

## Brochure

### BIOTRAP<sup>®</sup> MAIZE STALK BORER

Reg No./Reg Nr. L 2982, Act/Wet 36 1947

BIOTRAP<sup>®</sup> is a Registered Trademark of Wefco Marketing cc.

A capsule containing sex attractant to be used in an Omnitrap/Funnel Trap for the monitoring of Maize stalk borer.

#### ACTIVE INGREDIENT

Tetradecenyl acetate                      24 mg/capsule

#### WARNING

KEEP OUT OF REACH OF CHILDREN, ANIMALS AND UNINFORMED PERSONS.

This system is recommended for used with the following insecticides: -

Thiodan MO Reg No L1172, Thioflo Reg No L1183, Thiodan Granular Reg No L2028 Thiodan ULV Reg No L2885, Hostathion EC Reg No L298, Decis Reg No L1741 for the control of Maize stalk borer (*Busseola fusca* (Fuller)).

Wefco Marketing cc bears no responsibility for failures, which may occur when non- recommended chemicals are used in conjunction with this system.

The ingredient used in this bait tablet poses minimum risk when used in domestic, commercial and industrial situations according to the label instruction.

#### STORAGE OF CAPSULES

Capsules stored at room temperature (25°C) will be suitable for use throughout the season during the year of manufacture. If kept in a freezer at -20°C the lifetime of capsules is significantly extended. Carry over capsules from the previous season should be stored in a freezer until the following year. Capsules should not be subjected to abnormal conditions such as high temperatures for even short periods of time.

#### DIRECTIONS FOR USE

Use only as directed

The directions for use hereunder are protected by copyright of Wefco Marketing cc.

#### TRAP ASSEMBLY

The trap is a plastic Omni-Trap (Maré-Trap/Funnel Trap). The capsule is hung on its wire from the ceiling of the trap or placed in the bottom of the plug, which is located in the roof of the trap.  
DO NOT OPEN CAPSULE.

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### AREA COVERED BY TRAPS

A group of 3 permanent maré-traps/funnel traps is sufficient to give an accurate idea of moth flights for a farm falling within an area not larger than 1000 ha which has no large ecological differences from field to field. However, should the area be bisected by ridges, and obvious ecological barriers, each field should be monitored separately and traps placed to cover separate fields as well as both up and down slopes of steep fields.

### HANGING AND PLACEMENT OF TRAPS

Traps should be hung +/- 1,5 m above the ground along freely accessible headlands. Poles, stakes or wire fences are all suitable for trap attachment. The traps should be placed 150 - 200 m apart preferably more towards the middle of a farm if all fields are ecologically similar.

### MAINTENANCE OF TRAPS

Traps: Traps should not be placed where animals may interfere with them or where theft is a possibility. Attachment should be secure to prevent removal by high winds. Try to minimise the banging of traps against their supports.

Capsules \* Capsules will function efficiently for at least 20 weeks if they are stored in the recommended manner prior to use.

\* **BIOTRAP® MAIZE STALK BORER** contains tetradecenyl acetate, Reg No L 2982, Act 36/1947.

### TRAP DEPLOYMENT:

During the second week of September traps should be hung out to determine the commencement of the first generation Maize stalk borer moth flight.

### MONITORING AND DATA COLLECTION:

Record number of moths caught in each trap for each 7 day period preferably always on the same day of the week. Add together the number of moths caught in that week and divide this number by the number of traps. This will give 'the mean weekly moth catch per trap'. This weekly value may be entered on the enclosed graph form to establish the start of the flight and to describe its subsequent development.

### IDENTIFICATION OF MOTHS

The traps are extremely selective so that the moths caught in the traps will be the coppery gold coloured Maize stalk borer (*Busseola fusca* (Fuller)) moths. (20 mm long with their characteristic whitish cream coloured hind wings). If unsure, consult the coloured illustration.

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### PERIOD OF MONITORING

There are two major moth flights per season e.g. Oct/Nov (1st generation) and Jan/Feb (2nd generation). The monitoring periods should thus commence during: -

- 1) Second week of September and continue for at least 6 weeks but preferably until the moth flight terminates to establish the commencement and development of the first generation flight.
- 2) Mid December and continue for at least 6 weeks but preferably until the moth flight terminates to establish commencement and initial development of the second generation flight.

### CONTROL OF FUNNEL INFESTATIONS ORIGINATING FROM FIRST AND SECOND-GENERATION MOTH FLIGHTS

#### Commencement and development of moth flights

Take the FIRST week in which averages of 2 or more moths/trap (THRESHOLD) are caught as WEEK 1 of the moth flight. Moth numbers normally increase during subsequent weeks. If moth numbers don't show an increase above this level or drop and remain below the threshold during the moth flight up to the end of the funnel stage of the maize plants it means that no treatment of this stage of plant development is necessary.

### DEVELOPMENT STAGE AND PLANTING TIME OF CROP

Any decision to treat for Maize stalk borer should be based on the development stage and the date of crop emergence (the crop is most attractive for egg-laying between 3 and 6 weeks after emergence or if the plants are between 20cm and 1.5m high) as well as the commencement/development of the moth flight (as determined by the trap).

