
stewardship program. This should be mandatory and should safeguard the health of users.
2. Require companies to submit their specific product stewardship program per product.
3. FPA to refer submitted stewardship programs to DOLE for comments.
4. The product label should indicate that the product is "mild", "moderate", "severe"
sensitizer as the case may be 5. Both product stewardship programs and proposed labels of sensitizers shall be referred to PPTAC for comments/ recommendations.
6. Post-monitoring for sensitizing products. The egistration approval of the said products should not be based solely on the promises of the companies to comply. There must be specific guidelines depending on the severity and toxicity of the product. FPA, as a regulatory agency, should look nto during monitoring how the companies comply with the Occupational Health and Safety ccupational Heath and Safety
equirements and standards. analysis should be done and it is advised to check whether there are safer alternative formulations which are already in the market for the sensitizing products.
8. In the absence of biomonitoring, there should be actions to be taken for the following reasons: 1) sensitization sometimes has delayed effect/s, 2) allergic sensitization is genetically based, and 3) dose-response

relationship is not always present.
"We are just waiting for the decision of the Board whether to approve or not the recommendations of the PPTAC But my initial decision on this is, we can approve registration based on the PPTAC recommendations," elucidated Dir. Gicana.
Product stewardship, as recommended by the PPTAC, is seen as one of the efficient ways to mitigate effects of dermal sensitization. It was also recommended by the Board to form an interagency taskforce, who will deal and manage the issues on dermal sensitization. The FPA board decided to put off the decisions and actions on dermal sensitization until the issue is further validated through the proposed conduct of an independent research study. \#



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## PESTICIDE ORGS CONDUCT crop protection symposium



The Pest Management Council of the Philippines (PMCP) Foundation, Inc. and the Philippine Association of Certified Pesticide Applicators (PACPA) in coordination with the Fertilizer and Pesticide Authority (FPA) conducted the Symposium on Crop Protection Updates" on 14 November 2014 to inform 99 researchers, accredited responsible care officers (ARCOs), and certified pesticide applicators (CPAs) of the updates and current echnologies on crop protection.
In brief remarks, Dr. Teodora 0. Dizon, president of PMCP Foundation, Inc., welcomed all the participants to the activity and declared that all

proceeds gathered will support scholars.
Introducing his co-speakers who shared expertise and updates in the field of crop protection and serving as the event's host and moderator was Dr. Gil L. Magsino, assistant professor and researcher of the Crop Protection ClusterUniversity of the Philippines Los Baños (CPC-UPLB)

## The stewardship

 program is crucial in educating farmersHighlighting the importance of fertilizer and pesticide as the basic inputs in productive and profitable farming was FPA Executive Director Norlito R. Gicana. "When handled improperly, these inputs can cause negative impacts to the soil, environment and human beings," Dir. Gicana discussed
In his discussion on "Documentary Requirements on Renewal of Licenses and FPA Updates", Dir. Gicana reported that some agencies
propose to "relax" some rules and regulations such as the removal of licensing, efficacy tests, and registration. In his rebuttal, Dir. Gicana stressed the importance of such rules and regulations as the agency is strongly science-based and such inputs, as mentioned un, earlier, can impose ne mpacts if abused and misused "The stewardship program is crucial in educating farmers and ensuring safety of consumers," Dir. Gicana stressed as he highlights the vision of FPA which is
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improved quality of life for all Filipinos through increased farm productivity and food production using the necessary agricultural inputs that do not endanger human health and environment on a sustainable basis.
Also included in his discussion were the general functions of FPA on regulation and control, information and development; rules on registration and licensing; definition of terms; accreditation requirements; accreditation requirements; penalties; and updates in the pesticide industry. One crucial
concern, among others, is the concern, among others, is th
proliferation of smuggled proliferation of smuggled
pesticides, which is being pesticides, which is being resolved together with other
involved government agencies. Climate change and crop

