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Towards achieving PH's milk self-sufficiency

By Rosemarie C. Señora, DOST-STII

The Department of Science and Technology - Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST-PCAARRD) continues to strengthen its partnership with the Philippine Carabao Center (PCC) in ensuring milk self-sufficiency for the country.

According to Dr. Claro N. Mingala, Scientist IV of the PCC, all of the projects including that on milk production being implemented by PCC came through because of the efforts and support of the DOST-PCAARRD.

"Katunayan po, itong mga community-based science and technology-based farm projects ay extension services to farmers especially those who raise carabaos. They were given assistance like artificial insemination, at pagbibigay-kaalaman tungo sa pagbibigay ng magandang nutrisyon ng mga kalabaw para makapagbigay po ng mataas na volume ng gatas, gayundin sa karne at pantrabaho sa bukid," he said in the latest episode of the DOST Report, a weekly broadcast of the DOSTv.

DOST Secretary Fortunato T. de la Peña added that it was way back in 1999 when PCC launched the village-based buffalo dairying project for the improvement of local milk production.

The Secretary also affirms the collaborative efforts of DOST-PCAARRD and PCC to strengthen the production of carabao products.

"Nakikipag-partner ang Philippine Carabao Center at ang DOST-PCAARRD sa mga local government unit, sa mga asosasyon ng mga dairy farmer, at sa mga dealer ng dairy products," he said.

One of the major objectives of the PCC is to help address the demand for dairy products in the country, which is currently being met by way of importation.

"Ang Pilipinas ay may 1% lamang na self-sufficiency ng gatas meaning 99% ng gatas o dairying sa Pilipinas ay halos imported kaya pinag-igihan po ng Philippine Carabao Center,

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VolcanoPh app to raise public awareness on volcano hazards for better preparedness

By Joy M. Lazcano, DOST-STII



VolcanoPh app provides Android users with important real-time volcano alerts and notifications.

Last year, Taal volcano literally started the year with a bang. It resulted in the suspension of school classes and work and halted local flights in the area above as the Department of Science and Technology-Philippine Institute of Volcanology and Seismology (DOST-PHIVOLCS) issued Alert Level 4 on the afternoon of 12 January 2020. The scenario indicated "possible hazardous explosive eruption within hours to days."

After 42 years of silence, Taal volcano showed renewed activities that fateful day, spewing ash that affected residents and tourists in Batangas, Cavite, Laguna and even in Metro Manila and other neighboring cities.

Fortunately, the recent disaster has prompted scientists from DOST-PHIVOLCS to develop VolcanoPH, a volcano advisory application that will help the public better

understand similar geohazard warnings in the future so they can be better prepared. This innovation is a real-time volcano advisory application, initially for Android devices, that provides infographic information on the latest updates of Philippine active volcanoes monitored by DOST-PHIVOLCS.

This app will help users understand the present volcano status along with its alert level warnings through the 24-hour real-time observation data gathered from the Volcano Monitoring Network records and actual field survey data analyzed by experts from DOST-PHIVOLCS.

App users can also select and click from a list of active volcanoes with alert levels on its homepage and be provided with the 24-hour summary containing its alert level warning status, monitoring parameters, and recommendations in Filipino language.

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The push notification feature will inform the users of the latest volcano advisory before the updates are posted on social media platforms. "The system will enable the user to see the updates first on the app after we have posted it to the DOST-PHIVOLCS website and have disseminated the information to the proper authorities," said DOST Undersecretary and concurrent Officer-In-Charge of DOST-PHIVOLCS Dr. Renato U. Solidum Jr.

The information that the users can access include the following: seismicity or the number of volcanic earthquakes monitored, acidity level and temperature of the main

crater lake, the level of sulfur dioxide being spewed by the volcano, volcanic plume level or the gas and particles produced by the volcano. Moreover, the app can provide other important information to help users determine the risks like the following: ground deformation or the presence of cracks, sinking, or swelling of the ground that can be caused by gas, magma, or fluids moving underneath or the movements of the earth's crust due to the motion along the faults.

The VolcanoPh app also provides recommendations and comments written in Filipino. According to Ma. Antonia V. Bornas,

head of the Volcano Monitoring and Eruption Prediction Division of DOST-PHIVOLCS, her team is currently planning to include advisories on different languages as warnings can be contextualized using local languages. "Like in Bicol (province), there are three languages used in the province," explained Bornas. However, this is still being studied thoroughly to ensure that the app will be more effective.

