



# NEWSLETTER

Issue 68 – April 2024



## CORESTA CONGRESS EDINBURGH 2024

In 2010, British American Tobacco (BAT) hosted the CORESTA Congress in Edinburgh, Scotland. Fourteen years later, BAT is proud to invite CORESTA back to Edinburgh for the 2024 Congress! The first to be held again in-person since 2018, this Congress will be an exciting opportunity for the whole CORESTA community to gather together under one roof.

Congress theme:

### "Advancing Tobacco Harm Reduction through Scientific Collaboration"

Reducing harm is a key topic and currently the focus of many discussions across a wide range of both public and private sectors. Tobacco harm reduction is described as "a public health strategy to lower the health risks to individuals and wider society associated with using tobacco products". CORESTA is adding its expertise to the task with the creation of a Tobacco Harm Reduction (THR) Committee. The Congress hopes to advance our knowledge and understanding of the science related to THR applicable to all aspects from agricultural raw material production to product characterisation, nonclinical and clinical assessment as well as product use behaviour.

In addition to THR, the Congress will also be a forum for the communication of research on a variety of other topics, as described in the Call for Papers. An opportunity for networking and dialogue is also the time honoured advantage of participating in the CORESTA Congresses.

### Edinburgh

Edinburgh is the capital city of Scotland, part of the United Kingdom, located to the northeast of the island. It is a city of contrasts where modernity and a rich history merge to create an atmosphere reminiscent of the past yet strongly orientated towards the future. Much of its architecture, and most famously its castle, herald back to medieval times but the city has a vibrant modern economy and is a hub of bustling activity and creativity, including in the area of higher education and scientific research. Visiting Edinburgh will also allow the sampling of Scotland's culinary delicacies and its world famous whiskies.

### Venue

The Edinburgh International Conference Centre (EICC) is by no means medieval! A modern design and state of the art facilities and technology provide all the amenities for the successful hosting of meetings and conferences. It is situated a stone's throw from the city centre and most major hotels.

### Elections and General Assembly

Elections will be held for the renewal of the Scientific Commission and the partial renewal of the Board. Further details will be provided in the next Newsletter and through correspondence with the Official Delegates of CORESTA Member Organisations.

### Online Abstract Submission

Online submission is available for authors wishing to present a paper at the Congress.

The "Call for Papers" and "Abstract Guidelines and Submission" can be found on the CORESTA website at [www.coresta.org](http://www.coresta.org) under the Meetings section.

It is also available on the official Congress website at [www.corestacongress2024.com](http://www.corestacongress2024.com).

*Presenters are encouraged to submit papers related to the Congress theme on tobacco harm reduction covering agronomy, phytopathology, and product science and technology topics as described in the Call for Papers published online.*

Abstract submission deadline:

**17 May 2024**

Authors will be notified end of June.

### Dates

Congress: 13-17 October 2024

Working Group Meetings: 12-13 October 2024

### Timeline

Online Registration: 20 May until early October 2024

(Earlybird registration until mid-July 2024)

Working Programme: available end of June 2024

### Further Information

Please visit the official Congress website at [www.corestacongress2024.com](http://www.corestacongress2024.com)





# UPCOMING CORESTA MEETINGS / CONGRESS (2024)

Meeting	Date	Location
<b>SG PTM</b> - Physical Test Methods	17 April 2024	Vienna, Austria
<b>TF CROM</b> - Consumer Reported Outcome Measures; <b>TF HTP</b> - Heated Tobacco Products; <b>TF NGTX</b> - 21 <sup>st</sup> Century Toxicology for Next Generation Tobacco and Nicotine Products; <b>TF NPSQ</b> - Nicotine Pouches Safety and Quality Guidance	14 May 2024	Toronto, Canada
<b>SG BMK</b> - Biomarkers; <b>SG EVAP</b> - E-Vapour; <b>SG IVT</b> - <i>In Vitro</i> Toxicology Testing; <b>SG SA</b> - Smoke Analysis	15 May 2024	Toronto, Canada
<b>SG PUB</b> - Product Use Behaviour	16 May 2024	Toronto, Canada
<b>THR</b> - Tobacco Harm Reduction Committee	16 May 2024	Toronto, Canada
<b>ACAC</b> - Agrochemical Advisory Committee	May/June (TBA)	Online
<b>Scientific Commission</b>	4-6 June	Geneva, Switzerland
<b>Board</b>	28-29 June	Seoul, South Korea
<b>SG AA</b> - Agrochemicals Analysis	30 July - 2 August	Thessaloniki, Greece
<b>CORESTA CONGRESS</b>	<b>13-17 October</b>	<b>Edinburgh, Scotland - UK</b>

## CORESTA Sub-Group, Task Force and Committee Meetings in Toronto, Canada

Following the success of the grouped organisation of CORESTA Sub-Groups and Task Forces in Antibes (France) in April 2023, another set of grouped meetings is being organised in Toronto, Canada, from 14-16 May, kindly organised by Labstat International.

The first official meeting of the newly created Tobacco Harm Reduction Committee will also take place on this occasion.

Working group members who intend to participate in these meetings should contact their group Coordinator for further details.



## CORESTA WEBSITE

[www.coresta.org](http://www.coresta.org)

Users may have noticed that the CORESTA website has changed since 1 March 2024.

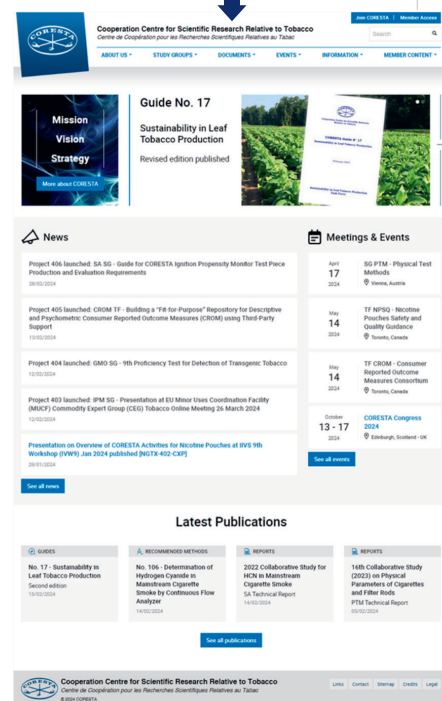
The CORESTA website was migrated to an upgraded web content management system as support for the older version was being discontinued.

The opportunity was taken to also slightly redesign the website, simplify navigation, include a few new features, and reduce content duplication.

A few of the changes made include:

- A spaciouly redesigned home page
- A condensed navigation menu that better groups together related topics
- A more powerful search tool that includes searches inside PDF documents
- Addition of page with information on CORESTA Strategy
- Clearer display of active and disbanded working groups
- Display of all active projects and search feature
- For members, full project descriptions are available via access to the New Work Item Proposal files
- Improved display of documents and annual reports related to each working group
- For members, improved display of guidelines and forms

The CORESTA website will continue to evolve and further improvements will be implemented in due course.