## protection

"It is undeniable that climate change has massive impacts in the environment," said Dr. Ireneo B. Pangga, professor of the CPCUPLB, in his presentation titled "Climate Change Effects on Plant Diseases: Uncertainty and Complexity".
Among the compelling evidences of climate change, as reported by Dr. Pangga, were extreme natural events, global temperature rise, sea level rise, and shrinking glaciers, all of which have impacts on crop


It is undeniable that climate change has massive impacts in the environment

## 2

In terms of agriculture, climate change is reported to be palpable in three major areas: 1) losses from plant diseases, 2) efficacy of disease management strategies, and 3) geographical distribution of plant diseases. Some other effects include loss of fertile coastal lands because of sea level rise, more unpredictable farming conditions in tropical areas, longer growing seasons in cool areas, dramatic changes in distribution and quantities of fish and sea foods, and increase in incidence of pests and vectorborne diseases.
In order to prevent such adverse impacts to agriculture, Dr. Pangga talked about effective strategies such as breeding for biotic and abiotic stress, use of crop diversity, effective quarantine regulation, $\rangle$
application of IPM strategies and forecast of outbreaks and epidemics.
Herbicide application techniques
techniques
"Every drop [of pesticide] not "Every drop [of pesticide] not
reaching its target is a loss in pest control," said Dr. Gil L. Magsino as he talked about "Challenges on Herbicide Weed Resistance through Herbicide Application
Techniques".
Dr. Magsino's presentation highlighted the relevance of herbicide application quality in promoting an efficient, safe and profitable farming. In the report, the effectiveness of pesticide products relies not only on its quality but also on the actual application and usage.
Among the key factors influencing application quality are: 1) target pest and development, 2) spray quality and coverage, 3 ) water quality, 4) tank mixtures and spray additives, 5) application equipment and techniques, 6) weather conditions, 7) environment and user safety, 8) use pattern, 9) product and dose rate, 10) chemical mode of action and systemicity, and 11) crop morphology and growth stage.
"For our customers to achieve the desired level of control from crop protection products, we need to consider the
interactions between and among product, target, timing, and
application quality," as reported by Dr. Magsino.
$\mathrm{ECO}_{2} \mathrm{FUME®}$ and
VAPORPH ${ }_{3} \mathbf{O S ®}$
"Before you can control certain pests, you should know the nature of the pest as well as the risks," opened Mr. Gabriel M. Salazar, Jr., general manager of Salazar, Jr., general manage
Sterix Incorporated, as he Sterix Incorporated, as he
introduced his presentation on introduced his pres "ECO2FUME® and
VAPORPH3OS®: The GameChangers on Phosphine Fumigation".

ECO2FUME® fumigant gas, a ready-to-use, non-flammable mixture of Phosphine and Carbon Dioxide, enables highly effective fumigation in a wide variety of sealed-storage applications as it quickly and easily aerates. Meanwhile, VAPORPH3OS® is composed of $100 \%$ phosphine gas compressed in high pressure cylinder and it requires a specific machine to blend phosphine with air.
Both are cylinderized phosphine, which has four major advantages: 1) external application to reduce worker exposure and eliminate confined space entry, 2) no waste byproducts or residues, 3) environment-friendly due to environment-friendly due to
non-phytotoxicity and nondepletion of ozone, and 4) ease depletion of ozone, and 4) e
of application and control. of application and control.
The current utilization of cylinderized phosphine in the Philippines are in food manufacturing plants, supply chains and distributors, pharmaceuticals and nutritionals, hybrid seeds, feed millers, grain traders, and rice traders.



Pest response to phosphine
Ms. Miriam A. Acda, chief science research specialist of the Philippine Center for Postharvest Development and Mechanization (PhilMech), presented an on-going study "Response of on-going study "Respon
Stored Product Pests to Stored Produ
Phosphine".
Phosphine".
Based on the report, the reasons why pests were found to have developed resistance to phosphine are under-dosing, insufficient application rates, uneven distribution of fumigant, and improper sealing.
"The way to delay development of phosphine resistance is to achieve complete kill of insects in every fumigation," elucidated Ms. Acda. This can be fulfilled through proper dosage, maintenance of required concentration level inside enclosure, monitoring of phosphine concentration, and proper sealing.
Corporate social responsibility and stewardship
"We can minimize or avoid
global warming partly through global warming partly through
stewardship and corporate social stewardship and corporate social
responsibility (CSR)," said Mr. responsibility (CSR)," said Mr.
Napoleon T. Saavedra, director of Napoleon T. Saavedra, director of
Syngenta Foundation and chair Syngenta Foundation and chair of the Stewardship Committee of CropLife Philippines, in his discussion "Stewardship \& Corporate Social Responsibility: The Plant Science Industry Perspective". Product stewardship

