



APPLE TREE PESTS NATURALLY CONTROL THEM


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Abstract. Adult mites are minuscule, with eight legs and only 0.02 inch in length. The appearance of the numerous apple-infesting species varies, with brown mites being dull reddish brown and European red mites being globular, reddish, and have white spines. Green apple aphid is a widespread but minor apple pest that also infects pear. The life cycle begins in April when the aphid hatches from overwintered eggs on the bark, and in the summer, large, dense colonies form along the lengths of these migrants' branches, emitting a strong, unique odor and polluting fruits with honeydew and black ants. The most important details are that spider mites require temperatures of at least 62 degrees Fahrenheit at sundown, lay solitary eggs on leaves, stems, or growing fruit at night, hatch in six to twenty days, and emerge in mid-summer. Management-biological control includes cool, moist temperatures early in the season, lady beetles, minute pirate bugs, predator mites, and cover crops.

Keywords: tree, pests, apple, control, naturally, female, brown mite

Annotatsiya. Voyaga yetgan kanalar juda kichik bo'lib, sakkiz oyoqqa ega va uzunligi atigi 0,02 dyuymni tashkil etadi. Olmaga hujum qiluvchi ko'plab turlarning tashqi ko'rinishi har xil bo'ladi: jigarrang kanalar xira qizg'ish-jigarrang, Yevropa qizil kanasi esa dumaloq, qizg'ish rangda bo'lib, oq tikanlarga ega. Yashil olma bitlari keng tarqalgan, biroq unchalik katta zarar yetkazmaydigan zararkunanda bo'lib, ular nok daraxtlariga ham zarar yetkazadi. Hayot tsikli aprel oyida, qishda po'stloq ustida qoldirilgan tuxumlar ochilganda boshlanadi. Yozda esa ko'chib yuruvchi bu hasharotlarning novdalari bo'ylab zich koloniya hosil bo'ladi, kuchli o'ziga xos hid chiqaradi va mevalarni shira va qora chumolilar bilan ifloslantiradi. Muhim jihatlardan biri shuki, o'rgimchak kanalar kechqurun harorat kamida 62°F (taxminan 16.7°C) bo'lishini talab qiladi, barg, novda yoki o'sib chiqayotgan mevalar ustiga yolg'iz tuxum qo'yadi, tuxumlar 6–20 kunda ochiladi va yoz o'rtalarida yangi avlod paydo bo'ladi. Boshqaruv – biologik kurashga erta



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mavsumda salqin va nam havo, xonqizlar (lady beetles), pirat hasharotlar, yirtqich kanalar va qoplama ekinlar kiradi.

Kalit soʻzlar: daraxt, zararkunandalar, olma, nazorat, tabiiy, urgʻochi, jigarrang kana

Аннотация. Взрослые клещи очень малы — имеют восемь ног и длину всего 0,02 дюйма. Внешний вид различных видов, поражающих яблоню, варьируется: бурые клещи — тусклого красновато-коричневого цвета, тогда как европейские красные клещи — шаровидные, красные, с белыми шипами. Зелёная яблонная тля — широко распространённый, но незначительный вредитель, также поражающий грушу. Жизненный цикл начинается в апреле, когда личинки вылупляются из перезимовавших яиц на коре, а летом формируются большие плотные колонии вдоль ветвей, издающие резкий специфический запах и загрязняющие плоды медвяной росой и чёрными муравьями. Важно отметить, что паутинные клещи активны при температуре не ниже 62°F (16,7°C) на закате, откладывают одиночные яйца на листья, стебли или развивающиеся плоды ночью, вылупляются через 6–20 дней и появляются в середине лета. Биологические методы контроля включают прохладную и влажную погоду в начале сезона, божьих коровок, пиратских клопов, хищных клещей и покровные культуры.

Ключевые слова: дерево, вредители, яблоня, контроль, естественный, самка, бурый клещ

INTRODUCTION

Adult mites are all minuscule, with eight legs and only about 0.02 inch in length. The appearance of the numerous apple-infesting species varies as follows: The brown mite: The adult female is a dull reddish brown with dark orange markings on a flattened body. The front legs are much longer than the other legs and reach forward from the torso.