# CORESTA Scientific Commission and Board Meetings

The **SCIENTIFIC COMMISSION (SC)** met in Knoxville, TN, USA, on 18 and 19 January 2024.

The main objectives were to review the Sub-Group, Task Force (SGTF) and Committee activity reports, to update the 5-year plans and 2-year deliverables, and to prepare the 2024 Congress.

2023 achievements have been impressive: 28 new projects were launched, a new Task Force (NPSQ) and a new Committee (THR) were created, seven new CRMs, 12 Technical Reports, one Guide and one paper in a peer-reviewed journal were published. In addition, eight Symposiums and Workshops and two Conferences were organised, and five presentations made at external events.

The working groups continue to be very active with more than 70 on-going projects feeding the 5-year plans with the objective to produce significant materials within the next two years.

Concerning the 2024 Congress, the Call for Papers was drafted, and six topics were identified for potential workshops: non-targeted analysis, artificial intelligence, population modelling, tobacco yield limitation, smart farming and ESG responsibilities.

The **BOARD** met in Tokyo, Japan, on 6 and 7 February 2024. The meeting was kindly hosted by Japan Tobacco Inc.

The Secretary General reported on the budget and the main projects of the Secretariat. The President and Vice-President of the Scientific Commission reported on the most recent achievements of the SGTFs.

- **Budget:** The operating results will be impacted positively by a higher number of participants than expected at the SSPT and AP Conferences in Cancun. The financial assets remained stable over the last six months.
- **IT:** The migration of the CORESTA website to Drupal 9 progressed well. Most of the developments were completed in December 2023, and a group of volunteers conducted functional tests in January 2024. The new website was launched on 1 March 2024. The CORESTA Secretariat has also initiated an IT project to dematerialise the accounting dossier; dematerialisation of invoices will be soon a regulatory requirement in France. This project should be completed before the beginning of the next financial year.
- **Strategy:** the 5-year plans and 2-year deliverables have been updated based on inputs by the Scientific Commission and SGTFs.
- **Events:** The preparation of the 2024 Congress hosted by BAT in Edinburgh, UK, is progressing well. The Call for Papers drafted by the Scientific Commission was approved, and the possibility to organise several workshops was investigated. The hosting of the SSPT2025 Conference was officially confirmed by SWM, and preparatory meetings were scheduled with the CORESTA Secretariat. Investigations for hosting the AP2025 Conference were progressing with the objective to have a host by June 2024.
- **Communication:** the Science Communication Committee proposed to review and pull together existing materials, including Strategy House materials, with the objective to demonstrate externally the work CORESTA has covered. Annual updates would be made based on Scientific Commission reports. The Secretary General will make a presentation at the next ISO/TC126 plenary meeting in Catania, Italy.



## CORESTA IN THE PRESS

### Tobacco Reporter

The **January 2024 issue** featured an article entitled "Aiming Low" on the CORESTA Agro-Phyto Webinar on Low Nicotine Tobacco: Current Insight & Perspectives for the Agricultural Product of Raw Materials.

The Webinar was held on 5 December 2023 and had featured guest speakers Dr Ramsey Lewis, Dr T. David Reed and Dr Anna Malpica, who had “highlighted the current understanding of low-nicotine tobacco (LNT) production capabilities as well as the successes and failures of applied research in the areas of genetics and agronomy”.



NEW

## CORESTA COMMITTEES

### “TOBACCO HARM REDUCTION” (THR) Committee

As many of you know, following the June 2022 Science Day and the April 2023 Tobacco Harm Reduction (THR) Workshop, CORESTA’s Board approved the formation of a CORESTA THR Committee. At the THR Workshop, CORESTA Members reached consensus on Key Focus Areas and Actionable Objectives to which the THR Committee would focus its efforts. The participants of the workshop also agreed that the Committee should not exceed 14 members and that Rob Stevens (RAI Services) and Jason Flora (Altria) should co-lead the Committee initially and then the Committee will determine leadership long-term. The CORESTA Board then drafted and approved Terms of Reference from which to govern the Committee within the scope of CORESTA’s policies. The next step was to determine who would be on the THR Committee.

Following Rob and Jason’s updates on the THR Workshop at the October 2023 CORESTA SSPT and AP Conferences, CORESTA sent surveys to all Member Delegates requesting nominations for potential THR committee members. Once nominations were received, the Scientific Commission (SC) and Board Members voted. When casting their votes, it was important that the SC and Board ensure the THR Committee be comprised of a team of experts representing a diversity of relevant expertise, geographical regions, and membership organizations. We received numerous nominations for excellent experts in the field of THR. As we are targeting 14 members of the THR Committee to ensure we can be an agile team that can move quickly on our important focus areas, not all experts could be selected (via SC and Board votes) to participate in the inaugural THR Committee.

We first want to thank all nominees for their continued contributions to CORESTA and willingness to participate in the important work of the THR Committee.

Second, we would like to introduce our inaugural THR Committee to the CORESTA community. While no distribution is perfect, we are pleased with the expertise, geographical region, and membership organization diversity of this Committee. We have experts representing numerous member tobacco companies, a consulting company, a regulatory agency, and a university. The experts represent Europe, North America, and Asia and have expertise in the fields of Biochemistry, Chemistry, Regulatory Science, Toxicology, Agronomy, Plant Breeding, Pharmacology, Clinical Studies, and Behavioral Sciences. The nominees who received the most votes from the SC and Board and will join Rob and Jason on the Committee are as follows:

Candidate	Region	Organisation	Expertise
Sarah Baxter-Wright	North America	RAI Services	Biochemistry
Colin Sinclair	Europe	Philip Morris International	Chemistry
Todd Cecil	North America	US Food & Drug Administration	Regulatory science
Liam Simms	Europe	Imperial Brands	Toxicology
Anne Fisher	North America	University of Kentucky	Agronomy, plant breeding
Dai Yuki	Asia	Japan Tobacco Inc.	Pharmacology
Tryggve Ljung	North America & Europe	Swedish Match AB	Clinical studies
Neil Sherwood	Europe	Neil Sherwood Consulting	Behavioral science
Grant O’Connell	Europe	Japan Tobacco International	Pharmacology
Michael McEwan	Europe	British American Tobacco	Biochemistry
Karl Wagner	North America	Altria Client Services	Chemistry
Park Chul Hoon	Asia	KT&G	Chemistry

On behalf of the CORESTA SC and Board, we want to again thank all nominees for their willingness to participate. In many cases, the THR Committee may reach out for your assistance on specific work items, and you will be considered as potential future members.

The THR Committee is excited to begin work on the Key Focus Areas and Objectives and looks forward to presenting its first report in October 2024 at the CORESTA Congress in Edinburgh.



