



This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

Garlic

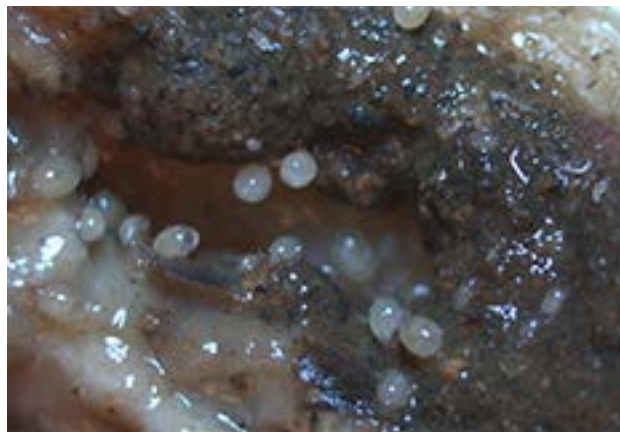
Several types of mites damage garlic bulbs. Bulb mites in the genera *Rhizoglyphus* and *Tyrophogus* have a wide host range, feeding on onions, garlic, ornamental alliums, amaryllis, crocus, freesia, gladiolus, hyacinth, iris, lily, narcissus and tulip, preferring those bulbs with loose fleshy scales. They also feed on a number of vegetable crops. Bulb mites are shiny, creamy white, mites that range in size from 0.02 to 0.04 inches (0.5 to 1 mm) long, and look like tiny pearls with legs. They usually occur in clusters in damaged areas under the root plate of onion bulbs or garlic cloves. They can infest bulbs in storage or in the field. They are most damaging when plant growth is slowed by cold, wet weather, and they are most active when the humidity is high and the temperature is between 60° and 80°F, becoming inactive at temperatures below 50°F and above 90°. When conditions are favorable for reproduction, numbers can rise rapidly. Bulb mite eggs are white, minute and lay singly on the bulbs. They hatch in 2 to 7 days. A female may lay 50 to 100 eggs at the rate of six to eight per day. The entire life cycle may be completed in 2 to 4 weeks. Their feeding activity penetrates the outer layer of bulb tissue and allows fungal and bacterial pathogens to enter the clove. Seriously infested cloves often will not sprout and rot in the field. Stand may be reduced and plants stunted. Control is mainly cultural. Rotate out of garlic and onions for at least 4 years. Garlic and onions should be planted only in fields where crop residues are completely decomposed, as they will persist on crop residues. Cole crops especially may harbor large bulb mite populations. They are particularly fond of cauliflower. Flood irrigation in the winter may lower mite populations. Hot water seed treatment may reduce mite infestation but can reduce germination. Put seed in water heated to 130°F 10-20 minutes, or 140°F for 10-15 minutes. Predator mites of the genus *Stratiolaelaps* may be useful in controlling bulb mites.

Garlic Bulb Mite Damage- *Rhizoglyphus* sp.



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Garlic Bulb Mite Damage- *Rhizoglyphus* sp.



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Bells of Ireland

Bells of Ireland, *Moluccella laevis*, is an old fashioned annual grown for its apple-green calyces. The plant produces long spikes that are used mostly in floral arrangements and as points of interest in a flower bed. In floral arrangements, they are used either fresh or dried. The 2-3 ft. tall plants are a good fit for the back of the border. They are typically sown in the spring as soon as the last average frost date has passed and do fine in average garden soil in sun to part shade. However, they have a tendency to decline during our hot summers. The small white-pink flowers have a pleasant scent. The stalks have small thorns. Occasionally we see Bells of Ireland leaves with brown spots caused by *Cercospora* spp. The spots are round to angular with a narrow darker border. If practical pick off leaves with spots and remove those leaves from the garden. Avoid overhead irrigation.

Homeowners may use Fertilome Broad Spectrum Lawn and Garden Fungicide, (chlorothalonil), or Hi-Yield Vegetable, Flower, Fruit, and Ornamental Fungicide, (chlorothalonil) or Ortho Maxx Garden Disease Control, (chlorothalonil), or Ortho Disease B Gon Garden Fungicide, (chlorothalonil), or Garden Tech Daconil Fungicide, (chlorothalonil), or Bonide Fung-onil Multipurpose Fungicide, (chlorothalonil), or Spectracide Immunox Plus, (myclobutanil & permethrin), or Bonide Rose Rx Systemic Drench, (tebuconazole), or Bayer Advanced Garden-Disease Control for Roses, Flowers, Shrubs, (tebuconazole), or Bayer Advanced Garden-All-in-One Fungicide/Insecticide/Fertilizer, (tebuconazole & imidacloprid), or Fertilome 2-N-1 Systemic Fungicide, (tebuconazole & imidacloprid), or Bonide Infuse Systemic for Turf and Ornamentals, (thiophanate-methyl), or Ortho Rose and Flower Insect and Disease Control, (triticonazole & acetamiprid).

Bells of Ireland- *Moluccella laevis*



Photo, courtesy of Park Seeds

Bells of Ireland Cercospora Leaf Spot- *Cercospora* sp.



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CLINIC NEWS

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Holly

Wax scales, *Ceroplastes* spp. are pests of many plant species, especially Japanese and Chinese hollies, pyracantha, spirea, ivy, hemlock, euonymus, and boxwood, yaupon, jasmine, mulberry, pear, persimmon, plum, and quince, among other plants. The females are tiny brown insects with a heavy coating of a wax-like substance. There are no males. The small purple eggs are laid underneath the adult's waxy coating. Once eggs hatch, the juveniles crawl around until they molt, then anchor themselves with their piercing-sucking mouthparts to one spot where they feed. There is one generation per year. Insecticidal soap, fine horticultural oils, sevin, or a pyrethroid will give adequate control.

Holly Wax Scale- *Ceroplastes* sp.



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