



### **RAIN in October: Monthly Digest**

*Get the latest on #thaiRAIN's recent outreach to farmers, innovators, agrifood firms, academic institutions and organizations. In October, we took a significant step forward in our initiative to expand our on-burn campaigns among farmers by launching the "Chi River no-burn" campaign in four provinces in northeastern Thailand: Kalasin, Roi-Et, Khon Kaen, and Maha Sarakham. We have tested the microbial powder at Chaipattana Foundation's demonstration paddy fields. We also grew a network of no-burn initiatives in a highly engaging rice session of the "Reduction of Air Pollution through Avoidance of Burning in Agriculture" meeting. Activities to increase drone usage are in full swing. #thaiRAIN is also collaborating with the Department of Agriculture and the Community Rice Center to share knowledge on how they could improve yields, reduce costs, and lower environmental impacts.*

*Let's get into the details...*



### **#thaiRAIN Tests Microbial Powder at the Chaipattana Foundation's Demonstration Paddy Field**

During a light rainy day in October, #thaiRAIN demonstrated the multi-purpose potential of Siam Agri Supply's (SAS) microbial powder at the Chaipattana Foundation's Agricultural Service Center demonstration paddy field in Pathum Thani. Dr. Wichien Yongmanitchai, the developer of "Soil Digest," demonstrated how it may be easily used as an alternative to farmers burning rice residue. By blooming one sachet of bacteria in a gallon of water overnight, nearly one hectare of land can be covered for residue decomposition.

#thaiRAIN's previous pilot test showed that the microbial powder, which contains four strains of Bacillus bacteria, can decompose rice stubble in just two weeks. This rapid breakdown allows farmers to clear their land in time for the next planting cycle. It also eliminates toxic residue on soil, resulting in the return of small animals. #thaiRAIN will expand its partnership to commercially scale this microbial powder as a solution to burning by farmers in Thailand and Southeast Asia.

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### **#thaiRAIN Grew Partnership to Reduce Rice Farmers' Burning**

#thaiRAIN advanced dialogues on reducing agricultural burning in Thailand and Southeast Asia at the Friends of Thai Agriculture (FTA)'s "Conference on Reduction of Air Pollution through Avoidance of Burning in Agriculture." Expanding our network of professionals and organizations, we highlighted the impact of burning residues from rice, maize, and sugar cane crops on air and soil quality. Our interactive workshop on rice explored microbial powder as a promising solution for decomposing rice stubble, offering a viable path to reduce agricultural haze and increase farmers' economic returns. This collaboration with FTA and partners highlights the importance of sharing knowledge with farmers, demonstrating products, and providing an easily accessible distribution network for them.



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### **#thaiRAIN Helps Khon Kaen Farmers Say “No Burn”**

#thaiRAIN has launched the "Chi River No-Burn" campaign to share knowledge with rice farmers in Thailand's Northeastern province of Khon Kaen and the provincial agricultural offices about the impacts of stubble burning on their health, income and environment. By promoting microbial decomposers as a sustainable alternative, the campaign aims to improve soil health, increase yields, and lower PM 2.5 levels. Community-level training, distribution channel building and market incentives will follow. We anticipate this model to be replicated across Thailand and beyond.



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### **#thaiRAIN Helps Kalasin Farmers Say “No Burn”**

#thaiRAIN has launched the "Chi River No-Burn" campaign to share knowledge with rice farmers in Thailand's Northeastern province of Kalasin and the provincial agricultural offices about the impacts of stubble burning on their health, income and environment. By



promoting microbial decomposers as a sustainable alternative, the campaign aims to improve soil health, increase yields, and lower PM 2.5 levels. Community-level training, distribution channel building and market incentives will follow. We anticipate this model to be replicated across Thailand and beyond.

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### **#thaiRAIN Helps Roi Et Farmers Say “No Burn”**

#thaiRAIN, has launched the "Chi River No-Burn" campaign to share knowledge with rice farmers in Thailand's Northeastern province of Roi Et and the provincial agricultural offices about the impacts of stubble burning on their health, income and environment. By promoting microbial decomposers as a sustainable alternative, the campaign aims to improve soil health, increase yields, and lower PM 2.5 levels. Community-level training, distribution channel building and market incentives will follow. We anticipate this model to be replicated across Thailand and beyond.



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## #thaiRAIN Helps Maha Sarakham Farmers Say “No Burn”

#thaiRAIN has launched the "Chi River No-Burn" campaign to share knowledge with rice farmers in Thailand’s Northeastern province of Maha Sarakham and the provincial agricultural offices about the impacts of stubble burning on their health, income and environment. By promoting microbial decomposers as a sustainable alternative, the campaign aims to improve soil health, increase yields, and lower PM 2.5 levels. Community-level training, distribution channel building and market incentives will follow. We anticipate this model to be replicated across Thailand and beyond.

[See more](#)



## #thaiRAIN Partners with Community Rice Centers to Promote Climate-Smart Farming

#thaiRAIN is collaborating with Community Rice Centers (CRCs) to enhance farmers' understanding of climate-smart practices through community training sessions. Focusing on innovations like microbial powder decomposers and controlled-release



fertilizers, this initiative aims to improve productivity and reduce environmental impact. Discussions with Mr. Jaruek Kamol-in, President of Ta Yiam CRC, will help expand outreach to surrounding provinces, targeting 1,000 farmers initially. As part of our USDA-funded initiative, we aim to scale climate-smart innovations to 30,000 farmers and launch a Southeast Asia climate hub by 2027.