Rob STEVENS  
Co-Lead



Jason FLORA  
Co-Lead

## TOBACCO HARM REDUCTION Committee launched

# CORESTA STUDY GROUPS

**UPDATE**

The scientific work of CORESTA, overseen by the Scientific Commission, is carried out within four Study Groups:

- Agronomy & Leaf Integrity
- Phytopathology & Genetics
- Smoke Science
- Product Technology

This structure was formalised in 1966, although the Smoke Study Group was initially set up in 1959.

In 2002, the remits of the Smoke and Technology Study Groups were revised, and the Study Groups were renamed Smoke Science and Product Technology, respectively. The main mission of the Smoke Science Study Group was to investigate chemical and biological aspects of smoke components of tobacco products and means to assess exposure and product use behavior.

Since the landscape of tobacco products has been significantly disrupted, especially with the arrival of new non-combustible products, it has seemed important to rename this group to better reflect its current mission. This mission now focuses on the scientific study of emissions from, and exposure to, both conventional and emerging tobacco products.

After discussions at the Scientific Commission level and validation by the CORESTA Board, the name selected for the Study Group was "Product Science". This selection was made for a variety of reasons:

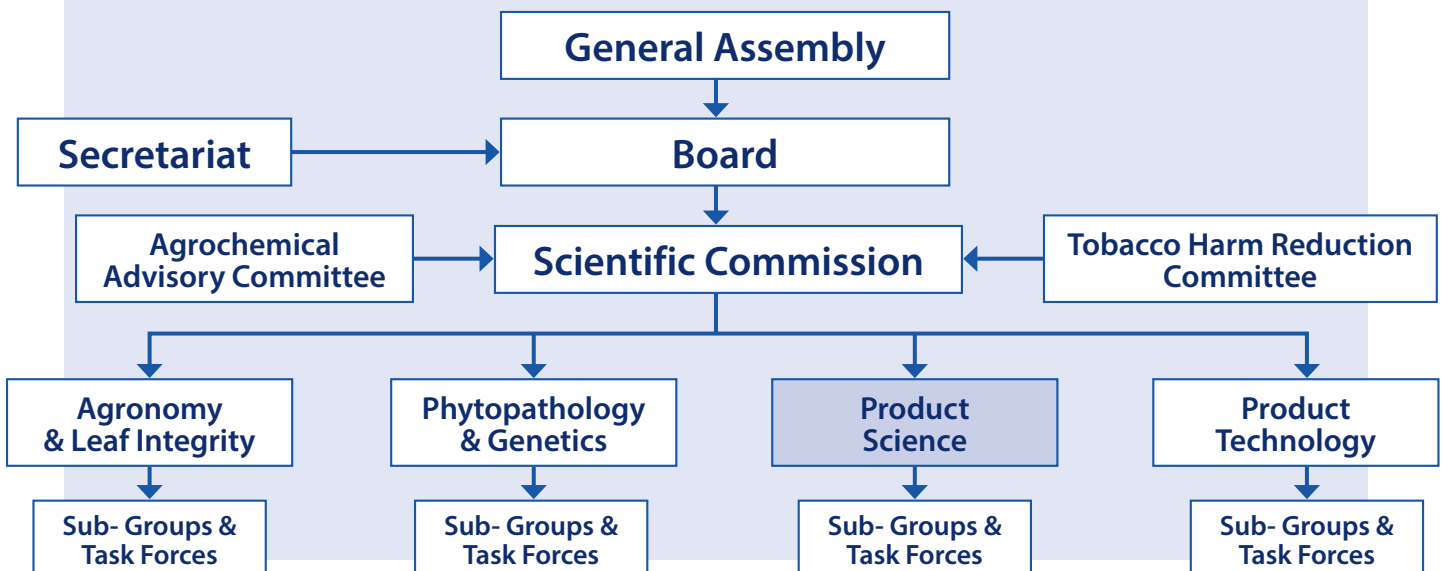
- **Clarity and Precision:** The name "Product Science" is concise and easy to understand, which helps in communicating the purpose of the group effectively.
- **Broad Scope:** Product Science is a multidisciplinary field that encompasses the scientific study of products, including their composition, analysis and effects on health and behavior. It allows the working group to explore different dimensions of tobacco products, including conventional and emerging ones.
- **Future-Proofing:** The name "Product Science" is not limited to a specific type of tobacco product or technology. It allows the working group to adapt to future changes in the tobacco industry, such as the introduction of new products or technologies, without needing to change its name.
- **Alignment with Mission:** The name "Product Science" aligns well with the mission of the working group, which is to investigate the scientific aspects of tobacco products, including the development of specific chemical, toxicological, and biological test methods and the investigation of means to assess exposure, product use, and behavior.

Overall, the name "Product Science" was chosen because it is clear, inclusive, future-proof, and aligned with the mission of the working group. It effectively communicates the Study Group's focus on the scientific study of conventional and emerging tobacco products and allows for flexibility in exploring different aspects of this complex and evolving field.



Xavier CAHOURS  
Vice-President  
Scientific Commission  
SSPT Study Groups

**“SMOKE  
SCIENCE”  
Study Group  
changes its  
name to  
“PRODUCT  
SCIENCE”**



## CORESTA SUB-GROUPS & TASK FORCES

### PRODUCT TECHNOLOGY Study Group

#### Change of Study Group: Sub-Group Smoke Analysis (SA)

UPDATE

The CORESTA Scientific Commission approved a proposal to move the Smoke Analysis Sub-Group from the Product Science (ex Smoke Science) Study Group to the Product Technology Study Group. To be consistent with the Sub-Group's activities it was decided that it should be within the same structure as the EVAP and HTP Sub-Groups.

#### Amendment to Objectives: Sub-Group Tobacco and Tobacco Products Analysis (TTPA)

UPDATE

Updated Objectives:

1. To propose and maintain CORESTA Recommended Methods (CRMs) and related documents for the analysis of tobacco and unburned tobacco products.
2. To organise interlaboratory testing related to Objective 1.
3. To organise the manufacture of and maintain traditional and modern oral nicotine reference products.

The third objective was revised and reference to “smokeless tobacco products” replaced by “traditional and modern oral nicotine reference products” to better reflect the wider range of products covered by the group's work.

### AGRONOMY & LEAF INTEGRITY Study Group

#### Amendment to Objectives: Sub-Group Proficiency Testing for Detection of Transgenic Tobacco (GMO)

UPDATE

Updated Objectives:

1. To establish a Proficiency Testing Scheme to enable participants to monitor their laboratory testing performance by means of interlaboratory comparisons of analytical results obtained by using appropriate PCR methods for the detection of GM tobacco.
2. To provide an independent assessment of the quality of data being produced by participating laboratories, through the Tobacco Proficiency Testing Scheme.

The definition of the objectives was expanded to better cover the scope of the work of the group.