#### First generation moth flight

Early plantings may be affected by the first generation moth flight (October/November) while maize plants are still in the funnel stage. The decision to treat for Maize stalk borer will be made once the 4th week of the first generation moth flight has been calculated and moth catches constantly exceed the THRESHOLD of 2. It is advisable to continue monitoring after the apparent end of the 1st generation moth flight as substantial numbers of moths are sometimes recorded between this and the next flight (2nd) generation. A treatment will in these cases be necessary if the threshold is exceeded and the plants are in a susceptible stage. If there is an indication that the moth flight is heavy and is persisting longer than expected, your CHEMICAL REPRESENTATIVE should immediately be contacted.

#### Second generation moth flight

Later plantings may be affected by the second-generation moth flight (January/February) while maize plants are still in the funnel stage. The decision to treat for Maize stalk borer is again made once the 4th week of the second-generation moth flight has been identified and moth catches constantly exceed the THRESHOLD of 2 during the development of the flight.

Thus 4th week of moth flight = KEY WEEK in both instances.

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### TREATMENT TIMING AND NUMBER OF SPRAYS FOR FUNNEL STAGE MAIZE STALK BORER CONTROL

Treatment for funnel infestation Maize stalk borer control may be necessary during WEEKS 4, 5, 6 or 7 depending on the number of days from plant emergence to WEEK 4 of the moth flight. Calculate the number of days from plant emergence to the 4th week of the moth flight and refer to the following table:

Days from plant emergence To Week 4 of the moth flight	Spray week	Number of Sprays
More than 50	No spray	0
38 – 50	Week 4 of moth flight	1
25 – 37	Weeks 4+6 of moth flight	2
13 – 24	Weeks 5+7 of moth flight	2
0 – 12	Week 7 of moth flight	1
Plants emerge After Week 4	No spray (but scout for damage)	0

#### **NOTE:**

1) Slightly sub-threshold moth flights over a period of time may occasionally accumulate sufficient larvae of a variety of development stages to justify a corrective insecticide treatment. If this situation occurs then a spray should be initiated according to the larval threshold levels set on for example the THIOFLO (Reg No L1183) label.

2) Use **BIOTRAP® MAIZE STALK BORER** to establish whether a moth flight is in progress in the case of out of season maize. If above threshold male moth catches are recorded and susceptible maize or sweet corn is present it is advisable to spray immediately. If an above threshold moth flight continues it may be necessary to spray more than once. The spray interval described on the label of the insecticide in use e.g. THIOFLO® (Reg No L1183) would then be used.

3) If crop development has been slowed down by cold weather predicted crop development, which is assumed to be linear, will differ from actual crop development. Spray time will therefore differ from that presented in the above table by the difference in the number of days between predicted crop development and actual crop development. If plants have not yet reached the six-leaf stage (critical height) on the date predicted by using the table they should be allowed to do so before spraying takes place. The second possible spray date will consequently have to be moved forward by the difference in number of days between predicted and actual spraying time.

### **MANAGEMENT OF JAN/FEB POST FUNNEL STAGE COB INFESTATIONS**

After the completion of the 1st generation moth flight, moth numbers increase once again from mid December (2nd generation). Take the first week in which averages of 2 or more moths/trap are caught as WEEK 1 of the second moth flight. Moth numbers should exceed the threshold of 2 during subsequent weeks. Take the THIRD week of increasing moth catches as WEEK 3 of the moth flight. If the crop has not yet shown full tassel by the time WEEK 3 of the moth flight is reached, spray during

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WEEK 4. (If the plants are already in tassel by WEEK 3 then cobs will be well developed by the time Maize stalk borer larvae attack them, and cob damage will be low.)

Occasionally identification of the first week of the second-generation moth flight may be obscured by a longer than normal first generation flight. If this is the case do not delay in consulting your local representative to assist with the interpretation of your moth catches.

NOTE:

1) Where THIOFLO is used for Maize stalk borer control the dose per ha can be reduced 20% when used in conjunction with **BIOTRAP® MAIZE STALK BORER**. SEE THIOFLO LABEL.

2. The effect of a Decis ® (Reg no L1741) treatment upon potential Maize stalk borer cob infestations, spraying within the parameters laid down for BIOTRAP, ranges from significant suppression of the insect to good control.

- X = First flight, (Funnel treatment) treatments 1 and 2 for Western region (Weeks 4 and/or 6 or 7)
- O = First flight, (Funnel treatment) treatments 1 and 2 for Eastern region (Weeks 5 and/or 7)
- = Second flight, (Funnel treatment) sprays 1 and 2 for Western region (Weeks 4 and/or 6 or 7)
- = Second flight (Funnel treatment) sprays 1 and 2 for Eastern region (Weeks 5 and/or 7)
- = Second flight, (Cob spray) spray for Eastern and Western regions (Week 4)

**WESTERN REGION (West of the Johannesburg/Bethlehem/Bloemfontein line)**

**EASTERN REGION (East of the Johannesburg/Bethlehem/Bloemfontein line)**

WESTERN REGION: Treatment for 1st generation Maize stalk borer control may be necessary during WEEK 4 and/or WEEK 6 or 7 depending on the number of days after plant emergence if subsequent moth catches show an increase in numbers above the threshold of 2 following the identification of WEEK 1.

EASTERN REGION: Treatment for 1st generation Maize stalk borer control may be necessary during WEEK 5 and/or WEEK 7, if subsequent moth catches show an increase in numbers above the threshold of 2 following the identification of WEEK 1.

If the crop is between 3 and 6 weeks post emergence (i.e. 20 cm - 1.5 m high).