

WEATHER OUTLOOK: RISKS AND MITIGATIONS FOR THE SUGAR INDUSTRY

Introduction

Understanding the upcoming seasonal weather conditions is crucial for effective planning in the sugar industry, especially as climate variability and extreme events increase. To support informed decision making, the recent 32nd Southern Africa Climate Outlook Forum (SARCOF 32) held in Mbabane from 28 to 30 January 2026 released the regional climate outlook for February–June 2026, offering essential guidance on expected rainfall and temperature patterns.

Rainfall and Temperature Overview

The February–June period is forecasted to bring **normal to above normal rainfall** across Eswatini and much of the region (see **Figure 4**), offering sustained moisture throughout the early

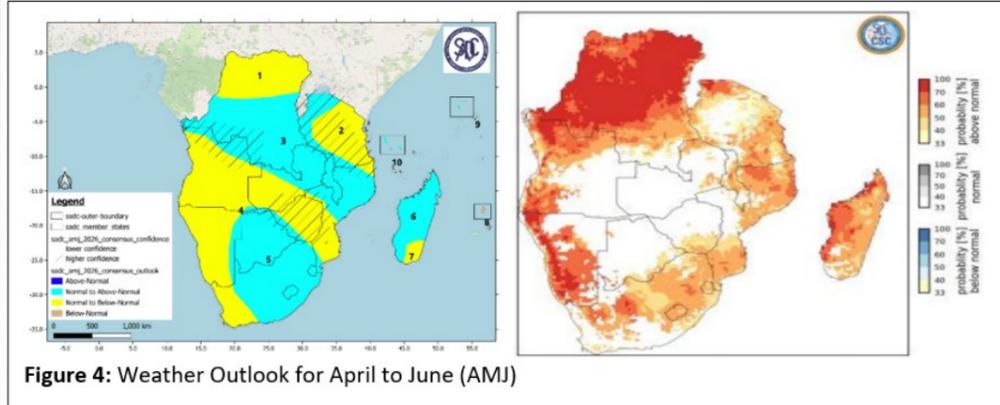


Figure 4: Weather Outlook for April to June (AMJ)

and mid harvest seasons. Alongside this, **above average temperatures** are expected, creating warmer and more humid conditions that will influence both crop development and field management.

Risks and Mitigation Measures

While the normal to above normal rainfall forecast presents opportunities such as replenished soil moisture, lower irrigation demand and improved water storage, there are risks which growers should be aware of (**Table 3**). These risks include waterlogging,

Table 3: Risks and mitigation measures for the forecasted wet and hot season (April to June)

Risks	Mitigation Measures
<ul style="list-style-type: none"> Waterlogging: Saturated soils may inhibit root oxygenation, undermine nutrient uptake, and create ideal conditions for diseases such as smut, leaf scald, and red rot. Pest pressure: High humidity and heat increase the risk of Eldana, termites, and other pests. Delayed operations: Wet fields may slow land preparation, planting, and mechanical work, pushing operations behind schedule. Transport disruptions: Heavy rains threaten road access to cane fields and mills, affecting cane delivery and mill throughput. Reduced sucrose accumulation: Excessive late-season rainfall (April–June) may dilute sucrose levels, affecting sugar recovery rates. 	<ul style="list-style-type: none"> Prioritise field drainage maintenance and upgrades to prevent waterlogging. Adjust irrigation schedules to align with increased rainfall using smart scheduling tools to avoid over-irrigation. Intensify pest and disease surveillance, applying preventative control measures when thresholds are reached. Reinforce haulage roads and vulnerable crossings to protect supply chain continuity. Align harvesting operations with up-to-date meteorological advisories for optimum cane quality. Maintain close collaboration with the Eswatini Meteorological Service for localised, timely climate updates.

pests, and operational disruptions associated with wetter and warmer conditions. To remain resilient, the sugar industry will need to prioritise targeted mitigation measures that respond to these evolving climate patterns (**Table 3**).

