

## **INSECT PESTS AND DISEASES OF *BUCHANANIA LANZAN* AND THEIR MANAGEMENT IN CENTRAL INDIA**

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**ABSTRACT:** *Buchanania lanzan* plants suffer damage by biotic factors like grazing, hacking, repeated fire, indiscriminate harvesting (lopping and cutting), diseases and insect attack. Indiscriminate cutting and lopping branches of trees attract fungal infestation and insect pests. This economically important tree is susceptible to several insect pests/ disease pathogens. Stem borer *Plocaederus obesus* and canker *Hendersonula toruloidea* in natural stands of *B. lanzan*; defoliator *Lamida carbonifera* in plantation areas; wilt caused by *Fusarium oxysporum*, blight by *Colleotrichum gloeosporioides* in nurseries and seed mycoflora *Aspergillus* spp., *Rhizopus nigricans* in storage were taken up in the study for monitoring the status of insect pests and diseases. Incidence of major insect pests and diseases in Madhya Pradesh, Chhattisgarh and Maharashtra were recorded in nurseries, plantations and natural stands. The seasonal incidence of five major insect pests/ diseases were recorded and correlated with temperature, relative humidity and rainfall. The overall observations revealed increase in the incidence with rise in temperature, relative humidity and rainfall during the period. Experiments on treatment with chemical pesticides to control insect pests and diseases were taken up in nurseries, plantations, natural stand and during seed storage. The results revealed that soil drenching with fungicide redomil 0.2% at monthly interval was found to be the most effective against vascular wilt disease (*F. oxysporum*) in nursery. Foliar spray of insecticides endosulfan and monocrotophos 0.05% were found effective against defoliator *L. carbonifera*. Injecting 10 ml solution of dichlorvos (nuvan) 0.5% was found to be most effective against the stem borer, *P. obesus* in natural stands of *B. lanzan*. The study also revealed that spraying of combination of chemicals- endosulfan 0.07% + bavistin 0.2% + alpha NAA 40 ppm were effective. But the endosulfan has now banned and therefore the second alternative treatment i.e. monocrotophos 0.04% + bavistin 0.2% + alpha NAA 40 ppm is recommended for production of better inflorescence/ fruits and protection against sap suckers i.e. thrips, *Rhipiphorothrips* spp. and diseases. The protein, carbohydrate and oil percentages were comparatively less in infected seeds as compared with the healthy seeds. Fungicide, dithane M-45 0.1% is superior control measure and exhibited 4.06% protein content and 47.58% oil content.

**Key words:** *Insect pests, diseases, Buchanania lanzan, seeds, nurseries, plantations, natural stands, management.*

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