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(57) Abstract :

Analysis and prediction of sugarcane's leaf disease using image processing and machine learning approach Abstract Stems and leaf midribs are covered with circular, brown or grayish black scales. Leaves of infected canes become unhealthy pale green and dry at the tips. The Leaves later turn yellow with persistent infection. The loss of plant sap leads to the leaves not opening, which eventually turn yellow and dry. Eventually, the cane will dry out and appear brownish-red when cut open. In severe infestations, infected canes shrivel and the insect invades the stem, eventually infesting the entire cane. Because of the insect's sedentary habit and small size, the insect escapes the attention of the sugarcane grower. Its presence is revealed only after severe damage has occurred. Damage is caused by scale insects. Females are oviparous – meaning young insects are produced by eggs hatching inside the female's body. Once hatched, the mealy bugs (young immature scales) wander in search of a feeding site. They insert needle-like mouthparts, suck plant sap, and do not move again. Infection begins with the formation of nodules and continues to increase as the sugarcane plant grows. Plant sap is absorbed by earthworms. In severe infections, the leaf sheath, leaf blade and midrib are also affected.

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