Impact of unfavourable weather conditions on cane in the Middleveld... *cont.*

than schedule to prevent further yield loss. The **28 of October 2023** is a day Malkerns sugar cane growers do not wish to remember as a very heavy storm accompanied by hailstorm hit the area, causing severe damage on sugarcane grown in the area **(Figure 3)**.

Figure 3: Cane severely damaged by hailstones in Malkerns on 28 October 2023

Impact on yield

The three fields which were heavily damaged by hailstorm in one of the farms in Malkerns had markedly reduced yields in the current season compared to the past two seasons when they were not damaged (**Figure 4**). This assumes the same level of crop management.

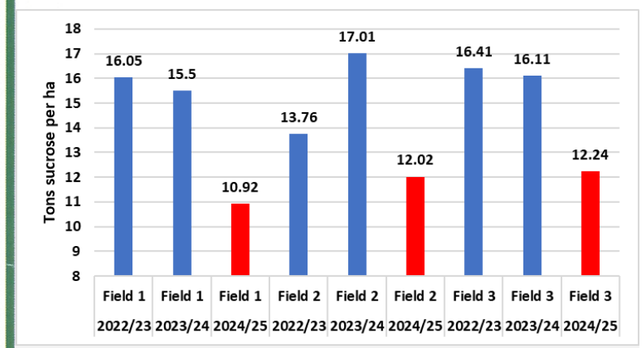

Figure 4: Yields trends of three fields damaged by hailstorm in Malkerns on 2024

Heavy winds damage

Heavy winds leads to cane lodging. Lodged cane results in reduced yields due to physical damage to the cane (breaking of stalks) and reduced leaf exposure to sunlight. Lodging also causes uprooting of the crop which severely disrupts crop development. These factors result in reduced growth hence negative impact on yield (**Figure 5**). Severely lodged cane results in side shooting which reduces cane quality drastically.

Figure 5: Seven months old lodged cane caused by heavy wind on 05 February 2024

Frost damage

Frost damage incidences are becoming common of late (**Figure 6**). The Sidvokodvo region has recorded frost damage in the past two years. Some fields suffered frost damage in July, including a 6 months old nursery field. Growers should assess the degree of damage and make a decision on weather to cut back the cane in the case of severely damaged cane or manage the crop to harvesting in the case of a slight damage. Seedcane damaged by frost should not be used for planting.

Figure 6: Frost damaged cane in Sidvokodvo

Justice Mabuza (Extension Officer) & Mphumelelo Ndlovu (Crop Protection & Extension Officer)

ESWATINI SUGAR ASSOCIATION TECHNICAL SERVICES

EXTENSION NEWSLETTER

Number 96 2nd Quarter 2024/2025

INSIDE THIS ISSUE:

APPLICATION FOR EXEMPTION TO HOLD LICENCE FOR OWN USE ELECTRICITY GENERATION

Background

Small-scale embedded generators (SSEG) such as solar PV are becoming an attractive alternative for many sugarcane growers who wish to reduce their electricity bill for irrigation. Generators who wish to produce electricity are required to hold a generation licence under the Electricity Act No.3 of 2007. The Act gives the Eswatini Energy Regulatory Authority (ESERA) the powers to licence and regulate the generation, distribution, transmission and supply of electricity in the country. The law criminalises power generation without a licence. However, sugarcane growers can apply for an exemption to hold a licence for electricity generation. This article therefore provides a guide on how to apply for an exemption to ESERA.

Condition for an exemption

Generators who wish to produce electricity with a power plant of 100 kW and above exclusively for own use can apply for exemption to hold a licence in accordance with the Electricity Licencing Bylaws of 2016. This means industry growers with larger power requirements of more than 100 kW can apply to be exempt from holding a licence while growers with smaller power requirements (less than 100 kW) do not require any licence.

The licence belongs to the one who intends to generate (the grower), and if the grower does not have the technical knowledge to process the application, he can grant the power of attorney to his Installer to apply on his behalf.

Application process for exemption

Growers wishing to apply for an exemption to hold a generation licence must make an application in writing, providing information:

- Full names, physical and postal address of the Applicant.
- Source of energy (e.g., solar) and the generator output (in kW).
- Period for which electricity will be generated.

Continued in the next page

Application for exemption...

...sugarcane growers can apply for an exemption to hold a licence for electricity generation.

Rising pests trends

The warmer temperatures have extended the activity period of pests, leading to higher survival rates

Sustainability & ethical practices

These unfavourable weather events continue to pose a threat to the sugarcane crop

P O Box 367 Simunye, Eswatini. Tel/Fax (+268) 23838998/ 23838470/ 23838731 Website: http://www.esa.co.sz

Application for exemption... *continues*

- An undertaking that the electricity generated will only be supplied for own use.
- An undertaking that all applicable technical, health, safety and environmental standards regarding the construction, operation and maintenance of the power plant will be complied to.

The application must be accompanied by a non-refundable application fee of E10 000 and must be paid at the time of submission of the application.

Approval of exemption

The Authority will grant the exemption within 30 days once all the required information has been provided by the Applicant. The holder of the exemption may be required from time to time to provide information as reasonably required by the Authority.

Validity and renewal of exemption

The exemption to hold a generation licence will be valid for up to 2 years, subject to the holder of the exemption complying with the terms and conditions under which the exemption is issued. The holder of the exemption, prior to such exemption elapsing, can apply for a renewal which shall be done in the same manner as a new application.

