

Pest Facts

- Latin name: *Rhopalosiphum maidis*
- Worldwide pest of corn and related grass crops; present nearly everywhere corn is grown
- Can cause yield loss by feeding and causing stress on the plant but also is an important vector of corn viral diseases such as maize dwarf mosaic in corn and barley yellow virus in wheat
- Usually female; males are very rare

Corn Leaf Aphids



Pest Symptoms / Injury ID

- Feeds primarily in corn whorls
- Removes moisture and nutrients
- Excess sap ingested is secreted as sticky honeydew which may attract ants
- Heavy infestation turns leaves red or yellow from nutrient loss and stress, which may shrivel and die
- Colony may expand to tassel at emergence; tassel may be killed from extensive feeding
- Late season colonies move to the lower stalk and ear husk or other protected areas of the plant



Upper leaves killed by aphids



Heavily infested tassel

Crop Impact

- Favorable conditions for crop injury:
 - Warm temperatures (77°F +)
 - Drought stressed plants
 - Low populations of natural enemies
- Host range is corn, barley, sorghum, wild grasses, cultivated grasses, winter wheat, other grasses
- The winter host of corn leaf aphid is winter barley but winter rye and winter wheat are alternates
- Pollination is NOT affected unless nearly all tassels are covered with aphids
- Aphids interfere with photosynthesis and cause water and nutrient stress, reducing ear size and yield



Corn ears from uninfested (left), and heavily infested (right) plants

Natural Enemies



Lady beetle
• Adult
• Larvae (Aphis Lion)

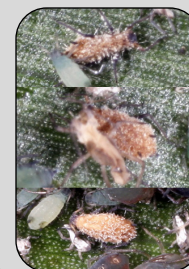


Lacewing
• Green or Brown

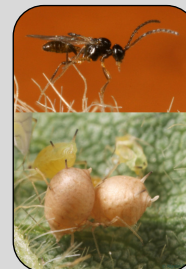


Syrphid Fly

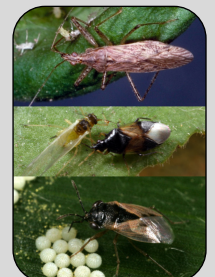
Entomoptera Fungus



Parasitic Wasps



Predatory Bugs
• Damsel Bug
• Minute Pirate Bug
• Big Eyed Bug



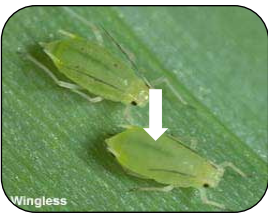
Pest ID

Key Characteristics

- Blue-green color, trimmed in black
- Black head with medium length black cornicles or “tailpipes”
- Short black antennae and black legs



Related/Confused Species



- Green bug: Light green with brighter stripe down the back, cornicles long with black tip, green legs and antennae



- Oat-bird cherry aphid: Dark green, medium length black tipped cornicles, reddish brown saddle at the base of the cornicles. Green or gray legs. More round than corn leaf aphids (CLA). Found in small colonies or mixed with CLA.



- English grain aphid: Bright green, very long dusty cornicles, long dusty gray antennae and green legs with black joints. Usually found in very small colonies of just a few individuals.

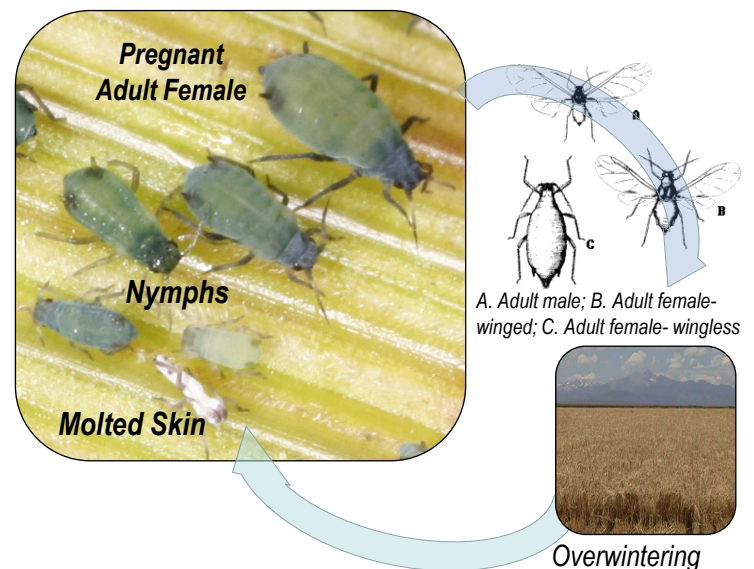
Management Considerations

IPM Practices

- When the crop is under moisture stress populations may increase rapidly
- Aphid populations are highly susceptible to control from natural enemies, especially scout fields which have had early season insecticide applications as it may be conducive to aphid outbreaks
- Scout three and two weeks prior to tasseling. Consider treating if colonies of 30-100 CLA can be found in the whorl, especially if corn is under moisture stress and evidence of natural enemies is low
- Treating high numbers of aphids at tasseling is usually too late to recover costs or damages
- Hybrid Selection – There are no truly resistant hybrids to CLA, nor is there any transgenic approach to their control at present. However, hybrids that exert their tassel better under stress may allow natural enemies access to the aphid and thus result in fewer highly infested plants
- Select pesticides that do not harm beneficials

Life Cycle

- Develop through gradual metamorphosis
 - nymph, adult
- Four nymphal stages, resemble adults
- Reproduce without mating; give birth to live nymphs, males extremely rare
- Wingless forms most common
- Winged forms with black head and thorax are produced when colony becomes stressed or overcrowded
- Dense colonies formed on plants; shed skins are white and shriveled
- 40-50 generations per year
- Overwinters on winter cereals



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