Conclusion

The 2026 season offers a promising rainfall outlook with potential for strong crop performance, provided growers manage the accompanying risks responsibly. By staying alert to weather developments and applying climate smart practices, Eswatini's sugar industry can position itself to benefit from abundant moisture while safeguarding production quality and operational efficiency.



Banele Mhlanga
(Irrigation Officer)



ESWATINI SUGAR TECHNICAL SERVICES

EXTENSION NEWSLETTER

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FEED-IN TARIFF GETS THE GREEN LIGHT: GOOD NEWS FOR GROWERS

Introduction

The Eswatini Energy Regulatory Authority (ESERA) has officially approved the **Embedded Generation (EG) Feed-In Tariff** and associated charges submitted by the Eswatini Electricity Company (EEC). This landmark decision follows extensive public consultations and rigorous technical-economic analysis. With this new framework, growers who already have approved solar PV (photovoltaic) systems, and those planning to install them, can now export excess electricity back into the national grid and receive compensation. This marks a significant step towards sustainable energy use and improved returns on investment for the agricultural sector.

- Revenue opportunity:** Excess electricity generated by solar PV systems can now be sold back to the grid.
- Operational efficiency:** Growers can offset energy costs while contributing to national energy supply.
- Sustainability:** Encourages wider adoption of renewable energy, reducing reliance on non-renewable sources.



Approved tariff structure

The approved tariff applies to commercial customers under both time-of-use (TOU) and non-TOU (flat rate) categories (**Table 1**). Growers should

note that fixed charges remain payable under the applicable tariff category. All grid-tied embedded generation plants are subject to once-off interconnection charges based on the plant size.

How will the new monthly electricity bill look like?

Growers who feed excess solar power into the grid will see a new line item on their electricity bill reflecting the credit from the feed-in tariff.

What does the Feed-In Tariff mean for growers?

Continued in the next page



INSIDE THIS ISSUE:

- 1 **Feed-In Tariff Gets the Green Light**
- 2 **A Yield Forecasting & Crop Growth Monitoring**
- 3 **The High Cost of Wrong Placement of Varieties**
- 4 **Poor Soil Health: A Growing Concern for Growers**
- 5 **Sugarcane Streak Mosaic Disease: A Biosecurity Threat to the Industry**
- 6 **Seedcane Alert — Autumn 2026 Industry Notice**
- 7 **Weather Outlook: Risks and Mitigation**

FEED-IN TARIFF GETS THE GREEN LIGHT *continues*

Figure 1 is an example of an electricity bill after the tariff has been incorporated.

Table 1: ESERA approved EG Feed-in tariff excluding VAT

Tariff type	Embedded Generation Feed-in Tariff (c/kWh)
Non-TOU (residential and small commercial)	51.23
TOU-Low Season Off-Peak	31.49
TOU-Low Season Standard	43.51
TOU-Low Season Peak	60.34
TOU-High Season Off-Peak	35.66
TOU-High Season Standard	57.37
TOU-High Season Peak	166.02

Customer name	Emvimbeko Sugar Scheme
Address	Buhleni, Hhohho
Tariff	T 3 LV
Billing Month	February 2026

Consumption	Tariff (E/kWh)	Units consumed (kWh)	Amount (E)
Peak	2.11	17 961.00	37 897.71
Standard	1.50	40 459.00	60 567.12
Off-peak	1.20	38 574.00	46 288.80
			144 753.63
Feed-in			
Peak	0.60	0.00	0.00
Standard	0.44	20 390.00	8 871.69
Off-peak	0.31	21 275.00	6 699.50
			15 571.19
Net bill			
Peak			37 897.71
Standard			51 695.43
Off-peak			39 589.30
			129 182.45
Fixed charges			
Facility charge	2 084.95	1.00	2 084.95
Access charge	66.94	128.24	8 584.39
Demand charge	224.89	162.07	36 447.92
			Grand total 176 299.70

Figure 1: An example of a post-tariff electricity bill

What is required from growers?

To benefit from the newly approved Feed-In Tariff, growers need to complete the following steps:

- **Register with EEC as an embedded generator** to be formally recognized under the program.
- **Install a bidirectional meter** capable of measuring both electricity consumed and excess power exported to the grid.
- **Obtain system approval from EEC** to ensure that your solar PV installation complies with grid

connection standards and safety requirements.

