

Chemical Control of Sigatoka Leaf Spot (*Mycosphaerella musicola*) of Banana

PARESH PATEL

International Journal of Plant Protection, Vol. 2 No. 1 : 98-100 (April to September, 2009)

Correspondence to :

P.R. PATEL

Fruit Research Station
Navsari Agricultural
University, Gandevi,
NAVSARI
(GUJARAT) INDIA

SUMMARY

A field experiment was conducted during two years to find out the effectiveness of different chemical fungicides against sigatoka leaf spot (*Mycosphaerella musicola*) disease of banana. Among all the treatments tested, four sprays of any one of the fungicides at monthly interval starting after six months of planting gave effective and economical control *i.e.* Carbendazim @ 1.0g/l or Tridemorph @ 0.7 ml/l or Propiconazole @ 1.0 ml/l or Thiophanate methyl @ 1.0g/l.

Banana (*Musa paradisiaca* L) is one of the most fascinating and important fruit crops. It is a large monocotyledonous herb that originated in south East Asia.

After rice, wheat and milk, it is the fourth most valuable food. In export, it ranks fourth among all agricultural commodities and is the most significant of all fruits with world trade totality 2.5 billion annually. Diseases are among the most important limiting factor in banana production world wide (Simmonds, 1966). Among various diseases of banana, leaf spot or yellow sigatoka caused by *Mycosphaerella musicola* is a very serious disease in tropical banana growing areas (Stover, 1980). Sigatoka leaf spot affects not only the banana leaves, but also bunch weight and fruit quality. Leaf spot when severe reduces yield when less than six viable leaves remain at harvest. Leaf spot may also cause early maturity and premature ripening of fruits. Banana from leaf spot infected plants can ripen in the field. These field ripen bunches harbor fruit fly and are unmarketable. Even unripe fruits from affected bunches are unsaleable, because they are likely to ripen in transit to market (Mourichon *et al.*, 1997).

Banana is one of the major fruit crops of south Gujarat. The sigatoka leaf spot is one of the major foliage diseases prevalent in susceptible variety of all Cavendish group including basrai. Hence, to get higher production of banana fruit yield, there is need to evaluate the efficacy of some fungicides for the management of this disease. Therefore, the present trial was conducted to find out effective and economical chemical for managing yellow sigatoka leaf spot disease.

MATERIALS AND METHODS

A field trial was laid out to find out the effect of various chemicals on yellow sigatoka leaf spot of banana cv. BASRAI at Fruit Research Station, Navsari Agricultural University, Gandevi, Gujarat for two seasons. The experiment was conducted in RBD with three replications. There were 11 treatments including control. The plant to plant and row to row spacing were 1.8 x 1.8 m. All the recommended agronomic practices for raising crop were followed. The treatment details were given in Table 1.

Table 1: Treatment details

Sr. No.	Treatments	Doses
1.	Tridemorph	0.7 ml/l
2.	Hexaconazole	2.0 ml/l
3.	Propiconazole	1.0 ml/l
4.	Propineb	2.0 g/l
5.	Tebuconazole	1.0 ml/l
6.	Carbendazim	1.0 g/l
7.	Companion	1.0 g/l
8.	Mancozeb flowable	2.5 ml/l
9.	Chlorothalonil	2.0 g/l
10.	Thiophanate methyl	1.0 g/l
11.	Control	–

These fungicidal treatments were sprayed four times at monthly interval after six month of planting. The effectiveness of fungicides were recorded on the basis of severity of yellow sigatoka leaf spot disease by using Gauhls modification of Stover's severity scoring system (Gauhls, 1989) by calculating severity index, yield and economics.

Key words :

Sigatoka leaf spot,
Mycosphaerella musicola,
Banana.

Accepted :
March, 2009