Conclusion

Industry growers who have already installed solar plants for own use with no approval from the Energy Regulator are therefore encourage to apply for this exemption so that they comply with the law.

Nkululeko Dlamini
(Irrigation Engineer)

Rising Pest Trends in Eswatini – What Sugarcane Growers Need to Know

Introduction

As we navigate the growing season, we need to address an important issue: the increase in pest populations following a warmer autumn and winter. This includes the rise of yellow sugarcane aphids (YSA) and eldana, which are posing significant challenges to our sugarcane crops. We also saw the prolonged higher levels of sugarcane planthopper into the winter months despite that literature indicates that populations decrease when temperatures are low.

Impact of Warmer Seasons

The relatively warm temperatures have extended the activity period of pests, leading to higher survival rates and prolonged or earlier infestations. This year, reports from growers of relative high infestation of YSA were received by ESATS. We also received reports of high planthopper levels in June/July. Eldana activity in recently cut fields was widespread. This has resulted in increased populations of both YSA and Eldana.

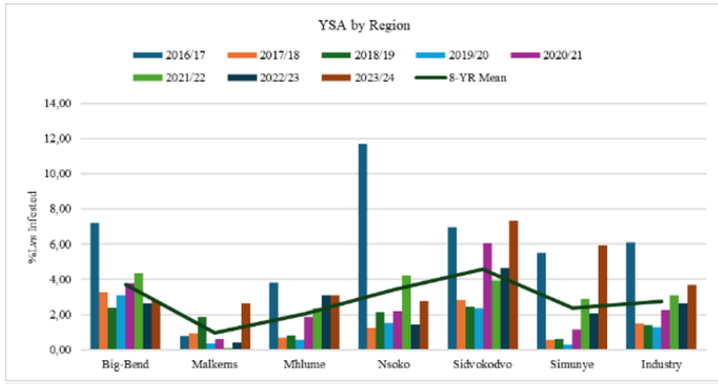

Figure 1: Average industry yellow sugarcane aphids (YSA) trends

Pest Overview

Yellow Sugarcane Aphid trends

The YSA pressure is on an upward trend since 2017 as shown in **Figure 1**. This follows the 2015-2016 drought.

Continued in the next page

Rising Pest Trends in Eswatini... *continues*

Eldana

Eldana damage by month since 2019 show an increasing trend.

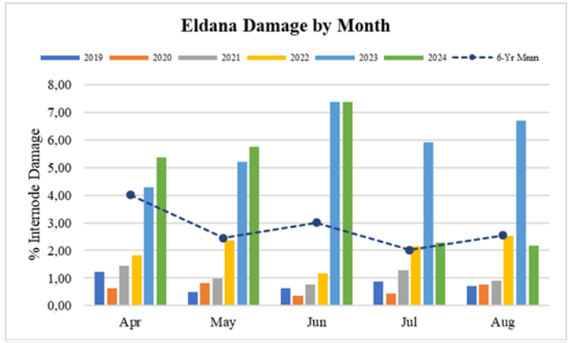

Figure 2: Eldana damage trends by month

Sugarcane planthopper:

High infestation of planthopper was recorded in 2023 in an area just under 3 000 ha. The prevalence level seems to have increased in 2024 as a total area of over 4 000 ha was reported to be moderately to severely affected.

Management Strategies

Growers are reminded of the need to use Integrated Pest Management (IPM) to curb the pest pressures.

Regular inspections: Conduct frequent scouting to identify pests early.

Reporting: Report pest records to your Extension Officer and ESATS for recommended corrective actions.

Cultural controls: Maintain field hygiene by ensuring that: verges are clean and grasses next to sugarcane fields are controlled, and base cutting and removal of all cane stubbles in fields to remove habitat for the pests and reduce overwintering.

Preserving biodiversity: through maintaining natural vegetation or planting vegetation which hosts natural predators and biocontrol agents to manage pest populations.

Keep the crop stress free: nutrition and water requirements are met to avoid stressing the cane.

Chemical Controls: Apply recommended pesticides carefully and follow the instructions on the label. Growers must use only pesticides which are listed in the industry approved list of agrochemicals. The use of off label pesticides (those not approved for a specific crop or pest, or for use in a way that deviates from their registered guidelines) is strongly discouraged as research has shown that this practices has long-term negative impact on pest management.

For a list of registered products that can be used to control YSA and Eldana, growers can contact their Extension Officers.

Mphumelelo Ndlovu (Crop Protection & Extension Officer)

Impact of unfavourable weather conditions on cane in the Middleveld

Introduction

The changes in weather patterns (climate change) which are characterized by very high temperatures, frost, severe droughts, uneven rainfall distribution and heavy storms which are at times accompanied by hailstorms are a cause for concern in the sugar industry and the country at large. These unfavourable weather events continue to pose a threat to the sugarcane crop. While these weather events are beyond human control, as growers we need to make effort to adapt and be resilient if we are to have sustainable sugarcane business.

Hailstorm

Hailstorms cause physical damage to the sugarcane crop by damaging the growing shoots, shredding leaves and breaking stalks which can lead to severely reduced yield. Hailstorm damage have implications on the harvest schedule in that the damaged cane may have to be harvested either later than schedule to allow it to recover or harvested earlier