Penalty for non-compliant EG plants

Growers must ensure that their solar PV systems fully comply with EEC technical and regulatory standards. Non-compliant EG plants will face:

- A uniform penalty of **E15,489.09** as stipulated by ESERA.
- Possible disconnection from the utility grid until compliance is achieved.

Maintaining compliance not only avoids penalties but also ensures safe and reliable integration with the national grid.

Call to Action

Growers are encouraged to take advantage of this opportunity by registering their solar PV systems with the Eswatini Electricity Company (EEC).

- Contact EEC today to begin the registration process and start earning from your excess solar power.
- Ensure your system complies with EEC technical requirements
- Contact the Eswatini Sugar Technical Services Department for guidance on registration and metering.
- Stay informed by subscribing to ESERA updates and participating in stakeholder forums.

By acting now, you will not only reduce your energy costs but also contribute to Eswatini's sustainable energy future.

Further Information

Growers can review the full ESERA regulatory decision at www.esera.org.sz, or reach out to the Communications and Stakeholder Manager at info@esera.org.sz.



Nkululeko Dlamini (Irrigation Engineer) & Njabuliso Vilakati (Graduate Trainee— Irrigation)

SUGARCANE STREAK MOSAIC DISEASE... *continues*

rapid investigation and helps prevent wider spread.

Protecting the Eswatini Sugar Industry

The confirmation of the SCSMD in Zambia demonstrates that the disease is now present within the southern African region. Although it has not been confirmed in Eswatini, the experience from other countries shows that early vigilance is essential to prevent establishment.

By maintaining strong biosecurity practices and reporting suspicious symptoms promptly, growers and stakeholders can help safeguard the productivity and sustainability of the Eswatini sugar industry.

Biosecurity is everyone's responsibility.



Mphumelelo Ndlovu (Crop Protection & Extension Officer)

SEEDCANE ALERT — AUTUMN 2026 INDUSTRY NOTICE

Eldana-driven condemnations have significantly reduced clean seedcane availability for autumn 2026 plantings. The table below shows total eligible area, condemned area, seedcane tonnages, and resulting planting losses.

Item	Hectares (ha)	Tonnage (t)	Notes
Total seedcane area	887.17	79 845.48	All ≥9-month fields
Condemned area (eldana ≥4/100)	126.41	11 376.90	Must not be used to establish commercial fields
Clean seedcane remaining	760.76	68 468.58	Seedcane available for planting
Planned area to plant (before condemnation)	-	-	6 653.79 ha
Actual area to plant (after condemnation)	-	-	5 705.72 ha
Lost area to plant	-	11 376.9	948.07 ha lost

Summary: A total of 126.41 ha of seedcane has been condemned, resulting in 11 376.90 tons lost and a planting deficit of 948.07 ha for autumn 2026.



Mphumelelo Ndlovu (Crop Protection & Extension Officer)

SUGARCANE STREAK MOSAIC DISEASE: A BIOSECURITY THREAT TO THE INDUSTRY

Introduction

The recent confirmation of Sugarcane Streak Mosaic Disease (SCSMD) in Zambia highlights an emerging biosecurity concern for the southern African sugar industry. The disease is caused by Sugarcane Streak Mosaic Virus (SCSMV), and its presence in Zambia increases the risk of introduction into neighbouring countries, including Eswatini. Historically, the disease was first observed in the United States in the 1930s but later became widespread in Asia, particularly in countries such as India, China, Indonesia, Pakistan, Thailand and Vietnam. More recently, severe outbreaks have been reported in Africa, including Côte d'Ivoire. The appearance of the disease in southern Africa highlights the importance of vigilance and strong biosecurity practices across the industry

Importance of the disease

Once introduced, the SCSMD can spread rapidly through infected planting material. In affected countries:

- Disease incidence in fields has exceeded 90%
- Average yield losses of about 30% have been reported
- Up to 70% yield loss has occurred in highly susceptible varieties

Symptoms to look for

Early identification in the field is critical. Typical symptoms occur on leaves of young cane and may vary between varieties (**Figure 3**). Although infected plants rarely die, the virus significantly reduces:

- Cane yield

- Stalk weight and diameter
- Juice quality
- Sugar recovery

This could have serious economic consequences if the disease becomes established.

