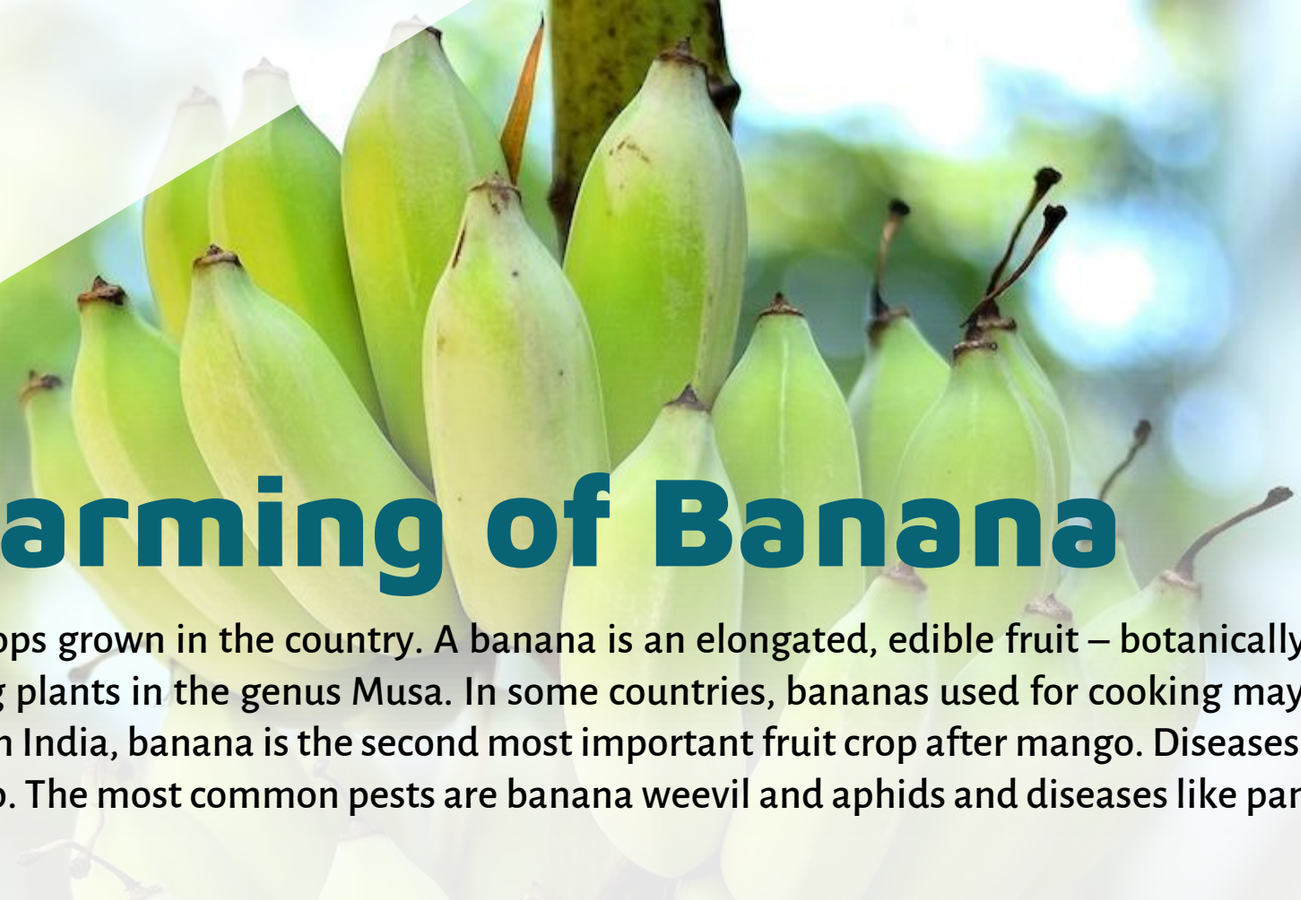
Editor: Mr. Hemang Dave
Dr. Mukesh Patel

