



DOST-FNRI

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July - September 2024

## Golden Year of DOST-FNRI Seminar Series

✍ CALEPacot, Project Technical Assistant II, TDSTSD

Opening of the poster exhibit, launching of the new DOST-FNRI food and nutrition tools and guides, and active forum discussions on the food and nutrition were some of the highlights of the 50th DOST-FNRI Seminar Series (FSS) held on July 3-4, 2024 at the Sheraton Manila Hotel, Pasay City.

With the theme: "Golden Year of DOST-FNRI Seminar Series", the 50th FSS commenced with the Opening Remarks from Atty. Lucieden G. Raz, DOST-FNRI's Director III/Deputy Director and Officer-In-Charge of the Office of the Director. In a recorded Inspirational Message, DOST Secretary Dr. Renato U. Solidum, Jr. underscored the power of research and development innovations in solving the country's problems on malnutrition, addressing the need for affordable and accessible nutritious food products, and ensuring proper health and nutrition across all life stages.

This was followed by the Message of Support from Ms. Leah C. Dajay, FNRI Employees Association Inc. President, and Welcome Remarks from Ms. Marilou L. Madrid, Overall Chair of the 50th FSS.

In the FSS Golden Anniversary Lecture and Testimonial, the evolution of the FSS was featured



through an audio-visual presentation. Marinduque Province Governor Presbitero Jose Velasco, Jr. provided a testimonial on how the FSS serves as continuing education for nutrition and health frontliners, while Dr. Gerard Bryan Gonzales, Associate Professor of Nutrition at Ghent University and a DOST Balik Scientist, discussed the

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# Director's Message



Continuous improvement is more than just an idea, it is essential to surviving the complicated and changing world of today. With this, the DOST-FNRI successfully handles the obstacles and takes advantage of the development of possibilities by embracing innovation, cultivating a growth mindset, and investing in technology and collaboration. For the past 77 years, the excellence and commitment of the Institute in data gathering, development of strategies and programs, and the diffusion of knowledge and technologies to achieve optimum nutrition for Filipinos remained steadfast.

This year, the Institute overcame a compact yet fun-filled and notable third quarter. One of the brightest events that featured the Institute's triumph was the DOST-FNRI's Seminar Series Golden Year on July 3-4, 2024, at the Sheraton Manila Hotel, Pasay City. This event presented the launch of new DOST-FNRI food and nutrition tools and guidelines and the active discussion of nutrition-related studies initiated by Filipinos for Filipinos.

Another important activity held was the participation of the DOST-FNRI to the 2024 National Youth Science, Technology, and Innovation Festival (NYSTIF) with the theme "STEM VIBE: Engaging Youth in Providing Solutions and Opening Opportunities," where the Institute


showcased the developed nutrition IEC materials and games, physical activities for teens, PhilFCT Mobile Application, and the various food technologies developed by the DOST-FNRI.

Featured in the photo news are the achievements and engagement of the researchers, such as being awarded as the Best Scientific Poster during the 46th Annual Scientific Meeting; the DOST-FNRI's Mealusog food technology being featured at 24 Oras-Game Changer segment; the Institute's participation during the 2024 Handa Pilipinas: Innovations in Climate and Disaster Resilience - Visayas Leg and 2024 Annual Philippine American Academy of Science and Engineering (PAASE) Meeting-Symposium; and the privilege to host the Nutrition Communication Network (NUTRICOMNET) Media Forum at Tacloban City.

As we continue reaching Filipino families for nutrition education and updates, the mission of the Institute to disseminate information this quarter continued through exhibits, radio broadcasts, and the conduct of the National Nutrition Survey to different areas were done.

On behalf of the Institute, we would like to extend our deepest gratitude to our public and private partners, as well as to you fellow readers for your unyielding support in helping us fly to great heights.

Let us ensure a better society for future generations, for it belongs to those who are ready to continually innovate, adapt, and progress. As a promise of commitment, rest assured that DOST-FNRI will work with excellence and perseverance at all times. *Mabuhay!*

  
**Atty. LUCIEDEN G. RAZ**  
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# News Flash

## The DOST-FNRI New Food and Nutrition Tools and Guides

✍ CALEPacot, Project Technical Assistant II, TDSTSD



The DOST-FNRI recently launched new food and nutrition tools and guides on July 3, 2024 at the Sheraton Manila Hotel, Pasay City, during the 50th DOST-FNRI Seminar Series (FSS).

As part of the Institute's mandates to develop strategies, programs and projects, and diffuse knowledge and technologies to address malnutrition in the country, the new food and nutrition tools and guides promote and help manage the nutritional well-being of Filipinos.

Among the nutrition tools and guides are the "Nutrition IEC Materials for Adolescents" which can help enrich adolescents' understanding of proper nutrition, good health, and well-being. Another is the "ExciteEN Recipes for Teens" which features nutritious meals for Filipino adolescents to help meet

their daily dietary requirements. Next is the "Physical Activity Guides for Adolescents" which offers interactive resource materials for promoting active lifestyle and physical fitness that can be used in schools. "A Guide to Workplace Wellness Promotion Program", on the one hand, focuses on helping employers create, implement, monitor, and evaluate their workplace wellness promotion program.

