

出國報告

出國類別：研究

建構東協國家使用台灣種畜禽及畜牧器材之研究：菲律賓

服務機關：行政院農業委員會畜產試驗所

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出國期間：民國 107 年 10 月 16 日至 10 月 24 日

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摘要

種畜禽產業為畜牧產業發展之旗艦因子，亦是食品保安與農村永續經營的主要生物資材。臺灣種畜禽場將原本飼養於溫帶的牛、豬、羊品種培育成臺灣耐熱特性品種，因此值得推展臺灣種畜禽及畜牧器材到東協國家 (ASEAN)。為拓展畜產種原庫合作研究交流國際化，強化新南向政策之家畜禽繁殖管理及畜產資材生產技術合作研究，派遣畜產試驗所三位研究人員於 2018 年 10 月 16 日至 24 日前往菲律賓，參加菲律賓畜產學會 (Philippine Society of Animal Science, PSAS) 所舉辦的第 55 屆科學研討會及年度會議 (Scientific Seminar and Annual Convention)，以研習菲律賓使用外來種之產業方式，並於大會上分享我國亞熱帶飼養天噸乳牛成功經驗。隨後至菲律賓水牛研究所 (Philippine Carabao Center, PCC) 參訪，分享臺灣天噸乳牛與高肉質土雞遺傳育種成功經驗，並引導菲律賓水牛研究所加入國際畜政聯盟 (ICAR) 活動，建議菲律賓採用國際畜政聯盟 (ICAR) 之乳牛分娩難易度及初產月齡記錄準則，增加乳用水牛、乳牛與乳羊的產乳量及生乳品質。藉由本計畫與菲律賓進行畜產種原庫管理及種畜禽畜牧器材應用之合作交流，期可強化新南向政策之家畜禽繁殖管理及畜產資材生產技術合作研究，並促成菲律賓使用我國種畜禽、畜牧器材及中小型農牧場的經營機具之契機。

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壹、目的

- 一、 協助東協 10 國 (ASEAN) 尚未參加國際畜政聯盟 (ICAR) 的國家加入，期藉此促進各國使用臺灣畜牧器材及中小型農牧場經營機具之契機。
- 二、 提供開發中國家畜牧業發展之諮詢平臺，拓銷臺灣優質種畜禽至 ASEAN 地區；發展臺灣種畜禽外銷菲律賓計畫，期增加臺灣種畜禽產業之技術國際化及年收益。
- 三、 我國經濟動物健康和新興的功能性性狀由 ICAR 認證遺傳評估機制效能，認證機制與國際認證接軌，期能促進國內畜產精準科技之應用升級，進一步拓展種畜禽加值產品外銷到東南亞市場。
- 四、 參加菲律賓畜產學會 (Philippine Society of Animal Science, PSAS) 所舉辦的第 55 屆科學研討會及年度會議 (Scientific Seminar and Annual Convention)，以研習菲律賓使用外來種之產業方式，並於大會上分享我國亞熱帶飼養天噸乳牛成功經驗。
- 五、 至菲律賓水牛研究所 (Philippine Carabao Center, PCC) 參訪，分享臺灣天噸乳牛與高肉質土雞遺傳育種成功經驗，並引導菲律賓水牛研究所加入國際畜政聯盟 (ICAR) 活動