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### **#thaiRAIN and STOU Partner to Drive Climate-Smart Agriculture in Southeast Asia**

#thaiRAIN and Sukhothai Thammathirat Open University (STOU) have signed an MOU under the USDA-funded RAIN Project to establish an International Climate Hub focused on climate-smart agriculture for Thailand and Southeast Asia. This partnership will source and validate new technologies, build capacity among farmers, scale sustainable practices, and foster cross-sector collaboration to shape a resilient agricultural future. Through these efforts, we aim to support farmers, communities, and the environment toward a more sustainable, climate-adaptive future.



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## **USDA #thaiRAIN Welcomes Dr. Chainarong Rattanakreetakul to Lead SOP Development for Agricultural Drones**

USDA #thaiRAIN is privileged to welcome Dr. Chainarong Rattanakreetakul from Kasetsart University, who is joining the USDA #thaiRAIN initiative to develop Standard Operating Procedures (SOPs) for drones in agriculture. Launching on December 12, this program aims to enhance the skills of 10,000 professionals, including current service providers and young job seekers, ensuring safe and efficient drone operations. In collaboration with the Department of Agriculture and the Thai Agricultural Innovation Trade Association, this initiative represents Thailand's first effort to create a sustainable, market-driven ecosystem for agricultural drones, promoting widespread adoption among farmers.



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## **#thaiRAIN and DOA Collaborate to Enhance Agricultural Drone Use in Thailand**

Rainmaker Phonlapat Amornrattanaket met with the Department of Agriculture's Plant Protection Research and Development Office, including experts from Pest Management Group and Thai Agricultural Innovation Trade Association, to boost drone use among Thai farmers. The collaboration will involve developing a comprehensive drone training curriculum and fostering public-private cooperation to advance drone capabilities in agriculture. A nationwide launch of certification courses for drone sprayers is upcoming as part of thaiRAIN's USDA-funded initiative to scale climate-smart solutions across Southeast Asia.



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## **#thaiRAIN Partners with Blackbox to Boost Youth Engagement and Scale AgTech for Thai Farmers**

#thaiRAIN recently met with Blackbox, a dynamic team known for enhancing capacity development in various sectors. This initial discussion opened doors for collaboration to leverage Blackbox's



expertise in engaging youth and expanding our AgTech outreach to benefit 30,000 farmers across Thailand.

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### **#thaiRAIN Explores Partnership with Wankaew Innovate to Scale AgTech for Thai Farmers**

#thaiRAIN met with Wankaew Innovate, a promising startup under Indragate, to explore potential collaborations. Known for creating platforms that boost farmers' income and partnering with the Ministry of Agriculture, Wankaew Innovate could be instrumental in helping RAIN bring AgTech solutions to 30,000 farmers across Thailand.

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## USDA #thaiRAIN Highlights Agrifood Climate-Smart Innovations

USDA #thaiRAIN regularly publishes Success Story articles showcasing our "5-S" approach: sourcing, scaling, supporting, selling, and sharing agrifood climate-smart innovations. In a recent workshop with Michigan State University, Kasetsart University, and Mekong Institute, experts emphasized the need for collaboration across the agrifood value chain to address climate challenges. Prof. Duncan Boughton highlighted that science-driven innovation must align with market incentives, while Assoc. Prof. Witsanu Attavanich stressed the importance of centers of excellence for improved coordination and best practice sharing.

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## RAINmaker Joins ADB Field Demonstration for Sustainable Rice Production

RAINmaker Chayada Muangsopa participated in a field demonstration organized by the National Innovation Agency and Asian Development Bank (ADB) to showcase how integrated biotechnology and digital technology can



Panel agreed on building agrifood center of excellence

**We need to talk about agrifood climate-smart innovations**  
Southeast Asian farmers are facing the concrete effects of climate change, such as unusual weather, rising heat, water shortages, increasing pest infestations, and devastating floods. The region has invested in R&D and innovations for many years, but the results are unsatisfactory. Crop yield increases have stalled in many countries. Food costs have risen, and the agrifood industry remains a major source of global greenhouse gases. Adding to the problem, most farmers are aging, and many young people are reluctant to work on farms, resulting in a slow transition from traditional methods to more sustainable and productive practices. Given these challenges, USDA Thailand RAIN

(#thaiRAIN) has realized the need to promote efficient R&D investment and implementation to promote climate-smart innovations (CSI) across the region. It considers the approach of centers of excellence, facilitating collaboration across related agencies and countries in the region. This approach is useful in driving innovations to address the climate change challenges in the region's agrifood system. These centers of excellence seek to promote collaboration between the public and private sectors, academic institutions and related agencies in sharing knowledge, market-driven best practices, and experiences to promote the market for these innovations. In late April, Winrock International, Mekong Institute, Michigan State University, and Kasetsart University co-hosted a workshop titled "Exploring the Potential for Establishing a Sustainable Agrifood System Center of Excellence in Southeast Asia," which concluded that the region does indeed require a center of excellence approach to accelerate the adoption of sustainable practices and innovative solutions that can address the challenges posed by climate challenges in the agrifood system. It might be founded in each regional country or as an entity that operates across the region.

**Fostering CSI Collaboration**  
Apart from improving productivity to counter stress caused by climate impacts, CSI must aim to reduce GHG

winrock.org



enhance sustainability in rice supply chains. The event featured five leading AgTech startups, including BIOM, ListenField, EASYRICE Digital Technology, Born Thailand, and Warich, and attracted over 50 farmers who experimented with innovative solutions on a nearly 2-hectare demonstration field. This initiative, part of ADB's Greater Mekong Subregion Economic Cooperation Program, aims to improve farmers' livelihoods and promote lower carbon-footprint agriculture.

[See more](#)

*If you have any comments or feedback about the newsletters, please feel free to let us know!*

*#thaiRAIN is supported by U.S. Department of Agriculture Foreign Agricultural Service, and implemented by Winrock International.*