

# SUGAR BOARD OF TANZANIA

## GUIDELINES ON CONTROL OF SUGARCANE PESTS & DISEASES

### 1.0 CANE PESTS AND DISEASES

Regulation 12 – (1) of the Sugar Industry Regulations specifies the sugarcane pests and the diseases of sugarcane that are subject to compulsory control measures by sugarcane growers.

Regulation 12 – (2) and 12 – (6) specifies the type of measures or operations that may among others, be imposed.

The following guidelines prescribe, without being so limited, the compulsory measures/operations that shall be applied ***to each specified pest or diseases***, as well as procedures and matters relating to implementation thereof.

## 1.1 White Scale (*Aulacapsis tegalensis* & *A. madunensis*)

1.1.1 No grower shall, use supply or give sugarcane from cane field to any person for the purpose of such cane being **moved from a mill cane supply area without a permit issued by an officer of the mill approved by the Board.** Likewise no grower shall himself cut his cane and move the same outside the mill cane area without such a permit

1.1.2 For the purpose of determining area infested with white scale and areas not so infested (clear areas), the following shall apply:

- i) SRI shall monitor annually the spread of white scale throughout the country and issue a position report listing areas infested with white scale where cane is produced/grown.
- ii) The Board shall take the appropriate step to prohibit the movement of cane from such areas.

# White Scale (*Aulacapsis tegalensis* and *A. madunensis*) cont.....

iii) An area where cane is grown for commercial purposes shall be deemed to be infested with white scale whenever the infestation with white scale has been detected.

- 1.1.3 Sugarcane fields infested at the rate of **10%** white scale cover shall be harvested early in the season. The advisory services officer shall, prior to start of the season or as early as possible after start of the season, draw up a list of fields which are so infested and communicate the list to the local committee responsible for preparing a cane harvesting list. Such fields shall be scheduled for early harvesting whenever possible.
- 1.1.4 Sugarcane fields infested at a rate of more than **50%** white scale cover shall be harvested immediately.

# **White Scale (*Aulacapsis tegalensis* and *A. madunensis*) cont.....**

The advisory services officer shall, upon establishing the field (s) heavily infested to this level or higher notify the Committee and the Committee shall proceed to permit to harvest the cane without any delay irrespective of the harvesting schedule. Should the grower fail to harvest or have the cane harvested within one week of the report or should the grower object to his field being harvested, the miller, acting as an agent of the Board in this matter shall order the cane to be harvested at the cost and risk of the grower.

- 1.1.5 Sugarcane estates with an average infestation rate of 25% or higher white scale cover shall arrange to plant and maintain at least 5% of the total cane area with self-trashing varieties in order to enhance activities of predators. Cane fields grown with non trashing varieties, 1% of the area shall be covered with self trashing varieties as a control measure

## **1.2 Stem borer ( Eldana saccharina)**

The following agronomy practices shall be applied to control stem borer:

- 1.2.1 Where the level of infestation is high (more than 4% bored internodes) the field should be harvested early during the season. The early harvesting shall be taken to be a compulsory control measure.
- 1.2.2 Soon after harvesting fields heavily infested with Eldana the fields shall undergo stubble shaving
- 1.2.3 No seed cane shall be cut from the infested cane fields. The miller or the Miller Committee in the matter acting as an agent of the Board may in writing order seed cane cut from infested fields not be used for planting and be destroyed.

## **1.3 Sugarcane smut (*Sporisorium Sctamineum*)**

1.3.1 Before the cane is at least 6 months old growers must regularly inspect their cane fields and rogue out all infested stools as may be advised by authorized advisory services officer, Rouged cane shall be disposed of by burying as may be advised by the advisory service officer.

1.3.2 Any field with an infestation rate of 4% smutted stools shall be ploughed out after harvesting and replanted afresh. The grower shall ensure a thorough seed bed preparation so as to destroy all volunteers before replanting is done, observing a fallow period of at least one month.