The "Philippine Food Composition Tables (FCT) User's Guide" is a supplementary tool to better understand and properly use the Philippine FCT 2019. The "Trans-Fatty Acid Content or the TFA Handbook of Selected Processed Food Consumed by Filipinos" provides the trans fatty acid contents of various processed foods commonly consumed in the Philippines.

The "Safe Eats, Food Safety Guidelines for Pinoy Food Handlers" is designed to help ensure the preparation and serving of safe and high-quality foods. The "Medical Nutrition Therapy for Kidney Disease (Renal Exchange Lists)" is a guide for health professionals in creating personalized diets and providing sound dietary advice for persons with kidney diseases.

Join us as we advocate for the nutritional well-being and healthy lifestyles of all Filipinos! Discover the recently released food and nutrition resources from the DOST-FNRI, which aim to improve workplace wellness, empower youth, and ensure food safety. ■



# DOST-FNRI Proficiency Testing Training ventures beyond food, trains Energy Department lab team

✍ LMCarranza, Science Research Specialist II, TDSTSD



The Proficiency Testing Laboratory (PTL) of the DOST-FNRI has been at the forefront in providing proficiency testing in nutrition labeling and physico-chemical components.

The PTL significantly contributes to developing and implementing the Analytical Quality Assurance (AQA) system. This ensures that laboratories maintain high standards in testing procedures, guaranteeing the accuracy and reliability of results.

However, proficiency testing extends beyond food and nutrition.

The Department of Energy (DOE) sought the DOST-FNRI's PTL expertise because it recognizes its critical role in demonstrating testing competency, ensuring consistency and reliability of results, and maintaining accreditation.

This collaboration highlights the value of proficiency testing across various sectors, including energy.

Testing of product samples to verify claims on energy ratings, such as energy consumption and energy efficiency are critical components of energy standards and labeling programs.

The DOE's Lighting and Appliance Testing Laboratory (LATL) plays a vital role in testing energy efficiency and performance of lighting and appliances, which are essential in the government's drive toward energy conservation and efficiency.

The Proficiency Testing Laboratory and the Food and Nutrition Training Unit (FNTU) of the DOST-FNRI conducted a face-to-face four-day training on

Proficiency Testing Provision and Interlaboratory Comparison among the laboratory technicians, engineers, and employees of the LATL.

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) Philippines aided the DOE for the training.

The GIZ plays a significant role in supporting the DOE through various collaborative initiatives aimed at promoting sustainable development, energy efficiency, and renewable energy.

The training included modules on: 1) Introduction to Proficiency Testing; 2) Intralaboratory Comparison and Approaches; and 3) ISO/IEC 17025:2017 Requirements for Proficiency Testing.



# DOST-FNRI @ 2024 National Youth Science, Technology, and Innovation Festival (NYSTIF)

✍ FJPBatallantes, Science Research Specialist I, TDSTSD



The DOST-FNRI joined the 2024 National Science, Technology, and Innovation Week Celebration (NYSTIF) on September 18-21, 2024 at the Philippine International Convention Center (PICC) Forum Tent, Pasay City.

This year's NYSTIF theme is 'STEM VIBE: Engaging Youth in Providing Solutions and Opening Opportunities,' which aims at providing solutions and introducing opportunities through engaging, exciting, and fun science and technology activities.

The DOST-FNRI showcased its Nutrition IEC Materials and Games, Physical Activities for Teens, PhilFCT Mobile Application, along with various nutritious food products developed by the DOST-FNRI.

Furthermore, on September 20, 2024, the Institute engaged exhibit visitors and participants from several academic Institutions in a session called Food and Nutrition Talks: The Science of Nutrigenomics and Sensory Evaluation to explain the science

behind Nutrigenomics and Sensory Evaluation.

Mr. Jacus S. Nacis, Senior Science Research Specialist from the Nutrition Research and Development Group, discussed Nutrigenomics: Where Food, Nutrition, and Genes Interact, while Ms. Cyrho T. Sumera, Science Research Analyst of the Food Research and Development Group of the DOST-FNRI, discussed Sensory Evaluation: The Heart of Food Product Development.■



# Stakeholders commit for sustainable fruit and vegetable production to consumption

✍ CAJavier, Senior Science Research Specialist, NAMMD



Representatives from different government agencies, international organizations, non-government organizations, academe and the private sector expressed commitment to make fruits and vegetables available, accessible and affordable during the Fruits and Vegetables for Sustainable Healthy Diets (FRESH) Science and Innovations Forum held on July 17, 2024 at the Sheraton Hotel Manila, Pasay City.

“Fresh fruits and vegetables are the cornerstone of a sustainable diet due to their minimal environmental footprint,” Imelda Angeles-Agdeppa, Ph.D., country coordinator of FRESH, highlighted in her presentation.

