

Sword 6G

سورد 6 جي

Sword is a 2 in 1 pesticidal product for the protection from and early control of the two most serious banana pests namely: fusarium wilt and the root borer.

Dual Action for Complete Protection Two-in-one formulation for better application

مبيد ثنائي الفعالية للوقاية و العلاج المبكر لذبول وسوسة الموزيحتوي مركب سورد 6 جي على 2% (20 غراممادة فعالة بروميونازول) من المبيد الفطري بروميونازول مع 4% (40 غرام مادة فعالة دينوتيفوران) من المبيد الحشري دينوتيفوران في الكلف منتج بصيغة محبب للنثر في التربة حول نبتة الموز. معدلات الاستخدام: 10-15 كلف لل 1000 متر مربع ويروى جيدا بعد نثر المنتج

Sword is based on the readily absorbable systemic fungicide Bromuconazole (20 g/kg a.i.) and the nicotinoid systemic insecticide Dinotefuran (40 g/kg a.i.) as ready-for-use granular formulation for soil application.



Fusarium Wilt of Banana (Panama Disease)

Fusarium Wilt of Banana (also known as Panama disease) is caused by *Fusarium oxysporum f. sp. Cubense*. The disease was first reported in Australia in 1876, but did the greatest damage in export plantations in the western tropics before 1960. A new variant, tropical race 4, threatens the trades that are now based on Cavendish cultivars, and other locally important types such as the plantains. Phylogenetic studies indicate that *F. oxysporum f. sp. cubense* had several independent evolutionary origins. Fusarium wilt of banana can be described as a "classic" vascular wilt disease. It invades the vascular tissue (xylem) through the roots causing discoloration and wilting.

Disease Symptoms

Externally, the first obvious signs of disease in most varieties are wilting and a light yellow colouring of the lower leaves, most prominent around the margins. As the disease advances, more of the leaves become yellow and die. A "skirt" of dead leaves often surrounds the pseudo-stem. In the advanced stages of disease, affected plants may have a spiky appearance. Internally, symptoms first become obvious in the xylem (water conducting) vessels of the roots and the rhizome. These turn a reddish-brown to maroon colour as the fungus grows through the tissues. When a cross-section is cut, the discoloration appears in a circular pattern around the centre of the rhizome where the infection concentrates due to the arrangement of the vessels. The infection may travel all the way up to the top of the pseudo-stem. In severe cases it may even enter the leaf petioles and the eduncle (bunch stalk) of bunched plants. However, infection has not been shown to regress into the fruit.

Protection & Treatment

Beside good cultural practices including starting with a clean rhizome or seedling, and preferably resistant, planting in foc free soils and treating soils in nursery and field with chemical protection employing a systemic fungicide is of prime importance.

Bromuconazole is a conazole triazole fungicide proven to interfere with the growth of the mycelium and production of spores.

BROMUCONAZOLE
Fungicidal Activity

The Banana Root Borer (*Cosmopolites sordidus*)

This beetle is considered as one of the most serious insect pests of bananas which has been transported throughout the banana growing regions of the world and known from nearly all banana-growing areas of the world. Corms or rhizomes are used for propagation and eggs and larvae are easily transported therein

The adult weevil is dark brown to grey black, shining, about 11 mm long. It is similar in general appearance to the billbugs (*sphenophorus*), but lacks the depressions on the pronotum. All tibiae are armed with hook-like extensions which enable the beetle to hold tightly to plant tissue.

The larva is typical of the weevil subfamily *calendrinae*, the body is white and the head capsule is dark reddish brown.

The pupa is also typical of the subfamily *calendrinae*, the beak being very irregularly margined with numerous transverse depressions.

The eggs are laid between leaf sheaths and stems as well as around the corm, often in the enlarged cell-like compartments in the tissue. They are usually deposited singly with the newly hatched larva boring into the corm. The complete life cycle is from 30 to 40 days; egg five to seven days; larva 15 to 20 days, pupa six to eight days.

Life cycle: the adult can live for long periods without food and has been recorded to live for over two years. The adults are secretive in habits and more abundant at night. Although some authors have stated they are flightless, they have functional wings and have been observed occasionally in flight. Traps can be made by placing sliced corms or cut sections of stem on the ground and collecting the weevils attracted to them.

Damage

Is done by the extensive tunneling of the larvae in the corm, thus weakening the plant and causing blow-down by even slight winds. The banana root borer attacks rhizomes of banana independently of the head rot organism, and carries out its activities wherever possible on healthy tissue

DINOTEFURAN
Systemic Insecticidal Activity

Composition:

Bromuconazole: 1-[[4-bromo-2-(2,4-dichlorophenyl)tetrahydro-2-furanyl]methyl]-1H-1,2,4-triazole 2% w/w
Dinotefuran: (E)-1-methyl-2-nitro-3-(tetrahydro-3-furyl)guanidine 4% w/w

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Always read directions carefully because pesticide products can be "dangerous" or ineffective if too much or too little is used