貳、過程

時間	活動紀要
10月16日 (二)	<ol style="list-style-type: none"> 1. 高雄小港機場至菲律賓馬尼拉機場 2. 菲律賓馬尼拉機場至菲律賓達沃機場 3. 會見菲律賓畜產學會 (PSAS) 副主席 Dr. Ester B. Flores (菲律賓水牛研究所遺傳育種組組長)，介紹達沃市及 PSAS 第 55 屆科學研討會及年度會議綱要
10月17日 (三)	參加菲律賓畜產學會 (Philippine Society of Animal Science, PSAS) 所舉辦的第 55 屆科學研討會及年度會議 (Scientific Seminar and Annual Convention)：開幕專題演講及主題研討場次 I 及 II
10月18日 (四)	參加菲律賓畜產學會所舉辦的第 55 屆科學研討會及年度會議：學術論文宣讀與海報展示、業界應用新科技研習場次、獎項頒獎及閉幕典禮
10月19日 (五)	參加菲律賓畜產學會所舉辦的第 55 屆科學研討會及年度會議：羊乳加工廠參訪及達沃產品市場參訪 Technical Visit
10月20日 (六)	<ol style="list-style-type: none"> 1. 菲律賓達沃機場至菲律賓馬尼拉機場 2. 馬尼拉市至菲律賓水牛研究所 (Philippine Carabao Center, PCC)
10月21日 (日)	<ol style="list-style-type: none"> 1. 參觀 PCC 水牛奶展售中心 (Milka Krem) 2. 參觀 PCC 所在地：Science City of Muñoz, Nueva Ecija 區域
10月22日 (一)	<p>與 PCC 研究人員進行技術論壇，針對以下主題進行討論：</p> <ol style="list-style-type: none"> 1. 臺灣亞熱帶飼養天噸乳牛經驗分享 2. 高肉質土雞遺傳育種族群雞精子保存與應用 3. 建議菲律賓水牛研究所加入國際畜政聯盟 (ICAR) 活動 4. 檢視畜試所與 PCC 合作備忘錄雙邊合作關係執行進度
10月23日 (二)	<ol style="list-style-type: none"> 1. 參觀菲律賓畜產種原庫 2. 參觀 PCC 所屬國家級種公牛人工授精站
10月24日 (三)	菲律賓馬尼拉機場至高雄小港機場

參、計畫內容

在「2016-2020年東協畜牧合作策略行動計劃」，東協國家畜牧業產值對就業和糧食安全作出了重要貢獻。畜牧業將繼續成為東協農業的一個關鍵產業，因為它對高附加值的糧食和營養的貢獻，隨著經濟增長和城市化的需求，其需求將繼續增長(ASEAN, 2015)。小農系統的作用在東協每個成員國都有不同的牲畜商品組合，而且角色不同。東協在糧食、農業和林業方面的合作，成立了東協畜牧業工作組(ASEAN Sectoral Working Group on Livestock, ASWGL)，以建立和實施畜牧業相關活動的機制，如東協疫苗和優良種畜禽業標準規範之制定。

畜產試驗所與菲律賓農業部國家水牛研究所(PCC)於2015年6月4日簽署合作備忘錄，並辦理「種畜禽加值產品查驗體系研討會」，以提升雙方畜產研發能力。菲律賓科技部農科司(PCARRD, The Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development)畜產組負責種畜禽產業之研究、發展與推廣(RDE)，並由菲律賓農業部國家水牛研究所(PCC, Philippine Carabao Center)負責種畜禽基因檢測服務。台灣種畜禽產業發展依「出生登記、性能檢定、種用登錄、展示拍賣」等四大步驟進行育種工作，個體依生長期、配種期及種用期有各項性狀檢定記錄。派員出席菲律賓種畜禽產業發展有關會議與研習菲律賓使用外來種於產業方式。菲律賓生乳產業以乳用水牛為發展主軸，但水牛乳總產量尚未超過牛乳總產量，少量為羊乳，鮮乳自給率不到2%(表一)。菲國推展新的生乳政策，期望於2024年能提升鮮乳自給率至10%，此為我國高乳量高品質天噸乳牛品系外銷菲國之契機。

亞洲乳業發展國家之2014至2018年間的產乳量及進口量

APPENDIX TABLE 19: MILK AND MILK PRODUCTS STATISTICS
(thousand tonnes, milk equivalent)