is the responsible and ethical management of a pesticide product from its discovery through to its ultimate use and beyond. It aims to promote practices which encourage safe and effective use of crop protection products and to minimize, if not totally eliminate, adverse effects of crop protection products on humans and the environment.
"In conclusion, stewardship and CSR are not only compliance to regulation but should be part of a company business philosophy to ensure sustainability of the community," concluded Mr. Saavedra.
The activity was formally closed by PACPA President Bailey Yu , who recognized the active participation of attendees as well as the undeniable expertise of al resource speakers. \#

ermod es
and financial support from the Department of Science and Technology (DOST) or the Bureau of Agricultural Research (BAR).
With the urgent need for the research results in orde to create effective decisions, Dr. Nina Gloriani of PPTAC said, "The study will take a few months. Dr. Davide and I were talking about many substances that can cause dermal sensitizers, not just pesticides. Some individuals may respond differently to certain doses of chemicals. It is geneticallybased."
PPTAC Chairman Dr. Romulo Davide added, "We are all sensitive to the environment. Each one of us has different reactions. Even to dust, we are sensitive too. All pesticides are dermal sensitizers."
Finally last August, PPTAC released their eight (8) recommendations with regards to how pesticides classified as dermal sensitizer are going to be treated and processed by the FPA.
The PPTAC recommendations are as follows:

1. Allow the conditional registration for one (1) year for pesticide products with dermal sensitizing effect subject to the registrant companies' strict implementation of product


The Fertilizer and Pesticide Authority (FPA) and the Office of the Presidential Assistant for ood Security and Agricultur ood Security and Agricultura Modernization (OPAFSAM) conducted on 1 October 2014 planning workshop to update and fine-tune the strategic framework of FPA.
Held in the FPA Central Office in Quezon City, the event was graced by OPAFSAM Secretary Francis N. Pangilinan, OPAFSAM Undersecretary for Operations Fredelita C Guiza, and FPA redeliva, Biriza, and FPA xecutive Director Norlito R. icana together with the heads and representatives from th Office of the President, OPAFSAM, and FPA.
"This planning workshop is part of the thrust of our office to ensure that the agencies under our wings will be able to take advantage of the following years as we put in place the needed nterventions to address the rons of concer the agencies," elucidated Sec. Pangilinan in his opening remarks.
Vision, Mission, and Mandate of FPA
FPA Dir. Norlito Gicana reported that the only law that created FPA is the Presidential Decree 1144 enacted in 1977. During the planning workshop, as led by OPAFSAM Usec. Edel Guiza, a need to update the FPA vision, mission and mandate was
strongly proposed in order for the agency to better fulfill its functions. Increase in income, which is currently being pushed to become an indicator of growth, is advised by Sec . Pangilinan to be
incorporated in the FPA vision.
"No amount of increase in yield will matter if the farmers remain poor and do not earn more," in a statement of Sec. Pangilinan.
Moreover, farm enterprises and organizations were proposed to be included in the focus of the FPA mission instead of only farmers and fisher folk. "The general rule now is that our farmers are into subsistence farming. The strategy really is how we can transform the country from the general rule of subsistence farming to sustainable farming enterprises," stressed Sec. Pangilinan.
Strategic Themes of FPA
In the strategic framework draft lie six planned themes reflecting the agency's multi-faceted strategies. These are: 1) adequate supply and affordable prices of fertilizers and pesticides, 2) fertilizer and pesticide regulation, registration, quality control and inspection, 3) agriculture sector education in the use of fertilizers and pesticides, 4) public safety, 5) implications of ASEAN integration, and 6) FPA organizational concerns Adequate supply and affordable prices of fertilizer

Dir. Gicana reported that according to data, the prices of fertilizers and pesticides in the country are almost the same as compared with that of Vietnam and Thailand.
The awareness and monitoring of the trends on supply and prices of fertilizers and pesticides, as emphasized by Sec. Pangilinan, is important in order to optimize the function of FPA in ensuring the adequacy and affordability of these basic farm inputs.