The FRESH Initiative is an end-to-end approach to ensure safe, affordable and healthy diets among Filipinos. Key findings and recommendations from the different work packages of the FRESH research network with

different distinguished institutions in the Philippines as leads were presented.

On the one end, results of the consumer behavior including consumption presented by Eva A. Goyena, Ph.D., Senior Science Research Specialist of the DOST-FNRI highlighted in her report the inadequate intake of micronutrients among different age groups, particularly vitamin C, vitamin A, calcium, iron, zinc and folate as the most limiting micronutrients in the diet of Filipinos. Moreover, plant-source foods that include fruits, green and yellow vegetables and other vegetables contribute only less than 5 percent to total intake across age groups. Among the barriers to fruit and vegetable intake identified were low preference to fruits and vegetables and high preference for sweets, fast foods and convenience foods at the individual level. Meanwhile, high prices, limited food budget, socio-economic and cultural perception of fruits and vegetables (F&Vs), as well

as insufficient knowledge, skills and time to prepare fruits and vegetables and improper storage were identified at the household level.

For food environment key findings presented by Neha Kumar, Ph.D. of the International Food Policy Research Institute (IFPRI), emphasized the need to develop policies that help institutionalize integrated school-based interventions and strengthen collaboration within Department of Education and other agencies for more holistic implementation of interventions and provide supplementary inputs for school programs.

On the supply side, conservation of fruits and vegetables biodiversity as reported by Danny Hunter, Ph.D., Principal Scientist of The Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT) in partnership with the International

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# **“Raket para sa Masa”: Empowering communities through nutrition education and livelihood opportunities**

✍ TCANaniong, Science Research Specialist I, TDSTSD



The DOST-FNRI, in collaboration with DOST-National Capital Region (DOST-NCR), recently launched the “*Raket Para sa Masa*” livelihood training program.

The DOST-FNRI conducted the training at the Livelihood Center at Amlac Street, Payatas Road, Quezon City under the DOST-NCR’s PAMAMAZON (Pasay, Makati, Manila, Quezon City) Cluster.

This is part of pursuing the DOST-FNRI’s mandate to diffuse knowledge and technologies in food and nutrition that addresses both the nutritional and economic challenges of the community.

“*Raket Para sa Masa*” is more than just a training program because it is also a platform for empowering local entrepreneurs and community folk with basic nutrition knowledge, like food safety, storage, buying, and costing.

The program highlights the DOST-FNRI’s kitchen-tested recipes through a cooking demonstration, which features nutritious meals as viable business ventures for micro, small, and medium enterprises (MSMEs).

Focus on food safety is critical, as it ensures that food products meet

high standards of quality, ultimately protecting public health and driving business success.

Informed and skilled food handlers are better positioned in maintaining customer satisfaction and loyalty which are essential for enterprises to thrive in a competitive market.

The training was conducted face-to-face, featuring a dynamic combination of lecture discussions and practical cooking demonstrations.

Participants actively engaged in hands-on activities, gaining first-hand experience in implementing the knowledge and skills shared during the sessions.

Ms. Josefina T. Gonzales, Senior Science Research Specialist, and Ms. Tricia Camille A. Naniong, Science Research Specialist I, of the Food and Nutrition Training Unit of the DOST-FNRI facilitated the training.

Adding to the event’s significance was the presence of Barangay Captain Rascal Doctor who signified support and encouraged participants to seize the opportunities offered by the training, apply the knowledge gained, and use the new skills to improve

their businesses and help uplift their communities.

Mr. Doctor’s presence underscored the importance of support from local leaders in fostering community collaboration for development initiatives.

The DOST-FNRI expects to reach more communities, as it continues to roll out this initiative in offering nutrition education and viable livelihood opportunities.

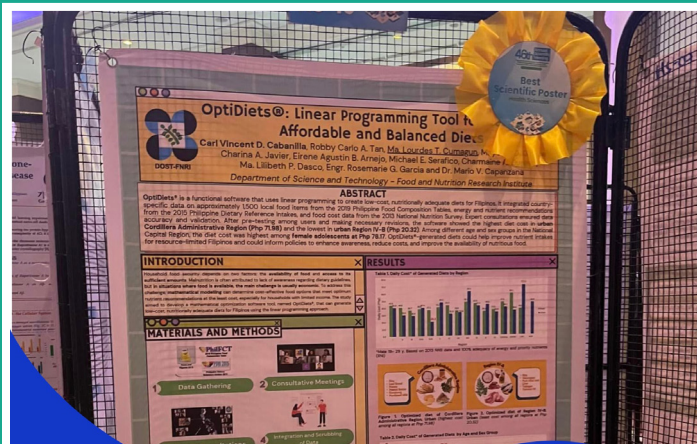
The Institute integrates food safety into the training to help ensure that participants are well-prepared to meet the food industry’s demands while contributing to their communities’ nutrition and well-being.