To make the app more effective, Usec. Solidum also shared that the Agency is planning on developing the app for IOS users as well.

kapartner ang iba pang ahensya ng Department of Agriculture para mapagtuunan ng pansin ito," said Dr. Mingala.

He added that among the support that DOST-PCAARRD has extended is a pilot project in Nueva Ecija, which is regarded as the milk capital of the country, amounting to P60 million to increase the quality of the carabaos in the country.

"Napataas at naabot po namin ang objective po namin sa project na ito gayundin ang isang komunidad ng mga magsasaka doon sa San Agustin, Isabela," he said adding that upon the completion of the project, it will prove that the Philippines can have a sustainable dairy industry.

"Ang hinahangad lang po namin ay maduplicate o mareplicate po ang proyektong ito sa lahat ng dako po ng ating bansa," he disclosed.

He said that aside from these projects, DOST-PCCAARD also helps in the dissemination of high technology projects so that they can be easily understood by the local farmers.

Dr. Mingala also mentioned the Patent Mining Program of Selected AANR Commodities by DOST-PCAARRD, which aims to discover emerging agricultural technologies and influence the development of priority R&D programs through patent mining. The process highly relies on patent literature, which contains valuable information that can guide organizations in planning for targeted R&D investments and determining early Intellectual Property management strategies.

For his part, Secretary de la Peña lauded the efforts of the Center in developing dairy product technologies and especially its collaboration with the local government units and the private sector.

"1985 pa noong isinulat ko ang article on the science and technology system in the

Philippines and in the year 2000, kasama na ang forecast regarding sa Carabao Center. Natutuwa naman ako at ngayon ay naisasagawa na," the science chief said adding in jest that carabaos are one of the animals closest to his heart.

Sec. de la Peña stressed that the PCC should explore more partnerships with the public and private sector to implement projects that will contribute to fulfilling its mandate and the country's quest to be self-sufficient in milk production.

"Kailangan lang talaga, gaya ng sabi ni Dr. Claro, iyong replication ng kanilang mga success stories at partnerships. Nabanggit niya ang San Agustin Dairy Cooperative, two weeks

ago ay nag-facilitate ako sa kanilang programa at maganda iyan dahil ka-collaborate nila ang LGU at siyempre iyong private business sector," he said.

Considered as an offshoot of the DOST-PCAARRD, the Philippine Carabao Center (PCC) is now a testament to the council's fruitful collaborative efforts.

Established by virtue of Republic Act 7307 or the Philippine Carabao Act of 1992, the Philippine Carabao Center started off as the Philippine Carabao Research and Development Project, an undertaking that was funded by DOST-PCAARRD and the United Nations Development Programme in 1982 to 1992.

#DOSTReport

Dr. Claro N. Mingala, DVSM, MVST, PHD
Scientist IV, Philippine Carabao Center

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Department of Science and Technology
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DOST REPORT EPISODE 60

DOST PARTNERSHIPS ON AGRICULTURE,
AQUATIC AND NATURAL RESOURCES
PROGRAMS

DOST, DOH allot funds to study effects of mix-and-match vaccines on Filipinos

By Allan Mauro V. Marfal, DOST-STII



Rowena Cristina Guevara (DOST, Philippines)

Department of Science and Technology (DOST) Undersecretary for Research and Development Dr. Rowena Cristina L. Guevara disclosed during the broadcasters' forum that DOST and DOH have approved the research projects on mix-and-match vaccines and real-world vaccine effectiveness. (Screenshot from Broadcasters' Forum Facebook Page)

The Department of Science and Technology (DOST), together with the Department of Health (DOH), will allot more than P200 million to fund studies related to the mix and match of vaccines as well as their real-world effectiveness.

During the broadcasters' forum online hosted by Rolly "Lakay" Gonzalo and Mike Abe held on 10 June 2021, DOST Undersecretary for Research and Development Dr. Rowena Cristina L. Guevara shared that there are two projects to study and produce relevant data and information about the procedures and effectiveness of vaccines on Filipinos.

Usec. Guevara explained that the project will focus first on finding out if it is possible and safe to mix and match vaccine brands. The study will try to establish the effect of using two different vaccines, like for example using Sinovac as first dose and AstraZeneca for the second dose. It will also determine the effectiveness of using two different vaccines and how long it could protect Filipinos who will be vaccinated.

