



Proposed Japanese Beetle Quarantine of Front Range Counties in Colorado using Best Management Practices/Systems Approach to Nursery Certification

Japanese Beetle (JB) is an invasive species. Precautions need to be taken to keep this pest from spreading to non-infested areas of the State. Currently the pest is known to infest certain areas within metro Denver, Boulder, Pueblo and various nurseries and sod farms. The majority of the state is considered non-infested.

For commercial nurseries, landscape contractors and garden centers in Colorado JB is analogous with a noxious weed. There is zero tolerance for this pest as it has high economic consequences for nurseries who export stock to western states. For nurseries and garden centers known to have Japanese beetles present, an active management program approved by the Colorado Department of Agriculture is required. You wouldn't sell a noxious weed; Make every effort not to sell plants infested with Japanese beetle.

For homeowners, landscape managers and Colorado agriculture producers this pest is also devastating. Damage done to ornamentals, grasses and fruit crops in Colorado can be significant. Control is highly warranted, with eradication encouraged. Chemical controls are recommended employing integrated solutions.

Over the past 5 years Colorado Department of Agriculture has focused its JB prevention efforts on external quarantine and monitoring nursery stock imported into the state from the mid-west and eastern US sources. While mostly successful, it is becoming apparent that we must work together to expand our focus on potential movement of this insect from the Front Range area to other un-infested areas of the State.

Japanese beetle has a complex life cycle where the larvae develop in the soil throughout the fall and early spring, feeding on roots. Larvae then develop into adults from June – September. Adults feed on host plants, defoliating the plant.

Nurseries, Landscape Contractors and Garden Centers in the Counties of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, Pueblo and Weld (Internal Quarantine Area) must meet the following criteria in order to move nursery stock held in the above named Counties to all other counties in the state of Colorado. Nursery stock held within the 11 above named Counties that remains within the named Counties is exempt from criteria outlined below. Apparent pest freedom is mandated when plants are sold.



Critical Control Point	Best Management Practice
Buy in of infested stock either from out-of-state vendors or in-state-vendors within the internal quarantine areas of Colorado.	<ol style="list-style-type: none"> 1. Abide by the Colorado Japanese Beetle Quarantine. All nursery stock purchased from States located east of Colorado including New Mexico must meet the restrictions of Colorado’s Quarantine. CDA inspectors check records of all imported stock for compliance. 2. Have knowledgeable staff watch trucks being unloaded, regardless of origin. Inspect and segregate plants into holding areas.
Adults fly in/move in from neighboring source	<ol style="list-style-type: none"> 1. Monitor plants and look for JB adults and feeding damage- adults are active Mid-June through Mid-September. 2. Preventively treat (appendix II) susceptible plants with insecticides. It is illegal to move Japanese beetles on plant material to areas of Colorado that do not have this pest. 3. Incorporate a granular insecticide in media.
Prevent egg laying	<ol style="list-style-type: none"> 1. Female beetles will lay eggs in turf and other grasses. Eliminate or treat displays with permanent turf or grass plantings. 2. Cover bare soil with gravel, weed barrier or similar.
Know Species susceptibility (Appendix I)	<ol style="list-style-type: none"> 1. Eliminate “pet” plants or susceptible hosts in the retail ‘landscape’/permanent displays. 2. Resistant or non-host plants do not need to be protected. 3. Move smaller susceptible hosts in to a screened or protected area, away from JB attack
Educate clientele	<ol style="list-style-type: none"> 1. Talk about resistant and non-host plants to clientele. 2. Explain how the nursery is managing this pest and by doing so your nursery is certified to be adequately mitigating the risk of Japanese beetle spread.



Enforcement of Front Range Quarantine and BMPs for Japanese beetle

Compliance agreements – Nurseries within the Internal Quarantine Area will be required to enter into a compliance agreement with CDA outlining the steps they are to take addressing critical control points and best management practices for Japanese beetle.

Monitoring – CDA will be inspecting nurseries within the internal quarantine area and verifying that an active JB management program is ongoing at the facility. This would include documenting how each nursery addresses the critical control points listed above and use of the BMPs for each critical control point.

Records Inspections: Nurseries will keep records of all pesticide applications related to Japanese beetle control as well as records of all nursery stock import. CDA inspectors will check records as per the Colorado Japanese Beetle Quarantine and Nursery Act.

Exemptions: Nurseries, Garden Centers and Landscape Contractors are exempt from the proposed restrictions under the following conditions:

1. Negative Japanese Beetle detection trapping.
2. Plant production in a Japanese Beetle Free greenhouse or screenhouse.
3. Plants with container or root ball sizes of 12" diameter or less.
4. Plants are to remain within the internal quarantine area.
5. Nursery stock certified for export to the states of AZ, CA, ID, MT, NV, NM, OR, UT, WA

Corrective Actions:

It is illegal to move or sell plants within the state or outside the state infested with pests, diseases and noxious weeds.

1. Nursery Act: 35-26-105

No person shall offer for sale: (b) nursery stock infested or infected with insect pests or plant diseases.

2. Pest Control Act: 35-4-108 (1)

It is unlawful for any person, by any means whatsoever, to knowingly transport, into or in Colorado, live pests or host material which may be injurious to agriculture or horticulture in this state, without permission from the commissioner.

3. Colorado Japanese Beetle Quarantine: 8 CCR 1203-21



Penalties for selling or moving infested plants could be as high as \$1,000 per plant. Nurseries, Garden Centers and Landscape Contractors within the 11 County proposed Quarantine Area that are not under a compliance agreement and following an active management program addressing critical control points and best management practices for this pest will not be allowed to sell or move nursery stock to non-infested (non-Quarantined) areas of Colorado.

Appendix I - Know the plants susceptible to Japanese beetle (this is not an exhaustive list)

Susceptible Plants – over 300 species	
Roses – yellow and white flowers are most attractive.	<i>Rosa spp</i>
Grapes	<i>Vitus spp.</i>
Lilac	<i>Syringa spp.</i>
Prunus	<i>Prunus spp.</i>
Linden	<i>Tilia americana</i>
Crab apple/apple	<i>Malus spp.</i>
Hollyhock	<i>Althea spp.</i>
American elm	<i>Ulmus americana</i>
Virginia Creeper	<i>Parthenocissus sp.</i>
Maple	<i>Acer sp.</i>
Raspberry/Blackberry	<i>Rubs sp.</i>

Resistant Plants	
Silver Maple	<i>Acer saccharinum</i>
Red Maple	<i>Acer rubrum</i>
Euonymus	<i>Euonymus spp.</i>
Boxelder	<i>Acer negundo</i>
Boxwood	<i>Buxus sempervirens</i>
Holly	<i>Ilex species</i>



Appendix II - Insecticides labeled to control Japanese beetle grubs and adults. Use for grubs in early summer. Use for adults preventatively and when feeding and damage is observed on ornamentals. Follow pesticide label directions.

Common name	Trade name	Use for control of	class
Bifenthrin	Talstar	Adults	pyrethroid
Carbaryl	Sevin	Grubs, adults	carbamate
Cyfluthrin	Tempo	Adults	pyrethroid
Deltamethrin	DeltaGard	Adults	pyethroid
Permethrin	Astro	Grubs, adults	pyrethroid
Cholorantraniliprole	Acelepryn	Grubs, adults	Anthranilic diamide
Imidacloprid	Merit, Marathon	Grubs	chloronicotinyl