

STRATEGIC MANAGEMENT OF BANANA *EUMUSAE* LEAF SPOT SEVERITY IN ANDHRA PRADESH, INDIA

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ABSTRACT

Banana is an important traditional fruit crop being grown in India with an annual production of 32 million metric tons. Even though many varieties are in cultivation, Grand Naine is the most cultivated variety in Andhra Pradesh especially in Rayalaseema districts with its higher yields and export potential. Banana exports from the state have recorded an exponential growth during the past couple of years. However, Cavendish group especially Grand Naine is most affected by *Eumusae* (sigatoka) leaf spot when crops shooting stage coincides with the rainy season. A strategic field management schedule was tested on Grand Naine during the rainy season with the combination of chemical sprays and mineral oil at Horticultural Research Station, Kovvur, Andhra Pradesh under All India Coordinated Research Projects (AICRP) on Fruits. Chemicals such as propiconazole, difenoconazole, carbendazim + mancozeb, trifloxystrobin + tebuconazole, alone or in combination with mineral oil (1%) were tested for their effectiveness against *Eumusae* leaf spot during 2018-19; 2019-20 and 2020-21. Of the various chemicals tested, the following 5-7 spray schedule at 25 days interval was found effective and economical in managing the disease. First spray of propiconazole (0.1%) immediately after the onset of the disease, followed by second spray of 0.1% of combination product, carbendazim (12%) and mancozeb (63%). A third spray of 0.14% of combination product, trifloxystrobin (25%) and tebuconazole (50%) followed and a fourth spray of difenoconazole (0.1%). The first, second and third sprays were repeated based on necessity. Pooled data analysis of the studies showed that the above schedule effectively reduced the disease with percent disease index of 12.13 as against 20.99 in untreated control. It recorded highest youngest leaf spotted (YLS), bunch weight (63.80 t/ha) and benefit cost ratio (2.53:1) when compared to control and other treatments. The new technology effectively controls severity of *Eumusae* leaf spot under unfavourable weather conditions and avoids pathogen resistance to fungicides because of repeated use of same chemical.

Keywords: Banana, *Mycosphaerella eumusae*, sigatoka leaf spot, chemical management