1.3.3 Smut resistant cane cultivars should be planted in areas where smut is known to be common.

1.3.4 Seed cane shall not be cut from infested fields.

## **1.4 White grub complex (*Cochliotis melolonthoides*, *Heteronychus spp*, etc)**

1.4.1 The control of white grub is currently being investigated. Although there is no specific measure that has been identified, combination of measure (agronomical, chemical and biological) are in use in efforts to contain the pest and limit the damage.

1.4.2 The grower shall report any infestation of white grub observed in his cane field and shall comply with instructions given to him by the extension officer or any other authorized/responsible officer.

## **1.5 Ratoon Stunting Disease – RSD (*Leyfsonia xyli* spp. *xyli*)**

### **In all locations (where RSD is known to exist):-**

1.5.1 The cane grower shall use for planting only seed cane which has been HOT WATER TREATED by a competent person approved by the Board. In tandem, no person shall supply to a grower seed cane for planting which has not been hot water treated.

The Board or any person authorized by the Board may order a grower to uproot and destroy cane obtained from seed cane which was not hot water treated.

1.5.2 During the preparation of seed cane for planting (hot water treated seed cane) tools such as field knives/pangas used should be disinfected several times a day in commercial harvesting disinfection shall be three times a day.



# Ratoon Stunting Disease – RSD (*Leyfsonia xyli* spp. *xyli*) cont.....

1.5.3 Fields that are RSD infected shall be harvested early. The infected fields shall be uprooted and replanted. Replanting shall be done after thorough seedbed preparation and fallow period should be longer enough to avoid volunteers.

If a grower refuses or fails to plough out an infested field and the miller or mill committee feels that the field imposes unacceptably high risks to other cane fields, the Committee shall notify the Board. The Board shall issue the grower appropriate compulsion orders under provisions of the Act. and Regulations.

# 2.1 General administrative procedures on control of cane pests and diseases

## 2.1.1 Survey of pests/diseases

- The grower is responsible for inspecting the cane in his fields(s) as may be advised by advisory services officer to detect any signs of abnormalities and diseases in his crop. He shall report his observations to the extension/advisory services officer.
- The extension officer/advisory services officer shall be responsible for receiving and investigating/verifying pests/disease incidences reported by a grower and shall report the same to the Chairman of the “Mill Pest Control Committee (MPCC)”. In case expertise is needed to verify the reported infestation or assess the infestation level, the MPCC shall communicate with the miller or SRI as deemed appropriate.

# **General administrative procedures on control of cane pests and diseases**

The extension officer/advisory services officer shall also be responsible for routine monitoring of pests in his area of jurisdiction and report to the Chairman of the Mill Pest Control Committee as well as to the District Extension Officer of the district where the mill cane supply area is located.

- The SRI shall carry out annually the survey of cane pests nationally focusing attention on the status of pests in the mill cane supply areas (pests level increasing, decreasing etc) as well as the spread of pests to previously uninfected areas. These surveys shall be done annually. A status report shall be prepared and submitted to the Board and to all sugar mills among others. Where the survey results suggest there is a need for intervention to arrest the spread, a recommendation shall be made to the Board detailing the nature and scope of intervention needed.

## **2.1.2 Mill Pest Control Committee (MPCC)**

There shall be established in every sugar mill **a mill pest control committee.**

- The function of the Committee, shall be the following:-
  - i. In collaboration with SRI and NSI to educate and sensitize growers on appropriate or recommended measures for control of cane pests/diseases.
  - ii. To monitor the status of pests in the mill cane supply area and furnish status reports to SRI on annual basis so as to facilitate evaluation of strategic control plans.
  - iii. Acting as Agents of the Board, the Committee shall ensure growers in the mill cane supply area comply with the prescribed pests/disease control procedures and other directions as may be issued from time to time. To this end the Committee shall receive reports from extension officer and other relevant officers, deliberate on same and issue instructions as appropriate to remedy the reported problem.

# Mill Pest Control Committee (MPCC)

The Committee may carry out such inspections of fields as they deem appropriate in the course of insuring the compliance by growers to pests control measures.