How the disease spreads

Infected seedcane

The most important route of spread is through planting infected cane. Infected plants can sometimes show no visible symptoms but still carry the virus and transmit it when used as seed.

Mechanical transmission

- Cutting knives
- Harvesting equipment
- Contaminated tools used during planting or harvesting

Possible insect or mite vectors

Rapid field spread observed in other countries suggests that arthropod vectors may also be involved, although the exact vector species has not yet been confirmed.

What growers should do

- *Use clean seedcane* - Plant only certified seedcane
- *Avoid informal seed exchange* - Do not move planting material between farms without seedcane movement permit.
- *Maintain tool hygiene* - Disinfect cutting knives and equipment between fields.
- *Monitor fields regularly* - Pay close attention to young cane between **3 and 6 months of age**, when symptoms are most visible.
- *Report suspicious symptoms* - Notify your Extension Officer or the Eswatini Sugar Technical Services

immediately if unusual streaking or mosaic symptoms are observed. Early reporting allows

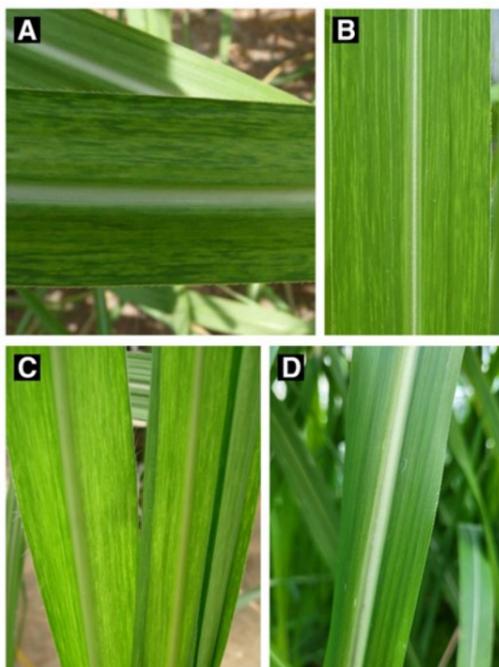


Figure 3: Symptoms of sugarcane streak mosaic virus (SCSMV) in sugarcane. Sugarcane leaves infected by SCSMV in **A.** Côte d'Ivoire, **B.** Pakistan, and **C.** Indonesia. **D.** Healthy sugarcane leaf.

Source: J. Daugrois; P. Roumagnac; C. Julian; D. Filloux; L. Putra; D. Mollov; P. Rott; *Phytopathology*® 114, 668-680. The American Phytopathological Society, 2024.

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A YIELD FORECASTING & CROP GROWTH MONITORING PLATFORM FOR SUGARCANE GROWERS

Introduction

As the sugar industry continues to modernize, accurate yield forecasting and real time crop growth monitoring are becoming essential tools for improving farm productivity and profitability. In 2025, Eswatini Sugar Technical Services (ESTS) department evaluated three digital platforms to determine which solution best meets the needs of industry sugarcane growers. Based on the assessment conducted, the results were clear: the CANASIGHT Platform offered by GAMAYA SA stood out as a powerful and practical tool for our industry.

Built for sugarcane

The testing team found that the CANASIGHT platform delivers the most relevant and accurate insights for sugarcane production. It offered the most accurate yield forecast and field crop conditions as well as strong analytical insight. It consolidates key crop growth indicators into one dashboard for data filtration as well as a comprehensive suite of parameters necessary for sugarcane production specific needs, thus giving growers and field managers a clear and continuous view of crop performance throughout the season. Some of the standout features include:

- Yield forecasting that becomes more precise as the crop develops and harvesting date gets closer.
- Growth stage tracking, helping growers align field activities with the plant's physiological needs.
- Canopy cover and biomass monitoring, useful for assessing crop vigour and identifying underperforming areas.
- Field level variability maps that highlight where management interventions may be needed.
- Comparisons of growth curves for multiple fields, with previous seasons for multiple fields (**Figure 2**).

interface, make the CANASIGHT Platform a valuable decision-support system for improving crop management, scheduling operations, and optimizing inputs.