#### 2024 GMO Proficiency Test

##### Call for Participation

CORESTA's Proficiency Testing for Detection of Transgenic Tobacco Sub-Group is organising its next Proficiency Test, which will be run by the FERA Science UK–FAPAS scheme.

Registration for the proficiency testing is open. Should you wish to participate or receive further information, please contact the Sub-Group Coordinator, Sitakanta Pattanaik at [spatt2@uky.edu](mailto:spatt2@uky.edu)

#### Amendment to Objectives: TSNA in Air-cured and Fire-cured Tobacco (TSNA)

UPDATE

Updated Objective:

- Investigate practices that reduce TSNA in air-cured and fire-cured tobacco at any stage of tobacco production through collaborative studies and information gathering.

The above single objective replaces the former ones covering data loggers, sampling methods, and literature reviews that have been completed.

### PHYTOPATHOLOGY & GENETICS Study Group

#### Amendment to Objectives: Collaborative Study Black Shank (BKS)

UPDATE

Updated Objectives:

1. To test available sources of black shank resistance in a global collaborative study
2. To determine conclusively that data received relate to black shank and not Fusarium wilt.

The former objectives 2 and 3 on the establishment of relative resistances of varieties in different locations and causal pathogen race composition were cancelled.

## CORESTA PROJECTS

- **Project 397: Presentation at TWC on CORESTA Strategy, Cooperation, Achievements and Perspectives - Jan 2024**  
CORESTA - Approved December 2023
- **Project 398: Evaluation of OECD's Guidance Document Good *In Vitro* Method Practices (GIVIMP) and Applicability for NGP *In Vitro* Studies**  
TF NGTX - 21<sup>st</sup> Century Toxicology for Next Generation Tobacco and Nicotine Products - Approved January 2024
- **Project 399: Standardisation of High Content Screening as a possible future New Assessment Methodology**  
TF NGTX - 21<sup>st</sup> Century Toxicology for Next Generation Tobacco and Nicotine Products - Approved January 2024
- **Project 400: 20<sup>th</sup> FAPAS CPA Analysis Proficiency Test**  
SG AA - Agrochemicals Analysis - Approved December 2023
- **Project 401: Ames Test Study - Inter-Laboratory Proficiency Study**  
SG IVT - *In Vitro* Toxicity Testing - Approved January 2024
- **Project 402: Presentation on Overview of CORESTA Activities for Nicotine Pouches at IIVS 9<sup>th</sup> Workshop (IVW9) 25-27 Jan 2024**  
TF NGTX - 21<sup>st</sup> Century Toxicology for Next Generation Tobacco and Nicotine Products - Approved January 2024
- **Project 403: Presentation at EU Minor Uses Coordination Facility (MUCF) Commodity Expert Group (CEG) Tobacco Online Meeting 26 March 2024**  
SG IPM - Integrated Pest Management - Approved February 2024
- **Project 404: 9<sup>th</sup> Proficiency Test for Detection of Transgenic Tobacco**  
SG GMO - Proficiency Testing for Detection of Transgenic Tobacco - Approved February 2024
- **Project 405: Building a "Fit-for-Purpose" Repository for Descriptive and Psychometric Consumer Reported Outcome Measures (CROM) using Third-Party Support**  
TF CROM - Consumer Reported Outcome Measures Consortium - Approved February 2024
- **Project 406: Guide for CORESTA Ignition Propensity Monitor Test Piece Production and Evaluation Requirements**  
SG SA - Smoke Analysis - Approved February 2024
- **Project 407: Communication on CORESTA Strategy and Projects at ISO/TC126 Meeting - Catania, Italy - April 2024**  
CORESTA - Approved March 2024
- **Project 408: Recommendations for Conducting Cytotoxicity and Genotoxicity Hazard Characterization of Liquids in ENDS (e-liquid) using *In Vitro* Assays**  
SG IVT - *In Vitro* Toxicity Testing - Approved March 2024

## CORESTA RECOMMENDED METHODS

All CORESTA Guides may be downloaded in PDF format at [www.coresta.org](http://www.coresta.org)

### New

- **CRM No. 105** – Determination of Nicotine Impurities and Degradants in Nicotine Pouches by LC-MS/MS  
(December 2023) [TPA-246-3-CRM-105]

In this Recommended Method, nicotine pouches, or white pouches, are oral tobacco products that contain tobacco derived nicotine, but not tobacco leaf. The nicotine degradants included are anatabine, anabasine, nicotine-N'-oxide, myosmine, β-nicotyrine, cotinine, and nornicotine. The CRM is supported by the Technical Report *Collaborative Study for the Determination of Nicotine Degradants and Impurities in Nicotine Pouches by LC-MS/MS*, also published in December 2023.

- **CRM No. 106** – Determination of Hydrogen Cyanide in Mainstream Cigarette Smoke by Continuous Flow Analyzer  
(February 2024) [SA-296-3-CRM-106]

This Recommended Method is supported by the Technical Report *2022 Collaborative Study for HCN in Mainstream Cigarette Smoke*, also published in February 2024.

- **CRM No. 107** – Determination of Glycerol, Propylene Glycol and Nicotine in the Aerosol of Heated Tobacco Products by Gas Chromatographic Analysis  
(March 2024) [HTP-348-CRM-107]

This Recommended Method is applicable to analysis of glycerol, propylene glycol, and nicotine in trapped heated tobacco aerosol. The CRM is supported by the Technical Report *Proficiency Study for Propylene Glycol, Glycerin, Nicotine, CO, NO, NO<sub>x</sub>, ACM, and DML in HTP Aerosol*, published in September 2022.

## CORESTA REPORTS

The following reports have been released and published on the CORESTA website at [www.coresta.org](http://www.coresta.org):