Adult European red mites are globular, reddish, and have white spines. Immatures resemble adults but are smaller. Red and globular eggs

Adult females are pale yellow to white with two or three dark, rectangular marks on each side of the abdomen. Immatures resemble the two-spotted spider mite; however, they are more yellowish in color. Eggs are transparent and round.

Spider mites cause leaf damage by puncturing cells and sucking the contents out. This causes little yellow-white dots to appear on the upper leaf surface. In severe infestations, the dots merge and the leaf turn yellow or bronze [1].

Female yellow spider mites overwinter under bark or in soil debris as fertilized females. European red mites and brown mites overwinter as eggs in twig bark cracks and immature limbs. When the buds break in the spring, they travel to the young leaves and create several generations from spring until October. Females can lay up to ten eggs every day and over 200 eggs in their lifespan. During the summer, egg-to-adult development can take 7 to 10 days. They flourish in hot, dry climates.





Webbing is produced by large mite colonies. Wind transport is the primary mode of dispersal [2].



Pic. 1 European red mite's egg

Green apple aphid is a widespread but minor apple pest that also infects pear. It is especially vital on young trees. It is brilliant green in color, as the name says, and easily recognized from other apple aphid infestations [3].

The life cycle begins in April when the aphid hatches from overwintered eggs on the bark, although the spring colonies that grow in shoot tips are unimportant.

In the summer, winged forms emerge and move to the budding branches of other apple trees. In the summer, large, dense colonies form along the lengths of these migrants' branches, and it is these that are harmful. The colonies emit a strong, unique odor.

Fruits near and beneath colonies are extensively polluted with honeydew, which is darkened by sooty mould and cast aphid skins. Black ants are commonly present in the colonies [4].

When pest assessments are performed from late June to the end of August, the severity of infestation by green apple aphid should be determined in each orchard. If more than 10% of shoots have green apple aphid infestations producing leaf curling, an insecticide application should be considered.

The codling moth This pest is as damaging to fruit trees as it is widespread it may be found anywhere apples are planted, with the exception of East Asia and Africa. Codling moth is not a new pest; it was brought to America by European settlers more than 200 years ago. Its primary host is apples, although it can also infect other fruits such as pears. Not only does the fruit lose its flavor, but the damaged areas of the apple may contain aflatoxins, which are carcinogens generated by mould [5].



Pic. 2 Codling moth (*Cydia pomonella*) on apple

The codling moth goes through four stages of development: egg, larva, pupa, and adult. The number of generations per year grows as the climate and weather warm. It is not uncommon to have two, three, or even four generations per year.

The developed larvae spend the winter in a thick cocoon under the bark scales and in plant detritus or soil around the base of host trees. The larvae pupate in early spring, and the adult moths emerge around the time the apples begin to bloom.

Adult moths are only active when the temperature rises over 60 degrees Fahrenheit and in the hours before and after sunset. To mate, the moths require temperatures of at least 62 degrees Fahrenheit at sundown. A female lays solitary eggs on leaves, stems, or growing fruit at night, totaling 70 to 100 eggs. The eggs hatch in six to twenty days [6].

The emerging larvae dig deeply into the developing fruit's core to feed on the seeds for three to five weeks before exiting the fruit. They fall from the tree and crawl to a sheltered area, such as plant debris on the ground or bark cracks, where they spin a cocoon for their pupa.

In mid-summer, the next generation of adult moths emerges, and the life cycle begins again. The larvae found in fall-harvested apples are usually from the second or third generation.

Management-biological control. Cool, moist temperatures early in the season keep spider mite populations in check. Lady beetles (*Stethorus* spp.) and minute pirate bugs (*Orius* spp.) provide significant natural control. Predator mites like *Typhlodromus* spp. or *Neoseiulus fallacis* (syn. *Amblyseius fallacis*) are also helpful in controlling spider mite populations and can be purchased. To protect predators, avoid broad-spectrum insecticide spraying.

CONCLUSION

Spider mite infections thrive in dry, dusty environments, so avoid generating these circumstances and stressing the plants. Cover crops also help to alleviate dust



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and mite concerns. Broadleaf weeds such as mallow, bindweed, white clover, and knotweed increase mite populations. Mite numbers may be reduced if these weeds are suppressed through cultivation or grasses. Mites can be removed off the tree by using a forceful stream of water. Trees that have been drought-stressed are more vulnerable. Excessive nitrogen applications promote mite growth.

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