AGRILAND
flourish
a thought for biofarming



Organic Farming of Banana

Banana (*Musa paradisiaca*) is one of the leading fruit crops grown in the country. A banana is an elongated, edible fruit – botanically a berry – produced by several kinds of large herbaceous flowering plants in the genus Musa. In some countries, bananas used for cooking may be called "plantains", distinguishing them from dessert bananas. In India, banana is the second most important fruit crop after mango. Diseases and pests cause an average of 30 to 40% yield losses in banana crop. The most common pests are banana weevil and aphids and diseases like panama wilt, bunchy top, sigatoka leaf spot and nematodes.

Adopt the following strategies for the management of various Banana pests & diseases and plant nutrition to get higher yield and residue free farm produces

- Follow strict quarantine and phytosanitary measures.
- A well-drained and fertile field should be selected for planting bananas.
- Do not plant banana crop in one field continuously. Avoid mono-cropping.
- Deep ploughing the soil in summer for destroying soil borne pathogens and nematodes.
- Long-term crop replacement should be done with sugarcane, paddy, groundnut and vegetable crops so that soil borne diseases can be prevented.
- Field should be cleaned by removing the dried leaves and plant debris from the field and destroy it by burning or by dumping of leaves in mulching pit and covering with soil.
- Selection of sucker/tissue culture plants for planting purpose.
- Transplant in rows at optimum depths under proper moisture conditions for better establishment.
- Rogue out the virus-affected plants from field to minimize spread of virus.
- Maintain optimum and healthy crop stand which would be capable of competing with weeds at a critical stage of crop weed competition.
- Tools used in interculturing operations must be sterilized. Disinfection of suckers with formalin along with water (1:3).
- Planting groundnut and banana crops as mixed crops to reduce the severity of the disease.
- Application of Neem cake @ 400 g/plant one at planting and second after 60 to 80 days after sowing reduced the population of *Meloidogyny* spp., *R. similes* and increased the bunch weight.
- Oil cakes of Neem, Mahua, Castor, Karanji, cashew etc. have shown special potential in reducing the nematodes.
- Care should be taken to ensure that the water from the diseased farm does not flow into the healthy farm during monsoon.
- Adopting good cultural practices including removal of dead leaves from plants, refrigeration of fruits and transporting fruits in polyethylene bags.

