

# KAPUCIN

Kabar Seputar Cerita Inspiratif SCOPI



SUSTAINABLE COFFEE PLATFORM OF INDONESIA



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## Diskusi Kopi : Eco Friendly Approach in Reducing Herbicide Use and Residue in Indonesia Coffee Farm

The use of herbicides is already on the verge of being dangerous. As a result, some weeds actually experience resistance. Therefore, the use of herbicides by farmers must be continuously monitored. Many farmers use chemical herbicides because the method is easy and practical, the reaction is fast, cheaper, and more efficient on a large scale. Moreover, farmers are also very easy to get at the kiosks of production facilities. Excessive use of pesticides and herbicides can damage the soil and reduce soil fertility.

Moving from concerns over the use of herbicide overdose on coffee plantations in Indonesia. SCOPI in collaboration with PT. Pandawa Agri Indonesia as a member of SCOPI has jointly held a Coffee Discussion (DISKO) entitled "An eco-friendly approach to reducing the use and residue of herbicides in coffee plantations in Indonesia" on 20 July 2022.

PT. Pandawa Agri Indonesia is the first life science-based company from Indonesia and is currently the only company that has innovation in the development of pesticide reduction products (Pesticide Reductants). Reductant products are expected to contribute and help agricultural businesses to create agricultural practices that are sustainable, environmentally friendly, safe for users and efficient.



Weeds are plants whose growth is not desired and can compete with cultivated plants in meeting the needs of nutrients, water and light. The role of weeds as temporary hosts for pests and diseases can interfere with harvesting activities. Weeds can interfere with coffee growth in the first two years after transplanting (movement from seedlings to planting fields). Therefore weed control needs to be done.

Facts in the field, some types of weeds are difficult to control because they are sprayed with the same herbicide active ingredients continuously and can cause resistance to weeds. Therefore, it is necessary to mix herbicides to reduce the 'hard to kill' symptoms of these weeds. Indiscriminate mixing of herbicides will result in impaired herbicide effectiveness and not working optimally. This is because some herbicide mixtures are synergistic (together) and some are antagonistic (repelling).



The use of a mixture of glyphosate as an alternative to weed control can show symptoms of poisoning in coffee plants even though it is only exposed to the underside of the coffee leaves and the coffee plant grows slower, fewer shoots appear, the leaves become smaller, the roots become less strong and cannot grow good due to lack of carbohydrates and amino acids. This event was observed in young coffee plants after 28 days after glyphosate (HSA) application. In the first year, the symptoms of poisoning are already visible and showing signs of slow growth. Although some plants can recover, in the first year they have shown symptoms of slow growth. Thus, the use of high doses should be reduced to reduce the impact of poisoning on coffee plants.



This Disko was opened with remarks from the Executive Director of SCOPI, Mr. Eman Wisnu Putra and the Co-Founder & CEO of PT. Pandawa Agri Indonesia Mr. Kukuh Roxa. In the coffee discussion webinar (DISKO) that was held, the participants were actively involved in discussions on ecofriendly approach in reducing residue and herbicide use for coffee farmers in Indonesia. Participants who had attended the event come from various backgrounds, including; NGOs, the private sector, government officials, academics and students, and most importantly, SCOPI Master Trainers. The webinar event began with speakers presenting various topics according to their fields of work, followed by a 60-minute discussion and question and answer session. During the session, the participants actively expressed their opinions, input and support for the material presented by the event resource persons.

The use of an overdose of herbicides (weed poison) both glyphosate and paraquat resulted in a reduction in the number of coffee stems, dead branches, shortening of the number of branches to a reduction in coffee weight so that production decreased. Countries in Europe as one of Indonesia's coffee export destinations have set Maximum Residue Limits (MRL) for glyphosate in raw coffee beans with a limit of 100 micrograms per kg (0.1 ppm). Traces of pesticides on products are referred to as residues and MRL is the highest level of pesticide residue that can be tolerated in a food or beverage product if the pesticide is applied correctly. Glyphosate is the most widely used herbicide in the world, which is of concern because its negative impact on human health and the environment is well documented. Exposure to this popular pesticide can cause cancer, according to strong scientific evidence. The European Union has started the process of renewing its market approvals, which will expire in December 2022. Going forward from 2023, the use of glyphosate will be banned globally as the protection of human health and the environment must come first.

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### Apa itu Gulma dan Efek Negatifnya?

