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Alcidodes ludificator Faust. : a serious insect pest of nursery and young plantations of *Gmelina arborea* (Roxb.) in northeastern India

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Gmelina arborea (Roxb.) an important member of the family Verbenaceae, is a commercially important fast growing deciduous tree species. The wood of this species is an excellent source for pulp and paper industries and suitable for manufacture of matchboxes splints. In India and particularly in northeast, it is grown extensively, and has substantially been contributing in timber, fodder and industrial wood. However, low productivity, poor bole form and susceptibility to various insect-pests and diseases are some of the reasons for its non-deployment at commercial scale.

Although *G. arborea* suffers multifarious insect injuries by a complex of insect pests including 21 defoliators and 13 shoot borers, Gamari Weevil, *Alcidodes ludificator* Faust. (Coleoptera: Curculionidae) is one of the serious pests of nursery and young plantations of *G. arborea*. *A. ludificator* is a small weevil 5-8 mm long, dark brown in colour and with a few light coloured bands on its elytra and a very diagnostic character-head with a long snout. The insect is found clasping the growing points of main or side branches or petioles of usually younger leaves. The weevil perceives any disturbance in the surrounding it hides quickly behind the thickness of stem or branch on which it is resting. This weevil has a habit of falling down to the ground and feigning dead at the slightest jerk to their roosting site. The pest is prevalent during rainy season, May/June to September/October. Adults gnaw into the growing points, tender branches, and leaf petioles, making a series of pits into them laterally. A range of 6-21 weevils can be observed in a plant, some times they may be found individually also. Weevils feed on the soft pith excavated from these pits and also lay eggs into them, especially on main growing points and branches. Symptoms of early attack show wilted top leaves and

growing point. Some days later damaged leaves and tips dry up and become brown, which can be spotted from a distance. Growth in the case of young trees in the field is severely stunted.

Control measures

Careful surveillance and monitoring of the nursery and plantation for the pest is an important step to keep the pests at bay. The early detection of potential pests helps in devising a successful control strategy. Handpicking of adults and kill by drowning in a container of water toped with a layer of kerosene oil. This practice is very effective and economic as well. In huge plantation production the above method cannot be employed and the surety of getting cent percent rid from the pest is not possible and also uneconomical. Here the use of insecticides is recommended. Endosulfan, a broad-spectrum insecticide is effective against this beetle. Endosulfan of 0.01% concentration with three sprays in weekly intervals will reduce the population to 1 weevil/plant. Synthetic pyrethroids, which have a quick knock down property like cypermethrin and deltamethrin are also very effective against the weevils.