	Production			Imports			Exports		
	2014-2016 average	2017 estim.	2018 f'cast	2014-2016 average	2017 estim.	2018 f'cast	2014-2016 average	2017 estim.	2018 f'cast
ASIA	314 197	323 470	333 153	40 650	42 327	43 938	6 528	6 203	6 029
China	42 294	41 289	42 306	11 981	13 311	14 140	95	75	74
India ¹	153 872	165 612	172 899	104	162	181	401	244	251
Indonesia	1 453	1 510	1 530	2 639	2 738	2 777	75	37	35
Iran, Islamic Republic of	7 330	6 855	6 980	431	355	359	519	772	662
Japan	7 371	7 281	7 245	1 911	2 171	2 274	7	9	10
Korea, Republic of	2 159	2 087	2 098	975	1 101	1 162	23	24	24
Malaysia	73	53	54	2 183	2 173	2 125	683	640	657
Pakistan	40 509	40 167	40 569	571	649	665	48	33	33
Philippines	16	15	17	1 919	2 164	2 156	151	50	56
Saudi Arabia	2 531	2 740	2 720	3 258	3 142	3 241	1 276	1 115	1 086
Singapore	-	-	-	1 714	1 580	1 609	597	470	463
Thailand	1 089	1 120	1 135	1 521	1 612	1 667	212	246	246
Turkey	18 467	17 917	18 670	204	124	120	683	861	883

菲律賓2016年與2017年的生乳產業規模戶數及其鮮乳自給率

Philippine Dairy Industry 2017

	CY 2016		CY 2017	
Livestock population, heads #	9,139,856		9,161,331	
Total dairy herd, number	55,776		58,023	
Total dams and does, number	27,768		27,889	
Players/Producers				
• Number of farm families	51,110		54,300	
• Number of primary cooperatives and institutions	627		618	
	In million kilograms	In Million Liters or '000MT(LME)	In million kilograms	In Million Liters or '000MT(LME)
Net Supply of Milk Products	445.67	2,582.65	413.97	2,456.71
Local milk production	21.16	21.16	22.76	22.76
Net imports of milk products	424.51	2,560.99	391.21	2,433.95
Exports of milk products	28.48	211.58	25.86	52.34
Total imports	452.99	2,772.57	417.07	2,486.29
Volume of skim milk powder imports	179.03	1,435.85	139.83	1,121.44
Volume of other imports in powder form	103.03	807.28	104.01	814.29
Volume of UHT imports	67.56	65.60	5.69.56	61.49
Volume of other dairy imports	282.40	463.84	243.50	489.07
% Share of Supply				
Net Supply of Milk Products	100	100	100	100
Local milk production	5	1	5	1
Net imports of milk products	95	99	95	99
Number of dairy processors and importers*	155		185	
Volume of imports accounted for by top three processors*	13%		23%	
Volume of imports supplied by top two country sources	54%		51%	

Basic Sources: PSA- Foreign Trade Statistics 2017, NDA-PMDS Philippine Dairy Update 2017

Note: # - includes cattle, carabao and goats

Livestock population/inventory - 2018- as of Jan 1

NDA-PMESD3/29/18

Note: LME - liquid milk equivalent

MT - metric tons

* - prelim

Long road ahead for dairy industry

posted **May 07, 2017** at 12:01 am by [Lance Baconguis](#)

Rene Martin de Guzman, NDA Corporate Planning and management Services Department manager, encouraged dairy growers and farm owners to look at the value of the dairy industry.

“You are part of a 100-billion-peso annual industry, there is so much room for growth,”

De Guzman said

“NDA data showed the country only has 2.8 million cows and buffalos, with only **45,439 used as dairy animals**. These animals **produced 21.16 million liters of milk in 2016**, representing a measly **1 percent of the country’s consumption.**”

Mr. Rene Martin de Guzman
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International Non-Governmental Organization (1951 Rome Italy)

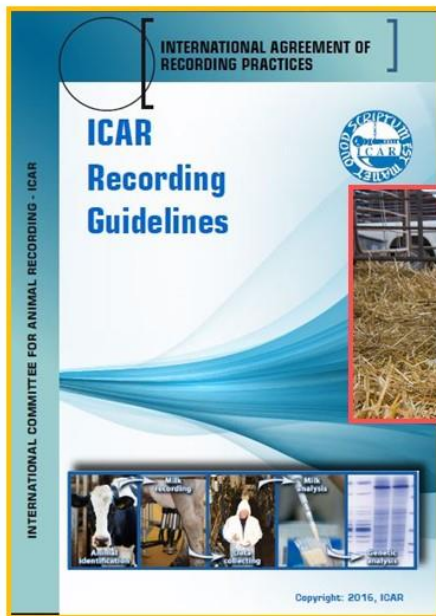
Members of ICAR (International Committee for Animal Recording)