- **Collaborative Study for the Determination of Nicotine Degradants and Impurities in Nicotine Pouches by LC-MS/MS**  
Technical Report [TTPA-246-2-CTR] – December 2023 (Sub-Group Tobacco and Tobacco Products Analysis)  
The CORESTA Tobacco and Tobacco Products Analysis Sub-Group (TTPA) initiated a collaborative study for the determination of nicotine impurities and degradants in nicotine pouch filler. The intent of this study was to propose a CORESTA Recommended Method (CRM) and to provide repeatability (r) and reproducibility (R) results and z-scores to support laboratory accreditation. The results of the study demonstrated that the proposed CRM was suitable, and the method was published as CRM No. 105.
- **16<sup>th</sup> Collaborative Study (2023) on Physical Parameters of Cigarettes and Filter Rods**  
Technical Report [PTM-368-CTR] – February 2024 (Sub-Group Physical Test Methods)  
The CORESTA Physical Test Methods (PTM) Sub-Group carries out a normally annual inter-laboratory study on physical parameters of cigarettes and filter rods. This Collaborative Study monitors the repeatability and reproducibility of the test methods used and allows the participating laboratories to assess their performance when measuring certain physical parameters of cigarettes and filter rods, such as weight, diameter, pressure drop, draw resistance and ventilation. In addition to monitoring the performance of the test methods, the results from this study allow each laboratory to evaluate its proficiency in comparison to other laboratories, to derive actions for improvement and to fulfil accreditation requirements. This report covers the results of the 16<sup>th</sup> Collaborative Study on physical parameters conducted in 2023.
- **The 2022 Collaborative Study for HCN in Mainstream Cigarette Smoke**  
Technical Report [SA-296-2-CTR] – February 2024 (Sub-Group Smoke Analysis)  
As a follow-up to the 2021 proficiency study, a Collaborative Study was conducted in an effort to publish a CORESTA Recommended Method (CRM) on the determination of hydrogen cyanide (HCN) in mainstream cigarette smoke that accommodates the total HCN-only pad and pad plus impinger reporting requirements. Statistical analysis was carried out following the ISO Standard 5725 to generate repeatability (r) and reproducibility (R) data on a combined data set. The test results of the study were acceptable, and the method was published as CRM No. 106.
- **2023 Collaborative Study of CORESTA Monitor 9 (CM9) and the Evaluation of a Potential Successor, CORESTA Monitor 10 (CM10) for the Determination of Test Piece Weight, TPM, Water, Nicotine, NFDPM, Carbon Monoxide and Puff Count obtained in Mainstream Smoke under ISO 3308 and ISO 20778, respective Health Canada T-115 Conditions**  
Technical Report [SA-340-CTR] – March 2024 (Sub-Group Smoke Analysis)  
The CORESTA Smoke Analysis (SA) Sub-Group is responsible for organising the annual testing of the ISO 16055 conform CORESTA Monitor test pieces to verify its continued suitability as a monitor. The current monitor is CORESTA Monitor 9 (CM9) and the intent was to evaluate the potential successor, CORESTA Monitor 10 (CM10) as the new monitor. The 2023 study was designed to measure smoke yields of total particulate matter (TPM), nicotine-free dry particulate matter (NFDPM), nicotine, carbon monoxide (CO), and puff count for CM9 and CM10 in the mainstream smoke obtained under ISO 3308 and ISO 20778 smoking regimes. Since no ISO Standard for the determination of NFDPM under ISO 20778 conditions is applicable, the yields were determined in accordance to Health Canada T-115. The study also determined intra- and inter-laboratory variability for the measured smoke yields for CM9 and CM10 under the different smoking regimes and evaluated CM10 as the potential new monitor test piece. The performance of the CM9 monitor in this testing was in line with its historical performance and CM9 continues to be a suitable smoke analysis monitor. CM10 generally has lower yield and higher puff count than CM9 but has generally similar variability. Since variability is the key factor in suitability as a monitor, CM10 performs adequately to serve as a monitor test piece.
- **Best Practices and Guidelines with respect to Psychometric CROM for use in Research on Tobacco and Nicotine Containing Products**  
Technical Report [CROM-269-1-CTR] – March 2024 (Task Force Consumer Reported Outcome Measures Consortium)  
The CORESTA Consumer Reported Outcome Measures (CROM) Task Force was formed to establish best practices and guidelines for the development and use of consumer reported outcome measures in research on tobacco and nicotine-containing products. CROM was defined as a measurement instrument where data are collected by self-report from the subject of research. “Psychometric” CROM are intended to measure underlying (unobservable) attributes of an individual, and “Descriptive” CROM are intended to measure observable characteristics and behaviour. This document represents the final deliverable of the work focused on Psychometric CROM, i.e., guidelines articulating best practices for the selection, development and validation, modification, and implementation of Psychometric CROM for use in research on tobacco and nicotine-containing products.



## CORESTA GUIDES

New

All CORESTA Guides may be  
downloaded in PDF format at

[www.coresta.org](http://www.coresta.org)

### CORESTA Guide No. 29

Best Practice in the Application of Biomarkers of Exposure as Compliance Measures in Long-term and Epidemiological Studies of New Nicotine and Tobacco Products

(April 2024) [BMK-362-CTG-29]

This guide discusses the suitability of biomarkers of exposure (BoE) for measuring product compliance based on their abundance, specificity and half-life and suggests single BoE and BoE patterns to verify product use status for the most popular product categories (e-cigarettes, heated tobacco products, nicotine pouches) as well as combustible cigarettes and traditional, smokeless tobacco like moist snuff based on the current scientific literature. The guide may help researchers in the field in the design of new studies with a robust assessment of subjects' compliance in long-term, epidemiological and/or cross-sectional studies where the use behaviour of the subjects is not under rigorous control but mainly assessed by self-report.

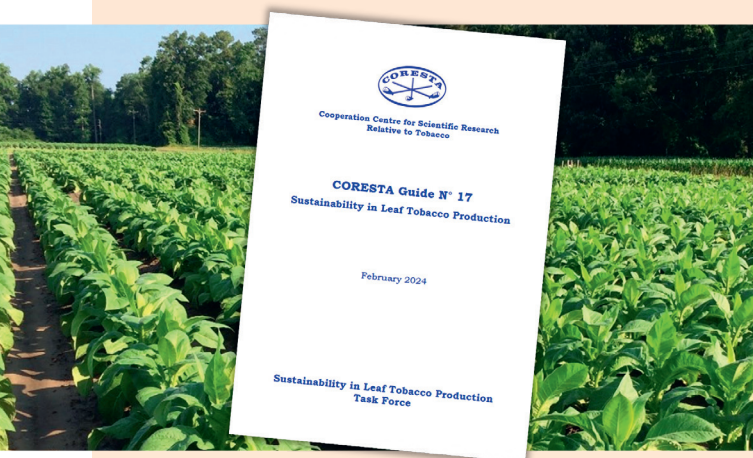
### Revision and Update

### CORESTA Guide No. 17

Sustainability in Leaf Tobacco Production

(Second edition – February 2024) [SUST-364-CTG-17]

As long ago as 2012, the CORESTA membership recognised that a sustainable production system was key to a reliable supply of raw material. This led to the formation of the Sustainability in Leaf Tobacco Production Task Force (SUST) that was tasked with identifying key issues for sustainability in tobacco leaf production, to complete Guide No. 3: *Good Agricultural Practices*, and to identify tools that would support sustainable tobacco production. While the creation of a sustainability document was not an original objective of the SUST TF, one cannot help but believe that this group quickly identified a knowledge gap. As such, the first version of the CORESTA Guide No. 17: *Sustainability in Leaf Tobacco Production*, which focused exclusively on leaf production and gave considerable recognition to the farmer, was published in 2016. The Task Force was then disbanded.



While many of those Task Force members are no longer affiliated with CORESTA or active within the global industry, they are to be acknowledged for accepting this challenge and for delivering what is recognized as a useful document across tobacco types, production origins, and farming systems.