## PS

## No amount of increase in yield will matter

 if farmers remain poorFertilizer and pesticide regulation, registration, quality control and inspection
Fertilizer and pesticide costs, as reported by Dir. Gicana, amount to half of the total cost of farm production and this intensifies the need for strict protocols with regards to registration regulation, quality control and inspection in order to produce and market only the premium fertilizers


## nd pesticides.

With the pertinent cases on abuse and adulteration as well as issues on delays, it was raised during the planning workshop that FPA should strengthen its regulatory and monitoring functions. Agriculture sector education in the use of fertilizer and pesticides
Education is the key to a brighter future and this also remains true in the case of educating stakeholders, especially farmers, in the proper use and managemen of fertilizer and pesticide.
As Dir. Gicana elucidated in the workshop, educating farmers and fisher folk on the proper ways of utilizing, handling, and storing farm inputs can lead to costeffective and high-yielding farm production and safer healthier environment for the armers and the community Found to be brand-conscious, farmers should also be educated when it comes to product brands and labels as they tend to buy expensive and better-packaged fertilizer and pesticide products even if they have the same formulation as that of the more affordable ones when compared through
he product labels. Public safety
Proper education is the key to ensure public safety and to lessen the hazards imposed by the misuse and abuse of fertilizers and pesticides.
Cognizant to the relevance fogealth and safety matters the industry Usec Guiza in the industry, Usec. Guiza proposed that the Department of Health (DOH) be a member of the FPA Board, which is currently comprised of dignitaries from the OPAFSAM, Department of Trade and Industry (DTI), Department of Finance (DOF), Central Bank, Philippine National Bank (PNB), Bureau of Plant Industry (BPI), Environmental Management Bureau (EMB) and Food and Drus


Safety issues on the hazardous impacts of aerial spraying of fungicides in banana plantations and smuggling and back-door utilization of Endosulfan nsecticide were also raised during the planning workshop, which intensified the need to mplement strong protocols on the conduct of community surveillance as part of the risk assessment activities. mplications of ASEAN integration
In 2015, the Association of Southeast Asian Nation (ASEAN) will implement the economic integration which will prop up the ASEAN Economic Community (AEC) defined by the following
characteristics: 1) a single market and production base, 2) a highly competitive economic region, 3) a region of equitable economic
development, and 4) a region fully integrated into the global economy (www.asean.org) As a member of ASEAN, the Philippines will partake in the abovementioned implementations With less than a month remaining before 2015, FPA needs to perform adjustments to adapt to the new protocols imposed by the upcoming ASEAN economic integration.
Currently, FPA is using the World Health Organization (WHO) labeling system and classification but the economic integration in 2015 will require FPA to adopt the Globally Harmonized System (GHS) of labeling its products, which will necessitate reeducation of FPA personnel, farmers, and the industry as a whole on the new labeling guidelines.
FPA organizational concerns Important matters within the FPA organization with regards to personnel and manpower, coordination within and outside the agency, and upgrade of facilities and equipment were also raised during the planning workshop. \#



On 27-31 October 2014, the Food and Agriculture Organization (FAO) and the Bureau of Agriculture and Fisheries Standards (BAFS) spearheaded the "Study Tour on Risk-Based Food Inspection in the Philippines" convening involved government agencie including the Fertilizer and Pesticide Authority (FPA) with the purpose of exposing thirteen key government officials of Bangladesh to the institutional setup,
arrangements, and approaches to risk-based food inspection in the country.
Commencing the five-day activity, which aims to contribute in the mplementation of risk-based food inspection and enforcement in Bangladesh, is a one-day lecture series of all government agencies in th Philippines as well as the academe involved in asserting the safety of consumers through quality checking and inspection of commodities. Aside from FPA, concerned agencies such as the Bureau of Animal Industry (BAI), Bureau of Fisheries and Aquatic Resources (BFAR), Bureau of Plant Industry (BPI)- National Pesticide Analytical

