

SDG REPORT

Rajamangala University of Technology

Phra Nakhon **2024**

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



- RMUTP Offers Workshops on Popular Sweets: Macarons and Timber Rings
- Natural Dye from Waste Coconut Shells and Taboon Bark: RMUTP Students Turn Waste into Valuable Local Products for Ban Lom Thuan Community
- Home Economics students from RMUTP created dishes and won 3 bronze medals.



RMUTP Offers Workshops on Popular Sweets: Macarons and Timber Rings

The Technology Clinic Center at the Institute of Research and Development, Rajamangala University of Technology Phra Nakhon (RMUTP), organized the 4th Technology Consultation and Information Service Project. This event featured lectures and hands-on training on macaron and timber ring production techniques, with honored guest speakers Ms. Intheema Hiranyakorn and Ms. Sasithorn Pomchiangpin, both instructors from the Faculty of Home Economics Technology. The event took place at the Faculty of Home Economics Technology (Chotiwet Campus) on June 14, 2024, and was attended by 20 participants.

Asst. Prof. Dr. Chantana Papattha, Deputy Director of Academic Services and Deputy Director of of Institute of Research and Development, Rajamangala University of Technology Phra Nakhon, stated that the department aims to transfer knowledge and elevate communities, community enterprises, and small and medium -sized enterprises (SMEs). This is achieved by disseminating research, inventions, innovations, and technologies in which the university has expertise through academic services. Each year, the university organizes vocational training for communities and interested members of the public, enabling them to earn supplementary income. Before each training session, the needs of the community and current trends are surveyed to ensure that participants gain new knowledge that can be applied to develop their careers.

Ms. Kittiya Wongkheung, currently the owner of Kittiya Bakery in Nakhon Pathom, shared that she has been running her bakery for over 8 years, offering a wide variety of products. The bakery’s highlight is its fresh, made-to-order young coconut pastries. However, with changing consumer trends that emphasize convenience, delicious flavors, attractive presentation, and healthy ingredients, the competition in the market has increased. To ensure the continuous development of her bakery and to expand the menu to meet customer demands, she is interested in improving her skills. She recently attended training on making macarons and timber rings, which are popular and trending on social media. The training provided her with extensive knowledge and techniques, including how to select ingredients that produce different textures and flavors, and how to choose health-conscious, natural ingredients without synthetic additives or preservatives. Implementing these techniques is expected to help attract new customer bases.



Additionally, The Technology Clinic Center at the Institute of Research and Development, Rajamangala University of Technology Phra Nakhon (RMUTP), offers technology consulting services.



Natural Dye from Waste Coconut Shells and Taboon Bark: RMUTP Students Turn Waste into Valuable Local Products for Ban Lom Thuan Community

Fabric dyeing is an ancient Thai craft, traditionally using natural materials derived from plants, animals, and minerals to add vibrant colors to textiles. This eco-friendly dyeing method has been passed down through generations, becoming a cultural heritage and a unique identity for various communities. Although dyeing technology has evolved over time, natural dyeing remains a simple and sustainable technique. This tradition is preserved in Ban Lom Thuan (also known as Khung Lom Thuan), Samut Songkhram Province, a community known for its ecotourism and local crafts. The residents mainly engage in coconut sugar production and fishing. Additionally, the community has established the Ban Rim Klong Homestay Cooperative, offering tourists activities like coconut leaf hat weaving, traditional dessert making, coconut sugar production, and natural dyeing.

Miss Chulamani Thansamut, a fashion design and fashion product management student at Rajamangala University of Technology Phra Nakhon (RMUTP), was inspired by the large amounts of discarded coconut shells from the local sugar industry. She decided to extract natural dyes from these waste materials to dye fabrics, thereby maximizing the use of local natural resources. This initiative also enhances the community’s identity. Under the guidance of Ms. Mallika Jongjit, a faculty member in fashion design and fashion product management, Chulamani and her team learned that the community had already started extracting dye from coconut husks for use in textile products such as shoulder bags, handbags, coin purses, keychains, and souvenirs. To support tourism and generate income for the community, the faculty integrated the knowledge of natural dyeing into the creation of products and services, aiming to attract more visitors.