Guide No. 17 was never meant to be a static document and with the monumental challenges that had arisen since 2016, it was long past time to give Guide No. 17 a “makeover”. The overhaul was first proposed to the Scientific Commission early 2023, and after significant discussion and specific highlights that focused on special areas of attention, the Agro-Phyto Study Group welcomed its first grand challenge as a new team.

As an association, CORESTA continues to acknowledge how much the world has changed over the last five to ten years. Some of these changes were in place before the COVID-19 pandemic, and others were merely revealed by this plague. Regardless of what the root causes for change may be, we must continue to look both inward and outward to help promote, increase, and raise awareness in the arena of sustainable leaf production practices. Moreover, as global production origins shift, and new producers enter the supply chain, we see emerging opportunities to further educate and inform our stakeholders.

CORESTA Guide No. 17 is not designed to be a measuring stick whereby all producers and purchasers are compared. Rather, it is merely regarded as a tool that has utility in every region where tobacco is grown. Our goal as the Agro-Phyto Study Group was to solicit input from a diversity of CORESTA members and global tobacco experts to ensure that all vantage points of production were considered, regardless of tobacco type or scale of production. We are very proud to share that our efforts have produced a new version of Guide No. 17. We hope that Version 2 accurately portrays the goals of the original Sustainability Task Force while addressing today's production challenges. In addition, you can be assured that we will continue to revisit Guide No. 17 as our industry and association moves into the future.

Finally, a special thank you is owed to the 38 individuals that contributed to this revision. Were it not for the commitment of CORESTA members and colleagues from across the globe, the document would not be as comprehensive and useful as it is in its current state. A list of contributing authors can be found at the very end Guide No. 17.

## Agrochemicals Analysis (AA) Sub-Group

As we dive into the new year, the Agrochemicals Analysis Sub-Group (AA SG) has wasted no time in kicking off with activities and initiatives to set the tone for an exciting and fulfilling year ahead. Read on to discover what has been keeping us busy and what is on the horizon.

We are thrilled to announce that our group's first ever webinar was held on 25 January 2024. There were several reasons for hosting the webinar titled "Proficiency Testing for Pesticide Residue Analysis".

- Firstly, due to the complexity of the tobacco matrix and the interaction with complex CPAs (Crop Protection Agents), the number of laboratories across the globe who have the technical capabilities to conduct such analysis, has been, unfortunately, on the decline. This is causing specific challenges to producers, manufacturers and others who are searching for credible laboratories for CPAs analysis. Accordingly, the first objective was to introduce the Proficiency Test and its benefits to potential new laboratories that are interested in testing CPAs for tobacco.
- Secondly, a venue was created in which laboratories, together with CORESTA and Fera Science/FAPAS Scheme as the coordinators of the Proficiency Test, could discuss operational aspects, and specifically the registration process, testing procedures, results submissions, and other. Therefore, the second objective was to ensure a smooth process going forward with the Proficiency Test 2024.

With a turnout surpassing our initial estimates, it is clear that the significance of the work this Sub-Group resonates deeply within the tobacco community. Over 90 participants from various entities, including laboratories, local and international companies, academia, and others gained valuable insights into the Proficiency Test. An overview of the key learnings and conclusions from the numerous Proficiency Tests gathered over the years was presented alongside a summary of CPAs that are commonly used in tobacco production and/or found in tobacco samples. Furthermore, the objectives, past and current projects of the AA SG were presented as well as the importance of CORESTA in the context of CPAs in tobacco.

The speakers of this webinar were Dominic Anderson representing Fera Science UK/FAPAS Scheme as the Proficiency Test collaborator, Heather Westberg from Global Laboratory Services – USA as the secretary of the AA SG and Aleksandra Pochucha from JT International GmbH as the coordinator of the AA SG. With the support of CORESTA's Secretariat, the webinar drew considerable engagement and positive feedback from participants. We thank the Secretariat for the support provided and look forward to building upon this success in future endeavours.

As the main objective of the AA SG is to conduct the Proficiency Test, efforts have been put towards ensuring that the 2024 test is executed according to the set timeline with an increased number of participating laboratories compared to last year. The test will commence in March and the provisional number of registered laboratories is higher than last year.

Among other projects, the update of CORESTA Guide No. 5 is well underway and will be completed in Q2. Additionally, there are ongoing preparations for the AA SG annual meeting which will take place in Thessaloniki, Greece, from 30 July to 2 August, at the kind invitation of SEKE SA. The agenda will be communicated soon.

For those that are interested to participate in the work of the AA SG or the annual meeting in Thessaloniki, Greece, please contact Aleksandra Pochucha ([aleksandra.pochucha@jti.com](mailto:aleksandra.pochucha@jti.com)).



Aleksandra POCHUCHA  
AA SG Coordinator



Heather WESTBERG  
AA SG Secretary

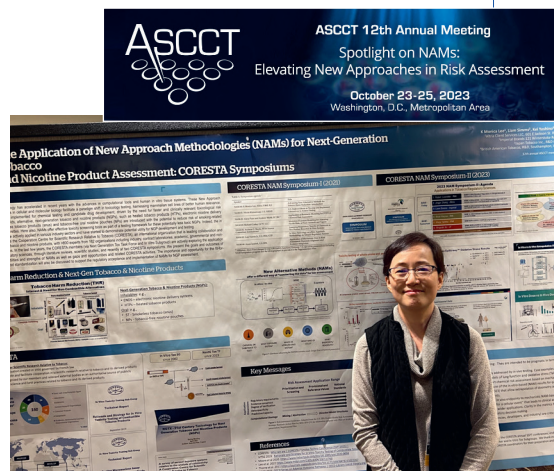
## CORESTA COMMUNICATION AT EXTERNAL EVENTS

### American Society for Cellular and Computational Toxicology (ASCCT) 12<sup>th</sup> Annual Meeting

The ASCCT is a "professional society for those working in all aspects of *in vitro* and computational toxicology" and aims to "facilitate the development, acceptance, and routine use of 'New Approaches Methodologies' (NAMs) through open dialog between industry, academic, advocacy, and regulatory scientists".

The ASCCT 12<sup>th</sup> Annual Meeting was held in Washington, DC, USA from 23-25 October 2023.

- Poster presentation on "The Application of New Approach Methodologies (NAMs) for Next-Generation Tobacco and Nicotine Product Assessment: CORESTA Symposiums" by K. Monica Lee (Altria), member of the CORESTA IVT, NGTX and BMK working groups.



## Physical Test Methods (PTM) Sub-Group

On 19 September 2023, the PTM Sub-Group held its 37<sup>th</sup> meeting in Milton Keynes, UK. The meeting was well attended, and the current status of all of the Sub-Group's ongoing projects and potential future work items were discussed. Since the meeting, some of these projects have already been completed and the Technical Reports published.