2011 (in blue)

Japan
Korea
Taiwan





Dairy Cow

- Calving Ease
- Age at First Calving



引導菲國國家水牛研究所加入國際畜政聯盟(ICAR)的活動，藉以協助菲國採用國際畜政聯盟(ICAR)之乳牛分娩難易度及初產月齡記錄準則。

HOARDS DAIRYMAN



Milk

Production in **Philippines** to reach out ?

一、參加菲律賓畜產學會第 55 屆科學研討會及年度會議

菲律賓畜產學會 (PSAS) 由 31 位獸醫和動物科學家於 1963 年所創立，現行會員人數超過 4,000 人，其中包括獸醫師、畜產研究人員、農業經濟學家、動物營養學家、農業推廣人員，禽畜飼養業者以及政府公部門畜牧業務相關人員等。菲律賓畜產學會第 55 屆科學研討會及年度會議於 2018 年 10 月 16 日至 19 日於菲律賓南方王者之都 (King City of the South) — 達沃市 (Davao City) 舉行，估計參與此次研討會人數超過 1000 人次。此次研討會主軸設定為「Animal Health Management: A Critical Control Point For Food Safety (動物健康管理：食物安全的關鍵控制要素)」，會中共邀請七位學者專家進行專題演講。本所遺傳育種組吳明哲組長亦為受邀講者之一，其發表專題演講「Calving Ease and Age at First Calving of Dairy Cows in Tropical Climate (亞熱帶區域乳牛分娩難易度及初產日齡之研究)」，分享臺灣亞熱帶飼養荷蘭乳牛育種實物

經驗及予現場與會人員，期有助於菲律賓生乳產業之發展。

在畜產科學發表部分，共分為解剖生理與生化、營養、應用科學、大學論文、遺傳與育種、生物科技、畜禽疾病診斷、畜產品加工、社會經濟及社會發展等十個研究領域，共有 40 篇論文宣讀及 19 篇論文壁報發表。其中「Cryopreservation of Spermatozoa Collected from the Excurrent Duct of Nondescript Rooster」、「Sperm Analysis by Computer Assisted Sperm Analyzer (CASA) of Epididymal Sperm Retrieved from Post Mortem Testicles of Philippine Native Pigs (*Sus scrofa*)」及「Recovery of Viable Epididymal Sperm from Post Mortem Testicles of Philippine Native Pigs」等三篇論文與林秀蓮助理研究員研究領域相關，故於壁報展示期間與論文作者進行深入討論，諸如用於雞精液凍存之抗凍保護劑及降溫條件、CASA 精子活力檢測關鍵條件修正及附睪精液收集效率等議題進行意見交流。

此研討會另規劃實習課程「Applications of Ultrasonography in Veterinary and Animal Science」及「Real-Time Ultrasound Scanning of Back Fat and Eye Muscle area in Swine and Cattle」，簡介超音波用以協助獸醫師現場診斷畜禽疾病之應用，並現場展示操作如何利用超音波科技測量背脂厚度及腰眼面積以建立家畜之遺傳育種性能資料。

二、參訪菲律賓水牛研究所

菲律賓水牛研究所 (Philippine Carabao Center, PCC) 是菲律賓農業部 (Department of Agriculture, DA) 的附屬機構，創立於 1992 年，並於 1993 年正式開始運作。菲律賓水牛研究所共有 13 個分所分布於菲律賓各地，其願景和使命為讓菲律賓人民有更好的生活條件，期望透過推廣水牛作為奶和肉類的重要來源以獲取良好的營養條件之外，同時也希望水牛產業可以帶來更高的國民收入以增進全菲律賓人民的生活福祉。這些年來，菲律賓水牛研究所除了致力於有關水牛遺傳育種、生殖、飼料與營養之研究推廣外，亦積極執行國際合作計畫，期透過國際合作交流