“*Raket Para sa Masa*” stands as a testament to the power of collaboration and innovation in addressing food and nutrition challenges in the Philippines.

The DOST-FNRI and the DOST-NCR are making strides towards a well-nourished, more prosperous nation through the help of this program.■



# Photo News



The DOST-FNRI researchers win Best Scientific Poster during the 46th Annual Scientific Meeting (ASM) on July 10-11 2024 at the Manila Hotel, City of Manila.



The DOST-FNRI joins the 2024 Handa Pilipinas: Innovations in Climate and Disaster Resilience-Visayas Leg on July 24-26, 2024 at the Waterfront Hotel, Cebu City.



The DOST-FNRI showcased its food technologies for the production of nutritious food products and services in the 2024 Annual PAASE (Philippine-American Academy of Science and Engineering) Meeting-Symposium (APAMS) on July 15-16, 2024 at the University of the Philippines Los Baños. This year's theme is: "Technological Innovations Towards Health, Food, and Nutrition"



Ms. Frances Isabelle Jacalan, Science Research Specialist II, being interviewed by Radyo Pilipinas 1 (RP1) on the topic "Height, nutrition, at genes ng isang tao, may ugnayan nga ba?" on July 25, 2024

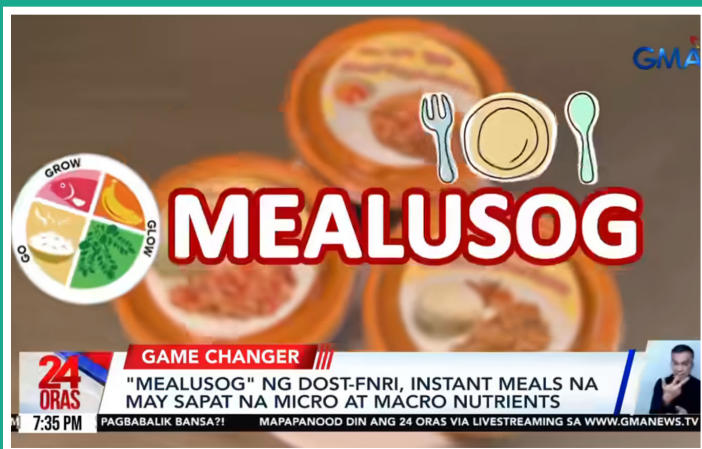


The Board of Directors of the Philippine Chamber of Pharmaceutical Industry (PCPI) conducted an exploratory visit to selected DOST agencies on August 13, 2024, including the DOST-FNRI.



The DOST-FNRI conducted the 2023 National Nutrition Survey (NNS) in Mababacat City from August 19-29, 2024, covering six (6) barangays: San Francisco, Dapdap, Mangalit, Santo Rosario, Dolores, and Poblacion. The 2023-2024 NNS began on June 19, 2023, and is being carried out in 81 provinces, 33 Highly Urbanized Cities (HUCs), and three (3) other special areas nationwide, continuing until the third quarter of 2024.





DOST- FNRI's Mealusog featured in the Game Changer segment of 24 Oras on August 26, 2024



The DOST-FNRI, in partnership with DOST VIII, hosted the "Nutrition Communication Network (NUTRICOMNET) Media Forum: Nutritional Status in Eastern Visayas and DOST-FNRI Recommendations" on August 28, 2024 at the Hotel Alejandro, Tacloban City.



The participants during the DOST-FNRI Strategic Communication Planning held on September 3-4, 2024 at the DOST-FNRI Meeting Room.



Special Meeting of the Philippine Nutrition Cluster on September 12, 2024 at the National Nutrition Council Central Office, Taguig City.



The DOST-FNRI booth at the 2024 National Science, Technology, and Innovation Week Celebration (NYSTIF) on September 18-21, 2024 at the Philippine International Convention Center (PICC) Forum Tent, Pasay City.



4th Philippine Dietary Reference Intakes (PDRI) Expert Committee Meeting on September 19, 2024 at the College of Home Economics, University of the Philippines Diliman, Quezon City.

# Writers Pool Corner

## Exploring the Potential of Augmented Reality and Virtual Reality Across Various Fields

✍ SFQArevalo, Science Research Specialist II, TDSTSD



Do you ever wish you could practice cooking in a risk-free realistic kitchen with lifelike ingredients, equipment, and utensils? Or play your favorite sports anytime and anywhere? Or experience your paintings and inanimate illustrations magically come to life?

It is not magic, it is science! It is Augmented Reality (AR) and Virtual Reality (VR)!

AR and VR are reshaping the way we interact with the world around us. The AR technology, according to Hantono (2018), enhances the real-world environment around us by overlaying computer-generated content into it. On the other hand, VR technology, based on Kyaw (2018), allows the user to explore and manipulate computer-generated real or artificial three-dimensional multimedia sensory environments in real time. To put it simply, only a portion of the digital world

is created by AR, while a completely virtual environment is produced by VR that totally immerses the senses of the user.