- Petani kopi dihadapkan ancaman hama, penyakit, dan gulma. Gulma yang tidak dikendalikan:
  1. Penurunan produksi kopi diperkirakan mencapai ~65 %;
  2. Tanaman inang ataupun reservoir bagi hama dan penyakit;
  3. Mengganggu proses panen;
  4. Pencucian timbanya kelokasan pada musim kering/panas
- Gulma : Tumbuhan yang tidak dikendalikan pertumbuhannya dan merugikan atau berpengaruh terhadap pertumbuhan tanaman utama.
- Faktor Ekonomi dan Lingkungan menjadi pembatas : mengelola dan mengendalikan seefisien dan seefektif mungkin namun tetap memperhatikan aspek lingkungan dan praktik yang berkelanjutan.

(Doriba 2018; Telfer 2018; GCP 2021)



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### Kerusakan yang disebabkan oleh Herbisida (Herbicides' Injury)



(Nurhadi 2008; GCP 2021)

Herbicide injury can manifest in various ways, including yellowing of leaves, stunted growth, and dead branches. The application of herbicides must be done carefully to avoid such damage.

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### Pengendalian Gulma Terpadu di Lahan Kopi

2. Manual



(Telfer 2018; Nurhadi 2018; GCP 2021)

- Kesulitan pada batang-batang bawah dan akar dikarenakan pengendalian secara mekanik di dekat pokok kopi
- Biaya dan tenaga kerja yang lebih banyak

3. Grazing dengan Hewan Ternak



4. Kimiawi (Herbisida)



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### Selayang Pandang Kopi di Indonesia

- Indonesia : The BIG 5 largest producer & exporter (Arabica & Robusta)
- Luasan pertanaman kopi di Indonesia diperkirakan sebesar 1,340,000 Ha yang terdiri dari lahan kopi Arabica (21%) dan lahan kopi Robusta (79%)
- Sebagian besar dihasilkan oleh petani kopi
- Tantangan dalam produksi kopi di Indonesia : kualitas dan kuantitas

(Hagenaars 2014; tin.org 2020)



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## Master Trainer Upgrade Program : Training of Trainers Based on the National Curriculum and Sustainable Arabica Coffee Module in Takengon- Central Aceh

SCOPI through the Master Trainer (MT) program has provided assistance and training to coffee farmers in 15 provinces of Indonesia since 2017 until now. In the last MT survey, during 2021 there were 65 Active MTs who had provided assistance to 6045 robusta coffee farmers and 3933 arabica farmers (30% of whom were women). As a strategic intervention step to increase the impact of the MT program, SCOPI in collaboration with The International Islamic Trade Finance Corporation (ITFC) held a Master Trainer National Meeting and Training of Trainers to facilitate the transfer of knowledge and information between MTs and related stakeholders.



The Training of Trainers was attended by around 38 Farmer Facilitators (Prospective Master Trainers). The training participants were representatives from government staff, technical staff of private companies, non-governmental organizations (NGOs), universities and research institutes, or heads of farmer groups/mainstream farmers/recommended farmers who are committed to empowering and increasing the capacity of Arabica coffee farmers in Indonesia, especially in Central Aceh and Karo districts. The MT National Meeting in 2022 is part of the SCOPI collaboration program with ITFC "Indonesia Coffee Export Development"



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which is expected to be a refresher and preparation for actions to improve MT competencies in the future, after the last two years the MT National Meeting activities were hampered due to the COVID-19 pandemic.

In addition to the MT National Meeting, SCOPI collaborates with ITFC in organizing a Training of Trainers, this training is intended to produce a Master Trainer for Sustainable Arabica Coffee at least 10 people from two program districts (Central Aceh Regency and Karo Regency) who will later will provide cultivation assistance to Arabica coffee farmers in the two districts.







## SCOPI Holds Training of Trainers for Coffee Extension to Increase Arabica Coffee Production

Takengon - Central Aceh, 04-06 September 2022 - The Sustainable Coffee Platform of Indonesia (SCOPI) collaborates with the International Islamic Trade Finance Corporation (ITFC) in initiating the Training of Trainers activity to recruit prospective main sustainable coffee extension workers or called Master Trainers (MT). The activity, which was carried out offline at Parkside Gayo Petro Takengon, is one of the programs in a series of collaborations between SCOPI and ITFC, namely the "Indonesia Coffee Export Development Program" with a focus on the districts of Central Aceh and Karo. This SCOPI-ITFC cooperation program has the main objective of increasing the quantity and quality of Indonesian coffee production in a sustainable manner by expanding the capacity development activities of MT and coffee farmers in implementing good sustainable and post-harvest coffee cultivation practices.