In the event of a grower failing or neglecting to comply with advice or directions of the committee in relation to pest management/control, the Committee shall determine whether the position poses a threat to cane production in the mill cane supply area and if so submit to the Board for intervention under the Sugar Industry Act and Regulations.

- iv To do all such things as mandated to be done by the Committee in these procedures.

# Mill Pest Control Committee (MPCC)

- **The composition of the Mill Pest Control Committee shall be as follows:-**
  - i. The Officer of the mill who at the time is in charge of sugar cane agronomy, shall be the Chairman of the Committee
  - ii. The officer of the mill who at the time is in charge of cane outgrowers department or unit.
  - iii. The agricultural extension officer or officers working in the mill cane supply area.
  - iv. Not less than two (2) and not more than four (4) representatives of growers nominated by the growers associations. Provided however the persons shall possess sufficient knowledge and experience in matters of cane agronomy/husbandry and they are resident in the mill cane supply area.

# Mill Pest Control Committee (MPCC)

- **Co-opted members**

The Agricultural Manager of the mill and the Chairman (Chairman) or Secretary (Secretaries) of the growers association (s) shall be co-opted members and may participate in all activities of the Committee but shall not be construed as members for the purpose of quorum for meetings or decision making through voting.

# Mill Pest Control Committee (MPCC)

- **Committee procedures & related matters:**
  - i. The Committee shall choose a Vice chairman and a Secretary among the members
  - ii. The Committee shall set its own procedures relating to conduct of meetings. A copy of the procedures as set shall be availed to the CEO of the mill who shall endorse the same or advice changes as he considers appropriate.
  - iii. The responsibility of establishing the Committee and ensuring the Committee functions and operate properly shall rest on the CEO of the mill in the mill cane supply area.
  - iv. Costs, if any, of the Committee shall be born by either the mill or the mill and the growers as the two parties may decide.



### **2.1.3 Cane supply/commercial agreements**

Any provision in cane supply/commercial Agreements between the millers and growers or growers association providing for pests and disease control measure shall be interpreted in the context of these procedures and administered through the committee as provided in these procedures.

## 2.1.4 Miller Cum Planters (MCP)

- Where the miller is also the grower and sole supplier of cane to the mill in the mill cane supply area, the officer of the mill in charge of the cane agronomy dept shall discharge the functions of the Mill Pest Control Committee.
- The officer stated above shall be responsible for monitoring the status of pests in the area and furnish a status report to SRI on annual basis.
- The SRI shall be responsible for routine monitoring or inspection for compliance by the MCP to the pests/disease control measures and cause remedial actions to be taken by the MCP or the Board as the case might be.

## **2.1.5 Other Categories of cane growers**

Growers who grow cane for purposes other than for sale or supply to a sugar mill, a jiggery plant or a factory for extraction of juice to be used in a manufacturing process. These include, subsistence farmers growing cane in mix cropping or pure stands at small scale whether for commercial purposes or for own consumption (chewing cane).

- Category of cane growers with cane fields located within a mill cane supply area will be subject to routine monitoring in respect of pests/diseases and where any observed pests/diseases are deemed to be a threat to cane in the mill cane supply area, the same pest control measures shall be applied. Routine monitoring of these areas shall be undertaken by the MPCC in collaboration with the Government agricultural extension staff(s) in the area. Pests status reports shall be communicated to the District Extension Officer and SRI by the MPCC.

# Other Categories of cane growers

- Category of cane growers located in areas other than the areas near mill cane supply areas stated above such as growers of cane for bio-fuels production, monitoring of pests/disease shall fall under the normal nation-wide pests/disease monitoring system in the Ministry responsible for agriculture for agriculture in collaboration with SRI. The SRI shall however monitor pests/diseases annually in mill cane supply areas.
- The object of the survey shall be to monitor the pests/disease status in hitherto free areas, changes in infection rates and pests/disease movement/spreading rates. Reports of such surveys shall be communicated to the Ministry as well as the Board together with recommendations, if any, on desirable measures to contain the pest/disease or arrest its spread.

***NB: Shaded sections shows aspects of guidelines recommended for regulation***

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