This includes the Technical Report on the 16<sup>th</sup> Collaborative Study on Physical Parameters of Filters and Cigarettes which had 24 participating laboratories providing 28 data sets for the analysis. This study is the major routine work item of the PTM Sub-Group and one of the few, if not the only, regular collaborative study on physical parameters for these products even outside of CORESTA. The PTM Sub-Group intends to continue with the 17<sup>th</sup> Collaborative Study on Physical Parameters in 2024, but the stock of cigarettes and filters has been exhausted in the meantime. Thanks to contributions from CORESTA members, filter and cigarette samples could be made available recently, which will last for three to four collaborative studies.

A Technical Report has also been published on the 3<sup>rd</sup> Collaborative Study on Air Permeability in December 2023. This collaborative study had 21 participating laboratories which provided 21 data sets. The study protocol included the determination of air permeability according to ISO 2965 of cigarette papers, tipping papers and highly porous plug wrap papers. This is a bi-annual study, so that the 4<sup>th</sup> collaborative study will be planned for 2025. This year the PTM Sub-Group will again focus on diffusion capacity (CRM 77) for which the 6<sup>th</sup> inter-laboratory study shall be carried out. The study will involve the measurement of diffusion capacity on bands of lower ignition propensity cigarette papers.

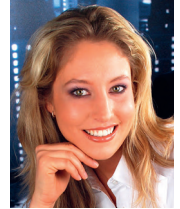
Apart from these projects the round robin tests on calibration standards for pressure drop, filter ventilation and air permeability continue. In these round robin tests calibration standards are circulated between three to five calibration laboratories. The projects have been substantially delayed during the last years due to issues with shipment of the calibration standards, but it is expected that the situation will normalize soon. In the meantime Technical Reports on the 16<sup>th</sup> Round Robin Test on Pressure Drop Calibration Standards and on the 1<sup>st</sup> Round Robin Test on Low Pressure Drop Calibration Standards have been published.

The PTM Sub-Group has also discussed the measurement of physical parameters of heated tobacco products (HTPs), but so far has not launched any projects. In order to better coordinate the work on physical parameters for novel tobacco products such as HTPs, e-cigarettes and oral pouches, a virtual meeting was held on 18 December 2023, including the coordinators of the relevant Sub-Groups, such as TTPA, EVAP and HTP, to discuss and define the form of future cooperation between these Sub-Groups and the PTM Sub-Group.

The 38<sup>th</sup> meeting of the PTM Sub-Group is scheduled for 17 April 2024, and will take place in Vienna, Austria.



Bernhard EITZINGER  
PTM SG Coordinator



Patricia MÜLLER  
PTM SG Secretary

## CORESTA COMMUNICATION AT EXTERNAL EVENTS (continued)

### 51<sup>st</sup> Tobacco Workers Conference (TWC 2024)

The Tobacco Workers' Conference (TWC) is a two-and-a-half-day event held every two years in the USA, mainly focussed on tobacco leaf production related topics. The 2024 TWC was organised in Knoxville, Tennessee, from 15-17 January.

- Presentation "CORESTA strategy, cooperation, achievements and perspectives" by Stéphane Colard, CORESTA Secretary General.

### Institute for In Vitro Sciences (IIVS) 9<sup>th</sup> Workshop

The IIVS is a "premier *in vitro* laboratory" that "couples rigorous scientific and compliance programs with education and outreach initiatives to promote the use and acceptance of these methods worldwide".

On 25-27 January, the IIVS hosted the 9<sup>th</sup> workshop in its *In Vitro* Workshop series focused on *in vitro* methodologies for genetic and other toxicity assessment of tobacco and nicotine products.

- Presentation "Overview of CORESTA activities for nicotine pouches" by Sara Moses (Swedish Match), member of the CORESTA NGTX Task Force.



TWC presentations are available via the Documents/ Abstracts section on the (redesigned) CORESTA website



## RESEARCHER SPOTLIGHT

*An introduction to up-and-coming graduate students and industry personnel*

### ROBIN ROUSSOS

**Name:**

Robin Roussos

**Current Employer and Position:**

Premium Tobacco Group – Group Agronomy  
Scientific Affairs Manager

**Current Work Location:**

Based out of Tanzania

**Place of Birth:**

Gent, Belgium

**What brought you into the tobacco industry?**

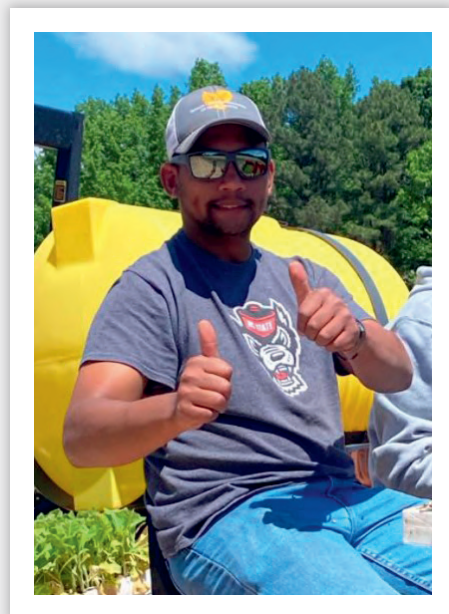
I grew up on a commercial tobacco farm in the southern highlands of Tanzania. Dry planting in the dust and excitement of the very first rains set my passion for this crop at a very young age.

**Where do you envision the collective industry in the next decade?**

The industry has gone through turbulent times in recent history, but I feel going forward we will need to adapt faster to global trends and changes in climate. All over the world we see more and more erratic weather events adversely affecting grower livelihoods and the industry at large. In ten years time, I envisage a global tobacco industry that has managed to tackle the current sustainability challenges, all pivoting on a dynamic and diverse grower base that is able to securely rely on tobacco for their livelihood. I also envisage reduced harm products dominating the scene and tobacco quality taking on a whole new shape in our industry.

**How should we as CORESTA address the grand challenges we face?**

The CORESTA Congress and various other bodies that meet periodically has been a very strong tool in bringing together the global tobacco scientific community. Going forward, I personally feel that more growers should participate in CORESTA. Growers have a unique outlook on the various challenges that face us as an industry and should be given an audience on the various events organized by CORESTA. After all, without them there would not be a tobacco industry.



## CORESTA COMMUNICATION AT EXTERNAL EVENTS (continued)

### European Minor Uses Coordination Facility (EU MUCF) Commodity Expert Group (CEG) on Tobacco

The mission of the EU MUCF is “to enable farmers in the EU to produce high quality crops by filling minor uses gaps through efficient collaboration to improve availability of chemical and non-chemical tools within an integrated pest management (IPM) framework”. The EU MUCF held a remote meeting on 26 March 2024 at which a presentation was made by Anne Fisher (University of Kentucky), CORESTA Board member and Coordinator of the CORESTA IPM Sub-Group, on “Integrated Pest Management”.