Inspiration for new developments in AR and VR can come from numerous sources. Here are some examples of AR and VR that made impacts in different fields:

1. Healthcare: AR and VR can provide simulation of emergency scenarios for training medical students and professionals, practicing surgery procedures, exercises for physical therapy, and nutrition counseling of patients through interactive experiences. Thus, improving medical skills and patient care.
2. Education: AR and VR can be used in interactive learning of human anatomy, science experiments, historical events, astronomy, virtual field trips, cooking, among others. These
3. Manufacturing: In warehouse management, AR glasses can be used by warehouse workers with hands-free and real-time instructions on where to search, pick, and pack items. VR also allows manufacturers to generate digital 3D models before building physical prototypes. This in turn lessens errors and speeds up the process.
4. Training: AR and VR can be used for the conduct of food and nutrition trainings, cooking demonstrations, cooking simulations for recipe development, technology transfer training, virtual reality facilities and laboratory tours, earthquake drills, among others. VR can be used by workers for hands-on training and learning safety protocols. AR can also be used to compare the actual



# The Role of Family Members in a Mother's Breastfeeding Journey

✍ CCSKahanap, Project Technical Assistant, TDSTSD



“Closing the gap: Breastfeeding support for all”.

This is the theme of this year's World Breastfeeding Week held on the first week of August. According to the World Health Organization (WHO), the campaign celebrates breastfeeding mothers in all their diversity, throughout their breastfeeding journeys, while showcasing the ways families, societies, communities and health workers can give support to every breastfeeding mother.

The 2018-2019 Expanded National Nutrition Survey (ENNS) conducted by the DOST-FNRI reported that the percentage of exclusive breastfeeding among 0-5 months old infants significantly increased from 48.8% in 2015 to 56.4% in 2019. However, there are still infants who receive untimely complementary foods while breastfeeding (25.8%) and those who use breast milk substitutes with foods (17.7%).

This poses a health warning to the increasing cases of malnutrition among Filipino children because they are not given proper nutrition in the first 1000 days of life. The care and nourishment given to the child will have a profound impact on a child's growth, ability, and adult nutritional status. It is important that breastfeeding mothers be given all the support that they can get in order to start, sustain, and continue breastfeeding.

Breastfeeding provides several benefits for both infants and mothers. According to the Department of Health (DOH), breastfeeding is the best way of providing ideal food for the healthy growth and development of babies. It is the sole source of nutrients for infants during their first six (6) months of life and contains antibodies that protect babies against infectious and chronic diseases, such as diarrhea or pneumonia. Furthermore, breastfeeding decreases the risk of

breast and ovarian cancer for mothers who breastfeed.

Given the wonders of breastfeeding, it is essential that breastfeeding mothers be provided with all the support they need. Breastfeeding education and awareness should be given more importance through the support and guidance from the government, the community, and within our homes.

Breastfeeding support starts at home. The emotional support given by family members through encouragement and their outpouring of love will help boost the mother's drive to breastfeed.

Other ways that the family members can give support is by taking turns in doing the household chores and helping the mother to take care of the baby. Also, the role of husbands and other family members in meal planning and preparation will ensure that the

## More *pawis*, ang mas nais!

✍ MBJARicalde, Project Technical Assitant II, TDSTSD



designed by freepik

Magtanim ay hindi nga naman biro, sapagkat maghapong nakayuko.

Ngunit, naisip mo ba kung ang magtrabaho sa opisina ay hindi rin biro dahil maghapong nakaupo?

Sa nararamdaman mong ngalay at pagod sa iyong matagal na pag-upo, minsan ba ay sumagi sa isip mo ang pagpapa-pawis o pag-eeherisyo?

Ayon sa 2018-2019 Expanded National Nutrition Survey (ENNS) ng DOST-FNRI, apat sa sampung indibiduwal, edad 20-59, ay napag-alamang kulang sa pisikal na aktibidad.

Sa depinisyon ng *World Health Organization (WHO, 2023)* ang pisikal na aktibidad ay tumutukoy sa lahat ng klase ng paggalaw.

Ilan sa mga karaniwang aktibidad na ito ay paglalakad, pagtakbo, ehersisyo, pagsasayaw, pagbibisikleta, paglangoy, o anumang uri ng aktibong laro.

Kaugnay dito, hindi maikakaila ang malaking epekto ng teknolohiya sa pagpapadali at pagpapabilis ng pang araw-araw na gawain na nakabawas sa ating pagkilos.

Ang transportasyon ay napadali at napabilis. Ito ay nagbawas sa mga taong naglalakad patungo sa kanilang destinasyon;

Ang dating halos kalahating araw na pamimili ng mga kailangang pagkain ay napalitan ng *online grocery shopping* na inihahatid sa bahay ang mga pinamili;

Kahit ang mga laro na siyang mainam na pagpapawis noon ay napapalitan na ng mga laro at iba pang libangan sa *cellphone, tablet, laptop, o desktop*.

Tunay nga namang “naging wais, less pawis” na ang mga tao sa makabagong panahon.