Miss Chulamani explained the dye extraction process using coconut shells. Due to the low absorption properties of the chemical components in coconut shells, Taboon bark was added to the process to achieve a more durable color. Taboon bark, which produces tannin, is traditionally used for fabric dyeing. The bark itself is gray or reddish-brown, and when combined with coconut shells, it produces a deep brown hue on cotton fabrics. The process involves boiling equal parts of coconut shells and Taboon bark for an hour, straining the mixture through cheesecloth, and then boiling the extracted dye for another 30 minutes. Sodium silicate (salt) is added to help the dye adhere better to the fabric. The fabric, tied in various patterns, is submerged in the dye bath and stirred continuously for an hour, followed by additional cooling and stirring for half an hour. Finally, the fabric is rinsed in clean water and dried.



Mr. Parada Paksathong noted that in the first wash, most of the dye from the coconut shell and Taboon bark mixture washes out because the pigments do not initially bond with the fibers. However, subsequent washes show no further color loss, indicating that natural dyes from these materials are effective for fabric dyeing. In addition to teaching community members about dyeing techniques, the group also instructed them on adding value to their products by sewing the dyed fabric into items like dresses, headscarves, and small wallets. These products have become a new source of income for the community, making them a distinct feature of Ban Rim Klong Homestay in Samut Sakhon Province. “Our goal is to take overlooked waste materials and turn them into valuable products, creating jobs and income for the community. We are grateful for the guidance from the ‘Royal Initiatives for the Conservation and Development of Products from Plant Genetics’ project by the Faculty of Home Economics Technology, which helped us solve problems and develop high-quality natural-dyed fabrics for the community,” said Mr. Parada.

Ms. Mallika Jongjit, the project advisor and faculty member, emphasized that the 2024 Royal Initiatives project integrates product development and plant utilization into students’ studies. The project encourages students to research and collect data on medicinal plants, transforming them into consumable or usable products. It also promotes the value and sustainable use of local natural resources. Natural dyeing, which can be self-taught and enriched through experience, preserves local wisdom and can be passed on to future generations. By engaging in hands-on projects, students develop a deep respect for conservation and learn about sustainable production methods.





Home Economics students from RMUTP created dishes and won 3 bronze medals.

Rajamangala University of Technology Phra Nakhon (RMUTP) congratulates Mr. Sirawit Thongpli, a fourth-year student in the Food and Nutrition program, for winning a bronze medal in the Asian Curry Challenge. Mr. Pattaek Khongmun, a fourth-year student in the Food and Nutrition program, also received a bronze medal in the Main Course Challenge, while Ms. Natthaporn Chaimongkol, a second-year student in the Applied Home Economics program, Faculty of Home Economics Technology, won a bronze medal in the Fruits and Vegetable Live Challenge Competition (Individual). These achievements were part of the 10th Thailand Ultimate Chef Challenge (TUCC) or “THAIFEX – Anuga Asia 2024,” organized by the Thailand Chefs Association, held from May 28 to June 1, 2024, at IMPACT Muang Thong Thani. The competition featured over 700 chefs from around the world participating in various categories.

Mr. Sirawit Thongpli, a student in the Food and Nutrition program, shared that this cooking competition provided a valuable platform to showcase his culinary skills and creativity. For the Asian Curry Challenge, participants were required to prepare curries from two different Asian countries. He chose to make Thai curry and Indian curry, each with its unique taste and characteristics. The Thai curry he prepared was based on an

ancient recipe that is now difficult to find, focusing on highlighting the traditional flavors. For the Indian curry, he emphasized the use of distinctive spices, making only slight adjustments to the taste. The preparation for this competition took a considerable amount of time due to the time constraints during the contest and the need for intense concentration. Acquiring various techniques during his studies significantly enhanced his cooking skills. Additionally, he received valuable advice from faculty members in the Food and Nutrition program, Faculty of Home Economics Technology at Rajamangala University of Technology Phra Nakhon, who are experts in Thai cuisine. They provided guidance on flavors and technique adjustments. He is satisfied with the competition results and sees them as motivation to further develop his culinary skills in the future.



Ms. Natthaphorn Chaimongkol stated that the fresh fruit and vegetable carving competition is the most challenging event she has ever participated in, as it is a national-level competition. This required extensive preparation before entering the competition, including designing patterns, practicing carving, and planning the display to showcase the work. The standout feature of the carved patterns lies in their intricate details and the incorporation of new designs, which require dedication, skill, and experience. During the competition, numerous challenges arise, such as limited time and the preservation of fruits and vegetables after carving. Therefore, the knowledge gained in the classroom and the experience shared between senior students significantly enhance their skills.