Why This Matters for Growers

With rising production costs and increasingly unpredictable weather patterns, growers need tools that deliver actionable data-backed guidance. The CANASIGHT Platform empowers growers to:

- Detect problems earlier.
- Make targeted, efficient use of resources.
- Predict harvest outcomes with greater confidence.
- Improve long-term field planning and budgeting.

Taking the next step

All growers, estate managers, and technical teams are encouraged to consider piloting this platform for their farms or estates. By adopting this digital solution, sugarcane growers can transition from reactive farming to proactive data-driven management. This shift will not only improve production but will also enhance efficiencies in the whole sugar production and marketing value-chain. Growers who are interested to pilot this platform can contact the Eswatini Sugar Technical Services department in the Simunye Office.

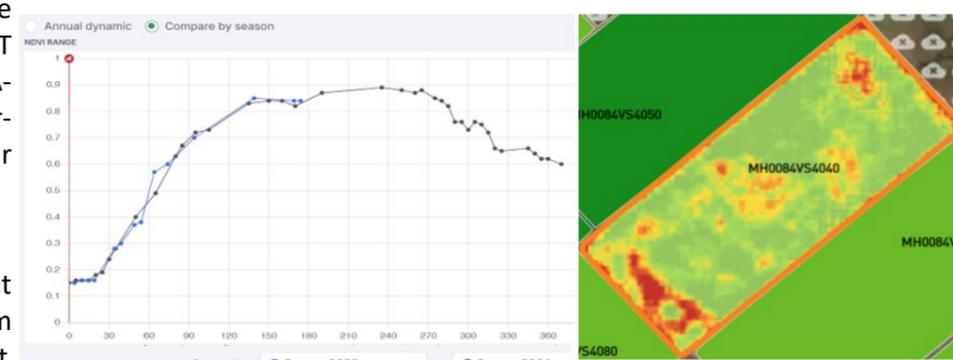


Figure 2: A crop growth curve comparing two seasons & the crop growth heat map



Nkululeko Dlamini (Irrigation Engineer) & Mthokozi Mamba (Irrigation Agronomist)

These parameters, combined with a user-friendly

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THE HIGH COST OF WRONG PLACEMENT OF VARIETIES

Introduction

Proper siting of cane varieties is not just good practice, but a *critical sustainability strategy* for sugarcane growers in Eswatini. Growers placing varieties outside their recommended times suffer significant financial losses. This practice undermines the genetic potential coming with the varieties.

Why variety scheduling matters

Different cane varieties reach their optimum sucrose content at different times of the harvesting season (early cut: April – June; mid cut: July – September; and late cut: October – December). Harvesting a variety outside its ideal harvesting window drastically compromises its sucrose yield potential, resulting in reduced farm revenue.

A practical grower case

An analysis comparing two grower fields planted with the same cane variety - M1400/86 - in the Malkerns demonstrated the importance of correctly timing sugarcane varieties. One field (A) was harvested in May 2025 (early season) while the other (B) was harvested in September (mid season) of the same year. Variety M1400/86 is recommended for planting/harvesting mid to late season. For completeness, another field (C) was also included in the analysis. Field C was also harvested in May 2025, and it was planted with N36. Variety N36 is recommended for early season harvest. All three fields were established in the same soil type.

Table 2 shows that, while field A had the largest TCH, but it had low sucrose content and it incurred high transport fees resulting to drastically reduced gross income compared to fields B and C. Had the grower planted the right variety (N36) in field A, he would have incurred 33% more on gross income,

emphasizing the importance of matching varieties with their rightful environments.

What does this mean to a grower

- The data is clear:
Right variety timing = higher sucrose = higher revenue
- Wrong variety timing = unnecessary financial losses

Growers who align their harvest schedules with varietal strengths can earn significantly more—even when tonnage is average.