Batay sa isang pag-aaral ng *Medline Plus* noong 2017, may ilang naitalang

negatibong epekto ang kakulangan ng pisikal na aktibidad.

Kabilang dito ang pagtaas ng timbang, kawalan ng *muscle* at tatag ng katawan, pagbagal ng sirkulasyon ng dugo, at pagkakaroon ng mahinang resistensya.

Dagdag pa rito, ang kawalan ng ehersisyo ay maaaring humantong sa pagkakaroon ng altapresyon, mataas na kolesterol, *osteoporosis*, pati na rin ang *diabetes*, ayon pa rin sa nasabing sanggunian.

Ngunit, bakit nga ba mahalaga ang page-ehersisyo?

Mahalagang malaman na ang gawaing ito ay mainam na paraan sa pagpapabuti ng iyong kaisipan, nakapagpapalakas ng katawan para sa pag-iwas sa sakit.

Sundin ang prinsipyo na ang regular na pisikal na aktibidad ang isa sa mga mahahalagang paraan sa pag-aalaga ng katawan.



# High blood pressure is a silent killer!

FJPBatallantes, Science Research Specialist I, TDSTSD



According to the World Health Organization (WHO), hypertension or high blood pressure (BP) is when the pressure in your blood vessels is 140/90 millimeters of mercury (mmHG) or higher.

However, the WHO adjusted the cut-off for pre-hypertension to 120/80, as a preventive measure to address it early on.

Hypertension can cause kidney disease and cardiovascular diseases, the WHO added.

The systolic (first) number represents the pressure in blood vessels when the heart contracts or beats, and the diastolic (second) number represents

the pressure in the vessels when the heart rests between beats.

Related to this, the 2021 Expanded National Nutrition Survey (ENNS) of the DOST-FNRI revealed that 14.4% or about 1 in 10 Filipino adults 20 to 59 years old has elevated blood pressure, and 33.4% or 3 in 10 of older persons have high BP.

The DOST-FNRI reminds everyone to eat a balanced diet and practice a healthy lifestyle to prevent hypertension and achieve good health.

Hypertension is a silent killer. Many do not know that they are at risk or are hypertensive already due to lack of BP monitoring and unhealthy diet and lifestyle.

Ensure regular consultation with your doctor to monitor your health. Remember that an ounce of prevention is better than a pound of cure—and tons of medical expenses!

Check out the Menu Guide Calendars of DOST-FNRI which feature nutrition information and healthy recipes for individuals with hypertension: <https://www.fnri.dost.gov.ph/index.php/39-tools-and-standard/fnri-menu-guide-calendar/49-fnri-menu-guide-calendar> ■

### **Golden Year of DOST-FNRI Seminar ... from p. 1**

trends on how food and nutrition is and should be shared in the global arena.

The Launching of the New Food and Nutrition Tools and Guides was held before the first and second technical sessions.

The Undergraduate Student Research Competition featured presentations of the three finalists each from the categories of nutrition and dietetics,

and food technology. Technical Session 2 on “TaG These!” covered topics on nutrition tools and guidelines.

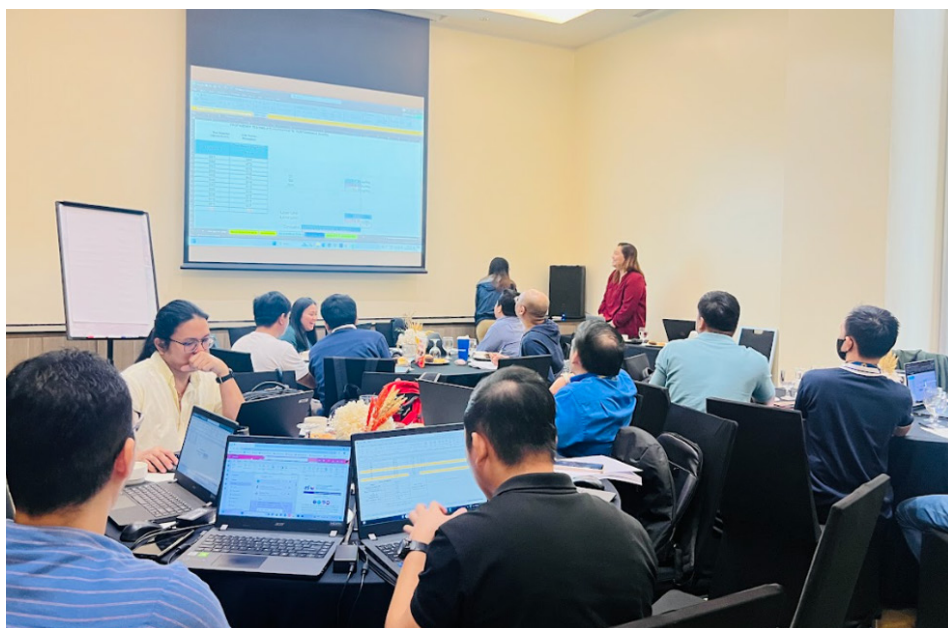
Technical Sessions 3 to 5 focused on “Nutrition for All Ages: Inclusivity in Nutrition”, “Unraveling Hidden Hunger”, and “Ensuring Food Safety and Quality through Innovation”.