Major Pests


Banana weevil


Pseudo stem borer


Termites


Aphid

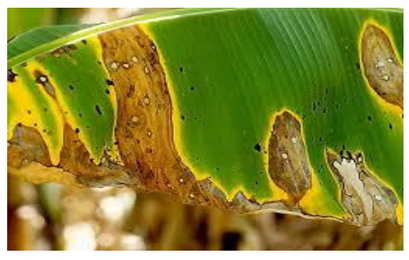

Thrips


Mites

Major Diseases


Panama wilt

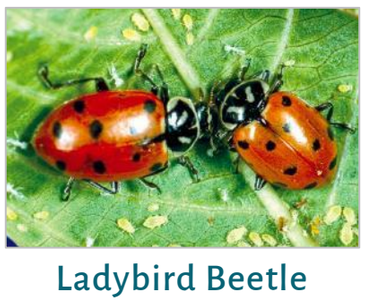

Nematode

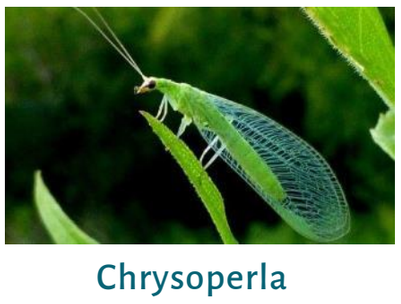

Sigatoka leaf spot


Bunchy top


Black leaf spot

Natural Enemies of Banana Pests


Ladybird Beetle


Chrysoperla


Bracon Wasp


Predatory Mites


Reduviid bug

Recommended Products Per Acre of Land

Monitor
500 gm

Sudozone
500 gm

Mr. Sulphur
2kg/acre

Yorker
250 gm

Biosoft
500 gm

Biofield Combo
3 kgs

Antity
500 ml

Lifeline
500 ml

Mycozone
100 gm

Saffron
1 kg

Biofield
1 ltr

SmartZINC
500 ml

Runoff 100
250 ml

Vanguard
1500 ppm- 1 ltr


Yellow / Blue
Sticky Traps 40 nos


Solar Light Sticky
Trap 1 nos


NoMate Pheromone
Traps 20 nos

Application Method of Agriland Organic Products

Sr. No	Time of applications	Product	Dose	Type of applications	Benefits
1.	At the time of Plantations	Monitor Sudozone Yorker	250 gm /acre 1 kg /acre 250 gm /acre	Application in soil	For control of plant diseases and plant parasitic nematodes
		Biofield combo Mycozone	3 kg /acre 100 gm /acre		For better sprouting of the seeds and the development of powerful root mass
		Mr. Sulfur	2 kg / acre		It helps to reduce Sulphur deficiency and uptake of nitrogen during metabolic process of plant.
2.	45 days after sowing	Biofield liquid	30 ml / 15 liters of water	Use as spray	For overall development and plant growth
		Runoff 100	15 ml / 15 liters of water		For better spread and enhance product efficiency at the time of spray
		Smart Zinc	05 ml/15 liters		Reduce the Zn deficiency and enhance the enzymatic and metabolic activities in plants
		NoMate sticky traps	40 traps/acre	Install 1 foot above the crop canopy	Used for control of sucking pests
		Solar light trap	1 trap/acre		Used for monitoring and controlling the male insects during night as well as daytime
3.	60 days after sowing	Monitor	15 gm /15 liters of water	Use as spray	For the control of panama wilt of banana
		Saffron	50 gm /15 liters of water		It provides sulphur micronutrient and useful in control of plant pathogens
		Runoff 100	5 ml /15 liters of water		For better spread and enhance product efficiency at the time of spray
4.	75 days after sowing	Antity	45 ml/15 liters	Use as spray	Used to control diseases like sigatoka leaf spot, black leaf spot, and Brown leaf spot diseases
		Lifeline	45 ml/15 liters of water		Use for providing micronutrient and overall plant growth
		Runoff 100	5 ml/15 liters of water		For better spread and enhance product efficiency at the time of spray
5.	95 days after sowing	Vanguard 1500 ppm	60 ml/15 liters	Use as spray	Used to control sucking pests
		Smart Zinc	15 ml / 15 liters of water		Use for providing micronutrient and growth of plant
		Runoff 100	5 ml/15 liters of water		For better spread and enhance product efficiency at the time of spray
6.	105 days after sowing	Biofield liquid	30 ml /15 liters of water	Use as spray	For overall development and plant growth
		Biosoft	15 gm/15 liters of water		For control of sucking pests and caterpillars
		Runoff 100	5 ml/15 liters of water		For better spread and enhance product efficiency at the time of spray

Note:

- Monitor insect population development and disease incidence in fields to determine if and when control measures are warranted. After treatment continue monitoring to take decision for scheduling next treatment for controlling the pest and disease and providing nutritional balance to crop.
- While applying organic products care should be taken for proper application of bio-pesticides, in terms of dose, volume, timing, coverage, and application techniques as per label claim.

Surface Technology

ISO 9001:2015

IMO Approved

GeM Approved

DSIR Approved R&D Center

ZED Certification

CRISIL MSE 2 Rated Company

AGRILAND

We are the leading agri-biotechnology company in the nation, pioneering in the area of research and development of environmentally friendly plant protection products.

36, Prince Industry Estate,
Mota-Motipura, 391520 (Samlaya),
Taluka - Savli, District - Vadodara,
Gujarat, India

+91-9687671555 / +91-9687671558

www.agrilandbiotech.com

info@agrilandbiotech.com