**All the presentations made at external events are available  
in the [Documents/CORESTA Presentations at Events](#) section of the CORESTA website**



Matthew Vann

## INSIGHT FROM A MEMBER

### THIS ONE'S FOR THE FARMERS

The New Year has started with a bang here in the Old North State. Just as soon as we finished celebrating the Christmas Season and bidding adieu to 2023, tobacco related activities kicked into overdrive. County production meetings and Good Agricultural Practices training events started in early-January. I'm proud to report that meetings in North Carolina were very well attended and that growers were highly engaged in the content that was shared. Although, smack dab in the middle of meeting season we had to divert our efforts to share production information and research findings at the 51st Tobacco Workers Conference. The broken record player in me keeps saying how great the conference was, from both a knowledge exchange and networking standpoint. I'm sure the 10+ inches of snow didn't hurt! (that's >25 cm of snow for those of y'all that refuse to leave the metric system...) Just as we wound up county production meetings, we convened the 2024 NC State University Tobacco Short Course, which is a three day crash course in all things related to flue-cured tobacco production. This was our first "normal" short course since the COVID-19 pandemic, and we had 30 participants equally divided into new tobacco farmers, County Extension Agents, and tobacco research station staff. Needless to say, turnout was better than anticipated! While the meeting/training side of the job has slowed over the last few weeks, we now find ourselves on the leading edge of greenhouse season. From my perspective, there's a lot of optimism and excitement for the 2024 flue-cured crop here in North Carolina. Personally, I'm glad to see the optimism expressed by our farmers.

As the saying goes, "to everything there is a season", and for those of us in Extension there's always a time to teach, a time to help, a time to speak, a time to listen, a time to research, a time to publish, and, yes, a time to fundraise. Within each of these action items, the farmer is the ultimate focus. Their presence is what makes Extension so special - for without the tobacco farmer, there is no raw material for manufacturers or finished goods for the consumer, in the vast majority of scenarios.

As I sit down from another long day of visiting local tobacco farmers, I can't help but be reminded about the broader impacts that we as tobacco scientists have on the decisions that farmers make on a daily basis. This may seem rather far-fetched at first glance, particularly within the realm of CORESTA, as most of our business is conducted away from the farm and our membership delegation doesn't include a large number of farmers or farmer-based organizations. However, there are numerous examples of CORESTA initiatives that feature farm level decisions at their core. For example, when CORESTA GRL's are established, those numbers are very likely to influence when and how (or IF) an agrochemical is used for crop husbandry. In addition, there are numerous farmer-centric CORESTA Guides, such as numbers 3, 17, 19, and 21. Other special initiatives such as the LNTP Task Force and Black Shank Sub-Group generate information that may eventually be used by growers in some fashion. The point of this is that what we do as a group isn't just impactful for CORESTA and member organizations, but it's also impactful to those that may not have a direct seat at the table, so to speak.

Given the massive need we have to fully connect with those that produce tobacco, it's exciting to reflect back on the Scientific Commission meeting in Knoxville, Tennessee. The plans made for 2024 have a significant focus on this particular group. For example, plans are underway to host a webinar that provides training on how to properly conduct field research. After all, the data obtained from field research is only as good as the methods used to generate it. In addition, we plan to host a larger discussion that focuses on yield limiting factors in all tobacco types. This particular topic is one that we hear a lot about on the Extension trail, so I'm looking forward to seeing what today's greatest tobacco minds can contribute.

*next page →*

## INSIGHT FROM A MEMBER (continued)

### THIS ONE'S FOR THE FARMERS (continued)

This renewed focus on the tobacco farmer is quite refreshing, and I'd like to think Farmer Steve had something to do with that. For those not in attendance at the 2023 AP Meeting, Farmer Steve is Steve Griffin. Steve's a bonafide tobacco farmer from North Carolina who participated in our ESG Workshop. I've known Steve (and his family) for years and wasn't at all surprised by the passion and honesty he portrayed. While his farming operation may be considered unique by some standards, his story is not. At its heart, his story is one of hard work, honesty, family and community values, investing in future generations, lifting up others, and speaking from a place of conviction. I find this to be the common thread among the tobacco farmers I work with on a day-to-day basis, those I grew up with, and those I've met in my travels. Our industry is blessed to work with and on behalf of such great people.

In closing, I do believe that 2024 has the potential to be one for the farmers. Of course, they need a lot of help from Mother Nature and from us! Let's be sure to step up and do our part.

**Matthew C. Vann, PhD**

(Associate Professor, NCSU, and elected member of the CORESTA Scientific Commission)

Spring 2024

#### Authors Note:

Be sure to visit the following websites if you'd like to learn more about some of the farmer-related content that's available (I also welcome information about other websites not listed!):

- 🌿 Agriculture Research & Extension Trust (Malawi) (<https://aret.org.mw/>)
- 🌿 Canadian Tobacco Research Foundation Website (<https://ctrf1.com/>)
- 🌿 Clemson Tobacco Portal (<https://www.clemson.edu/extension/agronomy/crops/tobacco.html>)
- 🌿 NC State Tobacco Growers Information Portal (<https://tobacco.ces.ncsu.edu/>)
- 🌿 Tobacco Research Institute of Tanzania (TORITA) (<https://www.torita.or.tz/>)
- 🌿 University of Georgia Tobacco Portal (<https://tobacco.caes.uga.edu/>)
- 🌿 University of Kentucky - Burley Tobacco Portal (<https://burleytobaccoextension.ca.uky.edu/>)
- 🌿 University of Kentucky - Dark Tobacco Portal (<https://darktobacco.ca.uky.edu/>)
- 🌿 University of Tennessee - Tobacco Information (<https://specialtycrops.tennessee.edu/>)
- 🌿 Virginia Tech Tobacco Portal (<https://www.arec.vaes.vt.edu/arec/southern-piedmont/research/agronomy/tobacco.html>)
- 🌿 Zimbabwe Tobacco Research Board (<https://www.kutsaga.co.zw/>)
- 🌿 2023-2024 Burley and Dark Tobacco Production Guide (<http://www2.ca.uky.edu/agcomm/pubs/ID/ID160/ID160.pdf>)
- 🌿 2024 NC State Tobacco Production Guide (<https://content.ces.ncsu.edu/flue-cured-tobacco-information>)
- 🌿 2024 Virginia Tech Tobacco Production Guide ([https://www.arec.vaes.vt.edu/content/dam/arec\\_vaes\\_vt\\_edu/southern-piedmont/2024-flue-cured-production-guide/2024 Flue-cured Production Guide.pdf](https://www.arec.vaes.vt.edu/content/dam/arec_vaes_vt_edu/southern-piedmont/2024-flue-cured-production-guide/2024%20Flue-cured%20Production%20Guide.pdf))

*The opinions expressed in this article are not necessarily reflective of the CORESTA or its members, including North Carolina State University.*