A luncheon symposium was conducted by a major sponsor of

the 50th FSS before Technical Session 6 on a “Closer Look at Food Environment and Economically Challenged Area vis-a-vis Nutrition”.

The winners of the Undergraduate Research Competition and the Scientific Posters of the completed food and nutrition research of DOST-FNRI were announced during the Closing Ceremony.■

### **DOST-FNRI conducts Proficiency Testing Training... from p. 4**



Participants gained knowledge on selection of Appropriate PT Schemes, how the laboratory interprets performance in PT Participation, and the statistical approach to establish comparability within laboratories.

There was a workshop on conducting root cause analysis involving a sample laboratory scenario which obtained unsatisfactory performance from PT participation and hands-on exercise to statistically evaluate the homogeneity,

stability, assigned value, and laboratory performance.

The DOE's engagement with the DOST-FNRI's PTL underscores the broader importance of analytical quality assurance in diverse fields. Whether in food, nutrition, or energy, proficiency testing remains a key factor in upholding integrity and accuracy of laboratory results, fostering consumer trust, and supporting the development of policies that impact everyday lives.

The DOST-FNRI customizes trainings and seminars based on the needs of the requesting party. Those interested to avail of trainings offered by the DOST- FNRI can write or email Atty. Lucieden G. Raz, Deputy Director/ Director III and Officer-in-Charge of the Office of the Director at dostfnri47@gmail.com, or contact Ms. Lhearnie M. Carranza, SRS II at landline number: 8837-8113 loc 321 and through email at: itrainfnri@gmail.com. ■

### **Exploring the Potential of Augmented Reality ... from p. 10**

model with the digital model.

5. Navigation: AR and VR can be applied for interactive maps, parking assistance, complex indoor spaces, evacuation drills, and the like.

These roles of AR and VR in different fields could inspire future projects and

drive the next wave of innovation to create new opportunities. The DOST-FNRI is already underway in applying these technologies and visualization techniques in health, nutrition, and education through the on-going ICT project (e.g. F&N 4.0). This will soon be launched, but for now it is currently undergoing several testings and evaluations.

The Institute is also hoping that others are doing and will be doing the same. Let us explore and utilize these technologies to inspire new projects and create exciting opportunities in the future! ■



## **Stakeholders commit for sustainable fruit and... from p. 6**

Institute of Rural Reconstruction (IRR), the neglected and underutilized are given importance for improvement and diversification. Germplasm of 22 indigenous vegetables (IVs) have been prioritized for conservation, school crop museums are being established and IVs seed packs and seedlings have been distributed in participating schools, vegetable growers, and community gardens. They have also collaborated with Consultative Group on International Agricultural Research (CGIAR) Resilient Cities Initiative in the distribution of indigenous fruit seedlings and recommends incorporating these indigenous F&Vs in food-based dietary guidelines.

Piloting and scaling of safe and sustainable Good Agricultural Practices (GAP) for vegetable production which include integrated pest management and integrated nutrient management under the lead of Prof. Filomena C. Sta.Cruz, Ph.D. of the University of the Philippines Los Baños (UPLB) were done for eggplant, bitter melon, and yardlong beans. Crop productivity

and profitability were shown to be higher with GAP compared to the usual farmer's practice.

For the post-harvest and inclusive markets with lead Jenny Ekman, Ph.D. of the Applied Horticulture Research in Australia, in partnership with the UPLB and UP Mindanao, the value chain mapping and implementing different methods to extend shelf-life of mangoes, indigenous vegetables and fruits like *kamote*, *saluyot*, *pako*, *kangkong*, watercress, mangosteen, and bottle gourd and improved handling for mangoes and tomatoes have been tested and shown effectiveness.

Lastly, in terms of policies, presented by Elaine Borazon, Ph.D. of the National Sun Yat-sen University in Taiwan, developing industry roadmaps to identify priority crops and required resources, protecting agricultural land to support fruits and vegetables, reducing production costs through incentives and subsidies, aligning policy directions, addressing lack of facilities for storage, identifying needs

per crop, equipping farmers with business and marketing skills, and ensuring that local production meets domestic demand were among the proposed solutions.

DOST Secretary Renato U. Solidum, Jr. expressed that the Department is one with the FRESH team on the quest towards sustainable fruit and vegetable production and consumption. He is glad that the initiatives are aligned with the DOST's and current administration's priority agenda on nutrition, health and food security, poverty reduction, livelihoods, gender equality and youth inclusion, climate adaptation and mitigation, environment and biodiversity.