Takeaways for Eswatini growers

- Know your variety’s recommended harvest window.
- Avoid pushing early cut varieties into mid or late season slots (and vice versa).
- Consult your Extension Officer before finalizing your harvest plan.

Remember: *Sucrose content (%), not cane tonnage*

Table 2: A crop growth curve comparing two seasons and the crop growth heat map								
Field	Variety	Harvest month	TCH	Suc%	TSH	Revenue	Transport	Gross Income
A	M1400/86	May	181.99	8.84	16.09	SZL 96 540	SZL 38 218	SZL 58 322
B	M1400/86	Sep	117.53	14.26	16.76	SZL 100 560	SZL 24 681	SZL 75 879
C	N36	May	120.84	14.21	17.17	SZL 103 020	SZL 25 376	SZL 77 644
<i>Assumptions :</i>								
Price per sucrose ton				SZL 6 000				
Transport fee (per ton)				SZL 210				

alone, drives revenue.

Message from your Extension Officer

“The figures from the different fields clearly demonstrate the impact of proper variety placement. More gross income is realised where cane varieties have been rightly positioned. Growers are therefore advised to take proper variety scheduling seriously if they want to improve their revenues.”



Justice Mabuza
(Extension Officer - North)

POOR SOIL HEALTH: A GROWING CONCERN FOR SUGARCANE GROWERS

Introduction

Healthy soil is the backbone of every successful sugarcane farmer. Yet, in recent seasons, poor soil health has become a major challenge for many growers. Continuous sugarcane planting without resting or renewing soils has reduced fertility and weakened soil structure—making it harder for crops to perform at their full potential. This article seeks to sensitize growers on soil health issues, and highlight practical steps growers can undertake to restore and protect their soils.

What poor soil health looks like in the field

Many growers are noticing concerning signs such as weaker crops, declining yields, and reduced ratoon longevity. The field observations include:

Yield decline

When soil loses structure, nutrients, or biological activity, the sugarcane crop struggles to form strong roots. This typically leads to:

- Stunted growth
- Fewer and thinner stalks
- Lower biomass and reduced cane tonnage

Poor ratoon performance

Degraded soils don’t support vigorous regrowth. This results in:

- Weak stubble regrowth and higher ratoon mortality.
- Shorter ratoon cycles—and therefore higher production costs.

These issues weaken the long term sustainability of sugarcane production and put pressure on growers’ profitability.

Simple, effective practices to improve soil health

Soil health **can** be restored over time with the right management practices. The following practices are recommended:

Plant cover crops during fallow periods

Planting cover or green manure crops like sunn hemp helps add organic matter, fix nitrogen, and improve soil structure.

Improve and maintain field drainage

Good drainage keeps soil microbes alive and ac-

tive—essential for nutrient cycling and healthy root development.

Use soil amendments at replant

Products such as mill/filter mud (milo), mill ash, gypsum and lime can improve soil structure and correct pH, creating a better environment for cane roots. Note that gypsum and lime applications must be based on soil test.

Ensure balanced fertilisation

Apply nutrients according to soil requirements to avoid deficiencies or toxicities and maintain crop vigour.

Increase use of organic fertilisers

Organic inputs boost soil quality and biology, complementing synthetic fertilizers and improving long term fertility.

Avoid burning crop residues

Leaving crop residues improves soil organic matter and enhances soil structure over time.

Limit Field Traffic

Unnecessary traffic—especially when soil is wet—causes compaction, which reduces root growth and water infiltration.

Quick Wins for Growers

Here are practical actions that can be implemented immediately:

- Leave more cane residues in the field.
- Plant a cover crop after harvest instead of leaving land bare.
- Properly schedule field operations to avoid traffic on wet periods.
- Consider adding organic matter whenever possible.

Final Thoughts

Poor soil health is one of the biggest threats to the sustainability of sugarcane production. But with consistent best field practices soil health can be restored over time.



Moses Dlamini
(Grower Support Officer—South)