On the other hand, for the real-world vaccine effectiveness, Usec. Guevara said that the researchers will try to find out how and how long the vaccine would be effective against COVID-19.

Usec. Guevara disclosed that the duration of both research projects will be one year but after three months, they can already provide initial findings.

"Iyong technical data, pag-aaralan ng ating Vaccine Experts Panel according sa characteristics ng mga Filipino," said Usec. Guevara.

[Our Vaccine Experts Panel will look and study the gathered technical data based on the characteristics of Filipino.]

"According to scientists, there is no problem if you get vaccinated with different brands, this study will only look into the efficacy of these vaccines", Usec. Guevara explained.

"May second part ang mix and match experiment. Aaralin din kung kailangan ba ng booster matapos ang first and second dose ng vaccine. So far, wala pang nakaabot ng long-

term study ng vaccine. Kung kailangan ba ng booster, iyan ang pangalawang aaralin ng mix and match," added Usec. Guevara.

[There will be a second part for the mix and match experiment. Also, they will be looking for the need to have the booster after the first and second doses of vaccines because as of now, there is no long-term study yet about the vaccine.]

For the experiment, the researchers are currently seeking clearance for clinical trials and the ethics board review clearance. Once they get it, they can start the study this July.

"Dahil kakain ng bakuna na kasama sa supply ng DOH, siniguro rin ng study na A1 hanggang A4 din ang isasali sa study para siguradong walang mababawas at hindi mauubos ang supply ng ating vaccine," said Usec. Guevara.

[To ensure that the vaccine supplies of DOH would not be affected, A1 from A4 will be part of this study.]

(With reports from Rosemarie C. Señora, DOST-STII)



A Mother and Child Care Center has been launched by the Department of Science and Technology-Science and Technology Information Institute (DOST-STII) on 24 June 2021 to provide a dedicated space that would ensure the comfort and privacy of breastfeeding mother-employees. It is equipped with a bed, couch, portable sink, and refrigerator for proper storage of the milk. (Photos by Gerardo G. Palad, Lady Shayne Yap, and Jaqueline C. Ballesteros, DOST-STII)

DOST's science info institute opens Mother and Child Care Center for employees

By Allan Mauro V. Marfal, DOST-STII

A newly-built center inside the Department of Science and Technology-Science and Technology Information Institute (DOST-STII) is now open and ready to accept nursing mother-employees who are in need of a private space within the office to express milk for their babies.

On 24 June 2021, as part of its 34th anniversary, the DOST-STII launched the Mother and Child Care Center which aims to provide a dedicated space for breastfeeding mother-employees with comfort and privacy.

It is an initiative of the DOST-STII's GAD Focal Point System (GFPS) and GFPS Technical Working Group in support for the implementation of Republic Act of 10028, otherwise known as "An act providing incentives to all government and private health institutions with rooming-in and breastfeeding practices and for other purposes."

"Having a dedicated space for these needs of our mothers would prevent them from being

stressed, knowing that you would leave your baby with enough milk supply. With this, the mother-employees will be stress-free and productive in her work," said DOST-STII Director Richard P. Burgos and Institute's GFPS Chair.

He assured that DOST-STII GFPS has the full support in maintaining and improving this kind of facility because it would not only serve the employees but also their visitors in the future.

"We see the importance of having this kind of facility in our office because if you take care of your people, they will be happy mothers and happy employees, they will become more productive," said Dir. Burgos.

The said establishment is equipped with a bed, couch, portable sink, and a refrigerator to store milk. A dedicated play area for toddlers is also available. The DOST-STII GFPS Technical Working Group is now preparing the internal guidelines and protocols for proper use and management of the center.

ABOUT US

The DOST Digest is published by the Department of Science and Technology-Science and Technology Information Institute. For comments, suggestions or queries, contact: (02) 8837-2071 to 82 loc. 2148/8839-2193 local 107 or email: dost.digest@gmail.com

Joy M. Lazcano

EDITOR-IN-CHIEF

Allan Mauro V. Marfal

MANAGING EDITOR

James B. Intia

LAYOUT & GRAPHIC ARTIST

David Matthew C. Gopilan

PROOFREADER

Ferdinand D. Cartas

CIRCULATION

Department of Science and Technology
Science and Technology Information Institute
Bicutan, Taguig City 1631
Metro Manila
Philippines

www.stii.dost.gov.ph

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Technology Information Institute