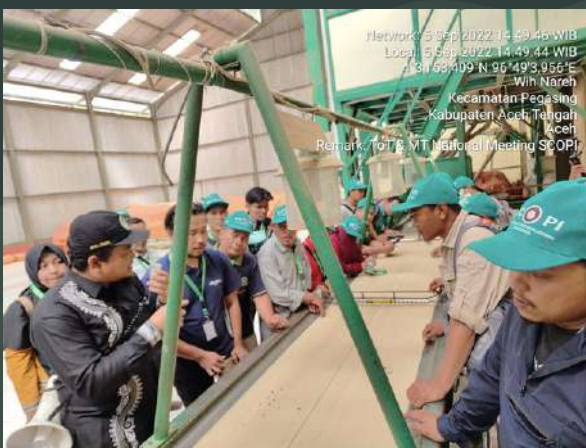


The ToT participants were attended by 38 MT candidates who came from representatives of field agricultural extension workers, agronomist staff of private companies, NGOs, universities, and reliable farmers who are committed to implementing empowerment and technical assistances to coffee farmers after participating in the ToT activities. The activity was opened on 04 September 2022 with remarks from Mr. Eman Wisnu Putra as the Executive Director of SCOPI. According to him, the ToT activity held in Central Aceh is a very good opportunity for the host. This can be the initial basis for a massive movement to recruit competent agricultural extension workers. Thus, an increase in the quality and quantity of Arabica coffee can be achieved, especially for the Provinces of Aceh and North Sumatra, which are the largest Arabica coffee producers in Indonesia.





## SCOPI Held Training of Trainers for Coffee Extension to Increase Arabica Coffee Production



SCOPI is also grateful for the main contribution from ITFC, along with support from various multi-stakeholders such as the Aceh Provincial Government, Central Aceh District Government, Karo District Government, Global Coffee Platform and contributions from PMO Kopi Nusantara, Pupuk Indonesia Holding Company and Pupuk Iskandar Muda in three-day training meeting.





## Memorandum of Understanding SCOPI x Gajah Putih University

In order to improve knowledge, insight and skills for students, lecturers, and education staff to support institutional development, as well as improve the quality of human resources in universities and in the community, Universitas Gadjah Putih collaborates with SCOPI through programs/activities for fostering and training farmers. Coffee in Central Aceh District using the National Curriculum and Training Manual for Sustainable Cultivation (Good Agriculture Practices) and Post-Harvest (Post-Harvest) Sustainable Coffee. This collaboration between SCOPI and Universitas Gadjah Putih will be carried out for the next five years.

Scope of this collaboration will be implemented in programs/activities that will directly support the Tridharma of Higher Education (Education, Research, and Community Service) as well as the implementation of the Independent Campus Learning Curriculum. SCOPI together with Gajah Putih University agreed to carry out field visits in order to monitor the implementation of programs/activities. SCOPI hopes that through this collaboration with Gadjah Putih University, SCOPI can provide technical training according to the national curriculum in order to improve the competence of human resources at Gadjah Putih University.





## SCOPI Support for the 2022 Karo Coffee Festival

Tanah Karo is a plateau flanked by two active volcanoes, namely Mount Sibayak and Mount Sinabung. Karo coffee produced from volcanic soil has premium quality and has received awards at local and national levels. However, the Karo coffee brand itself is still lagging behind other Sumatra Specialty Coffees, such as Lintong Coffee, Mandheling, and Sidikalang.

As an effort to introduce Karo coffee to the national and international scene, the Jumaraja Kopi Lestari Cooperative and the Cinta Rakyat Village Government (Karo Regency) initiated the 2022 Karo Coffee Festival. This festival also aims to strengthen synergies between parties in developing the cultivation and marketing of Karo coffee. packaged in a festival nuanced rural culture.

SCOPI supports the implementation of the 2022 Karo Coffee Festival by participating in organizing a series of pre-festival webinar series:

Date	Webinar's Topic	Speaker
28 August 2022	Karo Coffee: History and Problems	Dr. Ir. Surip Mawardi
25 September 2022	Karo Coffee Tour: Opportunities and Challenges	Rudianto Sembiring (Kukang Coffee)
02 October 2022	Kopi Karo & Local Government: Opportunities and Challenges	Munarta Ginting (Kadis Kebudayaan, Pemuda, Olahraga dan Parawisata, Kab. Karo) Hendriawan Girsang (Kabid Perkebunan, Dinas Pertanian dan Peternakan, Kab. Karo) Rudolf Wirawan (Adelaide Business School Australia)
02 October 2022	Karo & Village Coffee	Budiman Sembiring (MT SCOPI) Budi Karo-Karo (Kepala Desa Jumaraja) Wiwin Suryani (Kopi Punk-Sumbawa)
16 October 2022	Karo Coffee & Eco Village: Opportunities and Challenges	Elfran Surbakti (Ketua Koperasi Jumaraja Kopi Lestari) Rudolf Wirawan (Adelaide Business School Australia) Karya Jaya Ginting (Inisiator Desa Wisata Raya)

