

## Ips Beetle Treatment Options

In the last several years the drought that has persisted in Colorado and the West has created ideal conditions for many bark beetle populations to increase in size. As their numbers expand our ponderosa and lodgepole pine forests become at risk to infestations that may seem unusual but in reality should be expected relative to the severity of the drought and current stand conditions.

Ips beetles, sometimes known as the “engraver beetles,” have a short life cycle of only 8 weeks. Depending on the weather may produce as many as 4 generations per year between April and October. Compare this with the more familiar mountain pine beetle that has only one generation per year. Ips is generally not considered as destructive or aggressive as bark beetles in the genus *Dendroctonus* (mountain pine beetle, spruce beetle, Douglas-fir beetle). Normally Ips beetles limit their attack to trees in decline or are wounded or stressed. However, under widespread conditions which allow improved survival and large population build-ups, Ips beetles are a considerable threat to living trees. Two factors that recently contributed to Ips beetle problems in Colorado include: prolonged drought stress and the creation of freshly-cut wood or slash (which is a preferred breeding site) from forest homeowner efforts to reduce wildfire hazards. However, with the proper slash treatment, you can help control Ips beetles from reaching epidemic levels.

Ips beetle activity begins by mid-April with the emergence of adults that were laid as eggs the previous fall, usually around September/October. The first generation will begin to infest stressed trees; fresh cut green logs/trees and their associated slash. This is different from mountain pine beetle in several ways. Mountain pine beetle *must* have standing (vertical), live, green trees that are in excess of 6 inches in diameter. Ips pini, the Ips beetle that attacks ponderosa pine, can infest any green material that is larger than 1 inch in diameter, slash (a forestry term that refers to coarse and fine woody debris generated during timber harvesting operations, or through wind, snow or other natural forest disturbances), individual branches or portions of the living crown, the whole tree (even those greater than 24 inches in diameter) and freshly split green firewood. Therefore some special recommendations and considerations are in order.

- Expect the drought to continue that drives the conditions that are conducive to bark beetles attacks.
- Ips beetles have an 8-week life cycle with the first generation emerging in mid-April, the second during mid-June, the third during mid-August and perhaps another by mid-September.
- If you cut green material after mid-October when Ips is not active, your material may still be colonized by Ips in mid-April during the first emergence. If this happens, you have until mid-June to treat the material.
- Green material may stay green enough for colonization for up to six months especially if it has been stored in shade at high elevations.
- If you cut green material between April and October when Ips are most active, you will have 8 weeks from the day you cut the material to properly dispose of it.

- Ips beetle infested material may be treated in the following ways:
  - Grinding or chipping of all logs and slash greater than 1 inch
  - Pile and burn the infested material
  - Bury the material greater than 8 inches deep
  - Debark the logs – this may be impractical with small branches and slash
  - Transport the material to a “safe” site that is greater than 1 mile from all susceptible trees (ponderosa pine, lodgepole pine) including landscape trees
  - Insecticides such as permethrin or carbaryl (Sevin) applied prior to adult beetle infestation

For more information regarding management and treatment options for Ips beetle please contact the Colorado State Forest Service Boulder District at 303-823-5774 or visit our website at <http://csfs.colostate.edu/>