Other insights, reflections, challenges and ways forward to make sustainable fruit and vegetable production and consumption work in the country from key officials in agriculture, social work, health and academe were shared in the series of panel discussions during the forum. ■

## **The Role of Family Members in a Mother's ... from p. 11**

mother gets the nutrients she needs. In addition, proper diet plays a crucial role in the breastfeeding journey of a mother. It can impact the milk supply and the quality of milk she produces. Thus, also affecting the nutritional status of her infant.

The Philippine Dietary Reference Intakes (PDRI) developed by the DOST-

FNRI suggests that breastfeeding mothers need an additional 500 calories per day with increased intake of water, calcium, folic acid, and iron.

A balanced diet with a good source of protein, complex carbohydrates, and high fiber rich foods complemented with water is recommended for breastfeeding mothers.

The support we can give as early as now will greatly impact the health and well-being of not just the mothers but the growing child throughout his formative years.

Together we can help fight malnutrition. Support the first 1000 days of life! Support breastfeeding! ■

## **More pawis, ang mas ... from p. 12**

Hikayatin ang sarili na magpapawis sa tuwi-tuwina,

Hindi masamang magsimula sa maiikling hakbang kagaya ng mabilis na paglalakad o *brisk walking*, saglit na pagtakbo, o ilang minutong pagsasayaw.

Huwag mabahala kung sa simula ay mabilis mapagod, sapagkat masasanay din ang katawan sa ganitong gawain habang tumatagal.

Kung mayroon mang siyam na rason upang hindi makapagpapawis sa isang araw, sana ay sumagi sa isipan ang

ika-sampung dahilan na *more pawis ang nais*, upang mas maging wais sa kalusugan! ■

# Library Acquisitions

✍ KMDilag, Science Research Specialist II, TDSTSD

Call Number	Title/Author	Publication / Year
FN SB 418.7 D43 2024	Oh My Gulay! Sa FNRI: Exploring the Potential of Workplace Urban Garden for Food Self-provisioning/ <i>Maja Bethzaida S. Decena, Idelia G. Glorioso, Shannen Faye Q. Arevalo, and Milflor S. Gonzales</i>	Philippine Journal of Science / 2024
FN RG 580 F66 2023	Food and Nutrient Consumption Patterns of Filipino Pregnant and Lactating Women Based on a Nationwide Survey/ <i>Eva A. Goyena, Josie Platon-Desnacido*, Dexter G. Tabud, and Apple Joy D. Ducay</i>	Philippine Journal of Science / 2023
FN QP 141.A1 F739s 2022	2019 Expanded National Nutrition Survey monograph series: the food, health and nutrition situation of Southern Leyte/ <i>Food and Nutrition Research Institute</i>	Food and Nutrition Research Institute/ 2022
FN RA 407.3 J38 2024	Improving the Electronic Data Collection System (EDCS), a Computer-assisted Personal Interviewing and Database Tool Used for the Expanded National Nutrition Survey/ <i>Mae Ann S.A. Javier, Charmaine A. Duante, Owen John C. de Leon, and Imelda Angeles-Agdeppa</i>	Philippine Journal of Science / 2024
FN TS 2011 D35 2024	Production and Characterization of Rice Flour as Reference Material for Chemical Analysis/ <i>Leah C. Dajay, Jolly C. Cotara, Jennifer C. Laurea, Mylene B. Martin, Maricar Giel Y. Parcarey, and Prudencio E. Adona Jr.</i>	Philippine Journal of Science / 2024
FN TX 393 G53 2024	The International Breakfast Research Initiative - Evaluation and Comparison of Breakfast Nutrient Intakes in Indonesia, Malaysia and the Philippines with a View to Proposing a Harmonised Nutrient-Based Breakfast Recommendation/ <i>Michael J. Gibney, Imelda Angeles-Agdeppa, Elise Line Mognard, Helda Khusan, Jean-Pierre Poulain, Apple Ducay, Marvin B. Toledo, Roselynn Anggraini, Judhiastuty Februhartanty, and Sinéad Hopkins</i>	Nutrients/ 2024
FN QP 141.A1 F739su 2022	2019 Expanded National Nutrition Survey monograph series: the food, health and nutrition situation of Surigao Del Sur/ <i>Food and Nutrition Research Institute</i>	Food and Nutrition Research Institute/ 2022
FN RA 781.7 L38 2024	Energy Cost of Selected Physical Activities of Older Persons Living in Taguig City, the Philippines / <i>Hazel T. Lat, Chelcey Lauren T. Lim, Magnolia B. Velasquez, David Kenneth C. Mendoza, Kyler Kenn M. Castilla, and Robby Carlo Tan</i>	Philippine Journal of Science / 2024
FN QP 141.A1 F739za 2022	2019 Expanded National Nutrition Survey monograph series: the food, health and nutrition situation of Zamboanga Del Sur / <i>Food and Nutrition Research Institute</i>	Food and Nutrition Research Institute/ 2022
FN QP 141.A1 F739z 2022	2019 Expanded National Nutrition Survey monograph series: the food, health and nutrition situation of Zamboanga City / <i>Food and Nutrition Research Institute</i>	Food and Nutrition Research Institute/ 2022