Laboratory (NPAL), Food and Drug Administration (FDA), National Dairy Authority (NDA), National Food Authority (NFA)-Food Development Center (FDC), National Meat Inspection Service (NMIS), Philippine Coconut Authority (PCA), and he University of the Philippines (UP) College of Agriculture (CA) and College of Veterinary Medicine (CVM) participated in the activity
Presenting the lecture o
FPA was its Executive
Director Dr. Norlito R. Gicana, who discussed the roles and functions of the agency on monitoring and inspection, planning and coordination, and capacity building owards providing safe and quality commodities. inspection and monitoring FPA has the authority to conduct wide range of inspection and monitoring activities after a product is registered to assure that it $s$ being handled distributed and used safely and in accordance with the with the applicable
rules, regulations and product labeling," reported Dir. Gicana. When inspecting products/establishments/warehouses FPA regional officers scrutinize proper storage, genuineness of products maintenance of appropriate operational books and records, and sale of
restricted/smuggled products.
Factors to ensure food safety
"Pesticides and other chemicals are
poisonous in nature," stated Dir. Gicana, which is why FPA implements strategies to ensure food safety and consumer wellness.
Strategies include good agricultural practices (GAP), integrated pest management (IPM), safe and judicious use of fertilizers and pesticides, maximum residue limits (MRLs), and use of appropriate crop protection products for specific pests and diseases.
On 28 October 2014, the Bangladeshi inspectors visited the FPA Laboratory Services Division (LSD), headed by Ms. Jerolet C. Sahagun, to acquaint themselves with the FPA laboratory equipment and services being provided by the Agency. \#


health and safety in manufacturing and formulation plants and imposes penalties and sanctions for violation of its implementing rules and standards.

An important component of product registration is product stewardship program, which is required for every pesticide product wherein registrants are made primarily responsible for the conduct of the program for their products.

To better inform and educate stakeholders on proper use and management of farm inputs, FPA conducts trainings and accreditation programs for handlers. FPA also monitors prices and disseminates information on the proper and efficient application of such inputs through information activities and materials.
Inspection and monitoring
In monitoring product quality, FPA ensures that the fertilizer and pesticide products are not yet expired and are not misbranded or adulterated

To assess and ensure the safety of consumers, FPA monitors pesticide residue levels in food crops in collaboration with residue laboratories. "Such residue data will be the basis for modifying use patterns and taking regulatory action on the particular pesticide," explained Dir. Gicana. Pesticide poisoning incidents are also monitored and mitigated by FPA regional offices in coordination with other concerned agencies.

FPA and other involved
agencies also monitor the flow or movement of pesticide in
farms to other areas in order to determine the potential effects on natural environments which may affect fish, wildlife and other non-target organisms Response to food safety emergency
To protect consumers and stakeholders against potential hazards of chemical residues in food, FPA is also mandated to establish a system of setting maximum residue limits (MRLs) maximum residue limits (MRLs),
which is applicable to both local which is applicable to both lo
and imported commodities. and imported commodities. "From time to time, an existing
MRL may be modified to reflect MRL may be modified to reflect
better current good agricultural practice," elucidated Dir. Gicana.


