

MPUMALANGA EXTENSION MATTERS

Komatipoort

WILAN NIEUWENHUIZEN



WILAN NIEUWENHUIZEN

RCL Komatipoort Mill, R571 Road, Komatipoort, 

+27 (0)13 723 4177 | +27 (0)67 597 0203 

wilan.nieuwenhuizen@sugar.org.za 

Malelane

JAN ERASMUS



JAN ERASMUS

MCGA Building, Mhlati Farm 

+27 (0)66 114 0656 

jan.erasmus@sugar.org.za 

P&D


KARLIEN TRÜMPELMANN



KARLIEN TRÜMPELMANN

Lowveld LPD&VCC Office, Mhlati Farm 

+27 (0)83 335 3846 

karlien.trumpelmann@sugar.org.za 

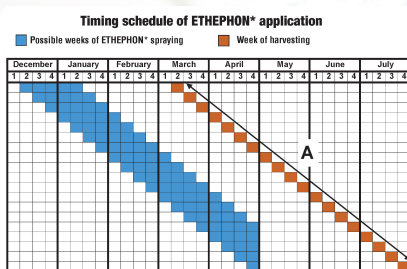
The fundamentals of cane ripening

- Combination (piggyback) ripening treatments are excellent options for increasing RV yields in high potential (high yielding) scenarios where cane quality is typically very low. However, combination treatments impose long and aggressive ripening actions on the cane crop and can hamper yield when growth is lagging. If growth is deemed to be below normal, consider a shorter spray-to-harvest option such as a single fluazifop-p-butyl treatment applied 6 – 7 weeks before harvest. This will allow the crop to grow unhindered for at least a month longer compared to combination treatments.
- Best practice is to determine the merits of ripening by using the PurEst® App and brix readings taken by a refractometer to calculate whole-stalk juice purity. (Please see SASRI **Information Sheet 4.7** for more information on ways to download the PurEst® App).
- Different seasons produce different stimuli and can consequently produce different brix gradients. For example, during extremely hot weather, the crop barely manages to maintain its water status for optimal photosynthesis and sucrose production. Varietal differences also impact brix gradients.
- Sucrose production only happens in the mature green leaves. So, the leaf canopy must be healthy and lush with seven or more healthy, green leaves per stalk. Only green leaves can produce sucrose, not brown leaves.
- There must be sufficient soil water/irrigation to maintain photosynthesis after ripener application. Do not dry-off excessively because this will further hamper yield in crops with below normal growth.
- To achieve optimal response from the selected ripener strategy, it is recommended to keep to the prescribed spray to harvest periods.
- The harvest date can be postponed for a short while provided there is sufficient soil moisture.

- For single ripener treatments, the spray-to-harvest periods are longer during winter than summer.
- Ethephon is not recommended as a single treatment in the early season due to large varietal differences and high sensitivity of the mode-of-action to environmental conditions. Also, do not use Ethephon on a plant carry-over crop or late season crops.
- When using Ethephon in an early season combination treatment, do not apply on cane with a whole-stalk purity of more than 75%.
- Late season cane quality maintenance with ripeners can be complicated by stress factors such as insufficient soil moisture, flowering, and pest and disease. Consider fluazifop-p-butyl or trinexapac-ethyl single ripener treatments based on a PurEst® test and do not carry-over ripened cane.
- The ripener schedules are available on the latest version of the **PurEst® App**, or click on the image below to download a copy.

RIPENER SPRAY-TO-HARVEST INTERVAL GUIDE

Harvest weeks falling during time-period indicated by arrows:
 A = Chemical ripening period (to improve quality)
 B = Only apply chemical on merit (following maturity assessment)
 C = Late-season quality maintenance period (to maintain high quality)

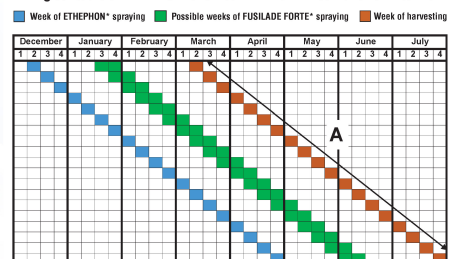


This poster provide guidelines to assist growers in determining suitable window periods of applying either single or combination chemical treatments for purposes of chemical ripening or late-season cane quality maintenance for the different harvest months. Refer to SASRI Information Sheets 12.3-12.5 for chemical-specific recommendations.

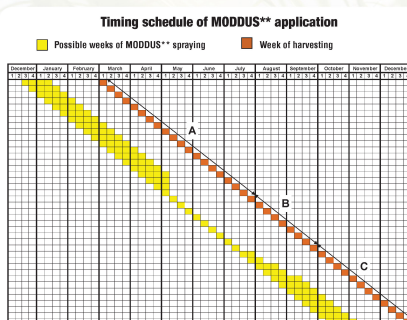
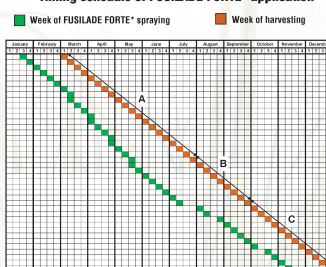
The optimal timing of application might very well vary depending on crop growth vigour, which is influenced by many factors including location, climate, variety, crop maturity and management.

For precision-agriculture purposes, timing may be adjusted based on information gleaned from hand-held refractometer measurements, recorded at intervals between spraying and the planned harvest date. Refer to SASRI Information Sheet 12.2 for more information on the measuring method and interpretation of refractometer readings for this purpose.

Timing schedule of ETHEPHON* and FUSILADE FORTE* combination treatment



Timing schedule of FUSILADE FORTE* application

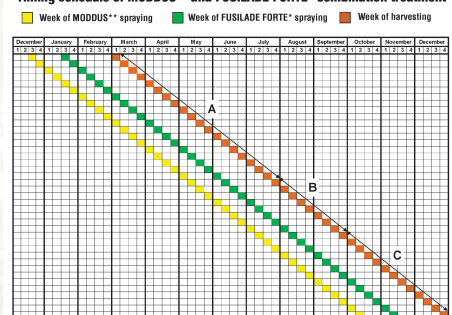


Important: Always verify that the desired treatment option is recommended for the particular variety. Consult the latest variety response table within the **PurEst®** application.

Important: Always consult the product label to establish the legal withholding period (minimum number of days between application and harvest).

* and other trade names
 ** and any future trade names

Timing schedule of MODDUS and FUSILADE FORTE* combination treatment**



© September 2019. All copyright and other intellectual property rights subsisting in this work, including without limitation of text, images and graphics contained in this work (collectively, the "Contents") are owned by the South African Sugar Association ("the Owner"). Neither this work nor any of its Contents may be shared, modified or copied in whole or part in any form, or be used to create any derivative work without the owner's prior written permission. Whilst every effort has been made to ensure that the information contained in this work is accurate, the owner makes no representation, warranty or guarantee relating to the information contained in this work. The use of this work is at your own risk and neither the Owner nor its consultants or staff can be held liable for any loss or damage, whether direct or indirect, caused by the reliance on the information contained in this work. The use of proprietary names should not be considered as an endorsement for their use.