacteria in soil, moisture and temperature frees the nutrients
 - Alfalfa pellets – cheap at feed stores, have growth stimulant triacontanol
- Good compost adds nutrients and micronutrients, improves soil health



Culture Reduce Pests and Disease by Air and Light

- **If you don't spray**, let air and light into the middle of the plant
- Cut out canes growing inside
- Reduce splashing water/ spores on bottom leaves (remove leaves 8-12" from the ground)
- **Water early** – let leaves dry before night
- Mildew, rust, blackspot are fungi encouraged by poor air circulation
- Opening the center lets birds get insects



MULCH

Why Much?

Improves soil health, structure

Reduces water use

Reduces weeds

Encourages beneficials (Hiding places)

Larger organic wood mulch does not blow away (e.g., Arbor Mulch)

Can be left year to year to improve soil - microbes break it down



How to apply?

Leave 6" clear around base/ bud union of roses

Apply organic fertilizer /compost in dip zone

Apply 2-3+ Inches of mulch over the whole bed if not planted in shallow root/ companion plants



Identify Problems Fungal Diseases 1

- Rose Rust
- Black Spot



Identify Problems Fungal Diseases 2

- Botrytis
- Anthracnose

Note the “bullseye” red spots before browning on botrytis



Note holes in middle of spots of anthracnose

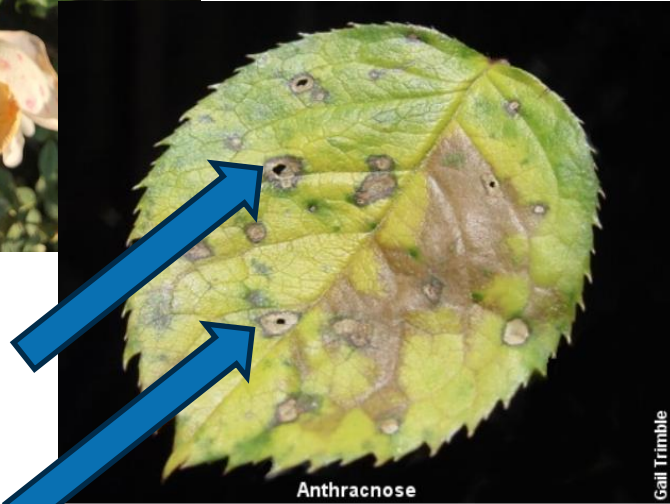


Photo Gail Trimble



ID Pests

Insects and mites

- Aphids, weevils, Sawfly larva (aka rose slugs) caterpillars, spider mites, thrips, kaytidids



Rodents and mammals

- Deer, Gophers, Rabbits



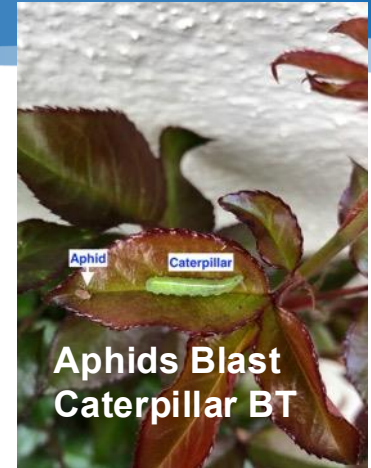
Pests... the Good, the Bad and the Ugly

Good (examples)

- Parasitic Wasps
- Lady Beetle larvae / adults
- Lacewings
- Leatherwings /Soldier Beetles
- Companion plants encourage the beneficials

Bad

- Curculio Rose Weevil holes in buds
- Rose Slug skeletonizes leaf



Managing and Controlling Insect and Mite Pests

Pest	Manage	Last resort (USDA organic)
Aphids	Water Blast , Beneficials	Squish, leave residue
Curculio Weevils	Soapy water bucket , hand pick	Spinosad
Rose Slug	Find under leaf, squish, birds	Spinosad
Spider Mites	More if dry and dusty, Water Blast, Beneficials	Usually not needed
Thrips	ID 1/20" usually on light colors, Beneficials	Neem, Spinosad
Katyidids	Usually not a big issue, birds	Usually not needed
Caterpillars	Like Butterflies? Leave them for birds	BT

Managing and Controlling Rodents , Mammals

Pest	Manage	Last resort
Gophers	Find , ID they are not moles	Cinch Traps, Sulfur “bombs”
Rabbits	Repellents ??? Enclosures	Trap with Havahart , relocate
Deer	Most repellants have little impact	High fences or 6’apart



Photos UC IPM



Biological... Attracting “Good Bugs” with Companion plants

Course mulch, groundcover, small-flowered , plant diversity, sequential flowering, native plants

Plant Families

- **Carrot** (Aplaceae) – Carrot, Coriander, Dill, Fennel, Queen Anne’s lace
- **Aster** (Asteraceae) – Blanket Flower, Coreopsis, Cosmos, Goldenrod,
- **Marigold** (Daisy)– Sunflower, Yarrow
- **Bean** (Fabaceae) – Alfalfa, Fava, Sweet Clover
- **Mustard** (Brassicaceae) – Alyssum, Mustards, Lantana
- **Other** – Buckwheat, Cinquefoil, Milkweed



LAST RESORT CHEMICAL If You Must Spray Use Organics With Low Impact

- **READ and FOLLOW the label!** Protect yourself and wash up afterwards
- **Spray very early** on a day that is dry, not windy and will stay dry for 24 hours
- **Water spray** is all you need for aphids, and most mites
- **Avoid spraying bees/beneficials**
- Spray oils, spreaders and soaps on a day not exceeding 80F to avoid spray burn
- Spray underside of leaves as well as tops.
- ***Tolerating a few pests is best***



Certified for Organic use

Note Bicarb Old Fashioned Fungicide is not available any longer
Main Ingredient Potassium Bicarbonate

See UC research



Summary

- Identify the issues and observe
 - Pick resistant cultivars Improve culture, sanitation (feed, water, mulch)
- Use, mechanical biological, organic nontoxic methods
- Chemicals are last resort or not at all



More Rose Information

UC IPM search for “UC IPM Roses” or use links

<https://ipm.ucanr.edu/home-and-landscape/roses-diseases-and-abiotic-disorders/#gsc.tab=0>

<https://ipm.ucanr.edu/home-and-landscape/roses-insects-and-mites/#gsc.tab=0>

Lyngso (<https://www.lyngsogarden.com/>) search rose as well as related info on soils etc

Peninsula Rose Society

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Photos by Stu Dalton unless otherwise noted



Questions

For copies write to studalton@gmail.com