Knowledge Sharing: Argentina The Argentine experts who visited FPA with PCAARRD delegates on 12 December 2014 are Engr. Esteban Sampietro, coordinator of the Federal System for the Fiscalization of Agrochemicals and Biological Products; Engr. Alejandro Fernandez, director of Hygiene and Safety in Products of Plant Origin and Feed; and Engr. Mariel Silvina Mitidieri, pest management expert of the Instituto Nacional de Tecnologia Agropecuria.
"We are basically importers of

FPA envisions an improved qualityof life for all Filipinos through increased farm through increased farm production using the necessary fertilizer and pesticide inputs
ertilizer and pesticide products, like the Philippines," said Engr Fernandez. Big pesticide companies found in the Philippines such as Bayer, DuPont, and others are also present in Argentina. "I noticed that your system in FPA is similar to that in our country," added Engr. Fernandez.
"Argentina has three monitoring programs: export, import, and internal market," stated Engr. Fernandez.
In Argentina, when commodities are detected to exceed MRLs, they are destroyed immediately. Sampling also takes place in packing areas of products before the shipments are exported to ensure product quality.
Knowlegde Sharing: Korea
The Korean experts who met with FPA officials on 16 December 2014 are Ms. Kwon Hye-Young, research scientist of the National Academy of Agricultural Science (NAAS)-Rural Development Administration (RDA); and Dr. Kim Taek-Kyum, junior staff scienstist, NAAS-RDA. Both are experts in the field of pesticide residue.
"Pesticide companies process registration before product commercialization in the rural areas and they validate the data and conduct meeting with experts in the conduct meeting with expert academe and the concerned
companies," explained Ms. Kwon.
companies," explained Ms. Kwon
In Korea, registration of new
In Korea, registration of new
pesticides usually takes nine month or so and the formulation of the products, imported or local, is not shared with other companies to protect intellectual property. Like the Philippines, Korea also imports pesticides from global companies. "We have the Good Laboratory Practices or the GLP system and the tests are conducted in GLPaccredited laboratories," elucidated Ms. Kwon
For possible collaboration with Argentina and Korea, strategies on monitoring, inspection and experimentation will be taken into account in order to improve the system here in the Philippines. \#


The Fertilizer and Pesticide Authority (FPA) joined the Philippine Council for Agriculture Aquatic and Natural Resources Research and Development (PCAARRD) in paving the way for knowledge sharing of agricultural practices, policies and technologies between Philippines and other countries as FPA officials met with experts from Argentina with experts from Argenti
and Korea on 12 and 16 December 2014 respectively, December 2014 respectively,
the FPA Conference Room. the FPA Conference Room.
Attending the meeting from FPA were Executive Director Norlito R. Gicana, Fertilizer Regulations Division (FRD) Chief Juliet B. Lansangan, Pesticide Regulations Division (PRD) Chief Aida V. Ordas, Planning, Management and Planning, Mage Information Division (PMID) Planning Officer Digna M. d Leon, Laboratory Services Division (LSD) Chief Jerolet C. Sahagun, Ms. Bella Fe Carmona of PRD, Ms. Suzettie Alcaide of FRD and Ms. Leonora Japon of PMID.

To give an informative overview of FPA's mandate and functions to the foreign experts, a presentation prepared by PMID was discussed by Dir. Gicana, FRD Chief Ms. Lansangan and Ms. Japon of PMID.
"FPA envisions for an improved quality of life for all Filipinos through increased farm productivity and food production using the necessary fertilizer and pesticide inputs that do not endanger human health and environment on a sustainable basis," reported Ms. Lansangan. FPA aims "to be a catalyst in the empowerment of farmers and fisher folks by helping them become better informed, more efficient and conscientious in the management of their plant nutrition and crop protection requirements towards conservation of our land and

## $B$

From time to time, an existing MRL may be modified to reflect better current good practices ?
marine resources," a emphasized by Ms. Japon General functions of FPA
"Licensing is required as a condition precedent to the importation, exportation, manufacture, formulation repacking, distribution, delivery, sale, transport storage and use of any fertilizers, pesticides and other agricultural chemicals,' discussed Ms. Lansangan regarding the function of FPA on licensing of handlers
Other than handler licensing, FPA also has vital function on import control, particularly the issuance of Certificate Authorizing Importation of Pesticides (CAIP) that is the ticket for pesticide importation.
In terms of product quality and adherence to safety, FPA designs and implements quality control standards on fertilizers and pesticides. FPA also monitors safe handling, use, application and compliance with industrial
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