模式獲取專家寶貴經驗，以加速帶動菲律賓相關畜禽產業發展。本所與菲律賓水牛研究所於 2015 年 6 月 4 日簽署合作備忘錄 (MOU)，並辦理「種畜禽增值產品查驗體系研討會」，以提升雙方畜產研發能力。此次參訪菲律賓水牛研究所進行技術論壇時，亦有論及強化簽署本所與菲律賓水牛研究所雙邊合作關係之議題，暫訂規劃 2019 上半年度由菲律賓水牛研究所派遣人員至本所再次簽署合作備忘錄。

此次至菲律賓水牛研究所參訪，進行一場技術論壇，由遺傳育種組吳明哲組長分享臺灣亞熱帶飼養天噸乳牛之育種經驗，並建議菲律賓水牛研究所加入國際畜政聯盟 (ICAR) 的活動，採用國際畜政聯盟之乳牛分娩難易度及初產月齡記錄準則，以增加乳用水牛、乳牛與乳羊的產乳量及生乳品質；由生理組林秀蓮助理研究員分享臺灣高肉質土雞遺傳育種經驗，包括臺灣土雞品種介紹、性能檢定制度 (肉質、母雞受精孵化率及公雞產精性能檢定)、保種計畫、人工授精技術及精液凍存活用技術等，提供相關研究人員參考。

水牛奶含有豐富的乳固體和蛋白質含量，非常適合乳製品加工，因此菲律賓水牛研究所於 2012 年起創立水牛奶展售中心 (Milka Krem)，除了為水牛奶農提供了銷售水牛奶管道，同時也提供給消費者安全與安心的消費品牌。Milka Krem 總部位於 Maharlika 高速公路沿線，就在菲律賓水牛研究所總部旁邊，其旗艦產品包括鮮奶、調味奶、莫扎里拉起士、奶酪、冰淇淋及優格等。

三、參觀菲律賓畜產種原庫

自 2008 年開始，菲律賓水牛研究所開始啟動了水牛保種計畫，其中包括水牛族群保種族群飼養及遺傳物質冷凍保存二大計畫主軸，這是菲律賓畜產種原保存計畫的起始點。直到 2012 年，菲律賓水牛研究所接受了韓國國際合作機構 (Korea International Cooperation Agency, KOICA) 之資金與技術支援，興建國家級畜產種原中心。該中心於 2014 年正式啟動，目前已收集水牛 5 品種 (Brazilian, Bulgarian, Indian, Italian

and Swamp)、肉牛 2 品種 (Brahman and Girlando)及山羊 4 品種 (Anglo-Nubain, Alpine, Boer and Saanen) 逾 20 萬劑之各類遺傳物質，其型態包括胚、卵、體細胞及血液等。

該中心資深研究員 Ms. Lilian P. Villamor，曾於 2015 年 6 月參訪臺灣畜產種原中心，針對動物精、卵、胚及細胞組織凍存管理系統進行討論，並期許臺菲雙方將來可於種原保存技術領域進一步規劃合作議題；在今 (2018) 年 5 月 3 日至 5 月 6 日透過本所國際合作計畫再次邀請 Ms. Villamor 訪臺參加亞太生殖科技國際論壇 (ARBC2018)，並發表專題演講「Animal genetic resources through cryobanking in the Philippines: management initiatives and future direction」。此次參訪菲律賓水牛研究所，再度針對本所與該中心種原保存議題進行討論，將有助於雙方未來種原合作計畫執行的可能性。

四、參觀菲律賓水牛研究所所屬國家級種公牛育種中心及人工授精站

誠如上述，菲律賓水牛研究所之願景和使命為推廣水牛作為奶和肉類的重要來源以獲取良好的營養條件之外，同時也希望水牛產業可以帶來更高的國民收入以增進全菲律賓人民的生活福祉。在其水牛遺傳育種計畫職掌規劃下，設立國家級種公牛育種中心及人工授精站，提供優質種公牛精液給當地農民進行人工授精。該人工授精站位於距離菲律賓水牛研究所約 1 小時車程的 Digdig, Carranglan, Nueva Ecija，其業務除執行種公牛性能選育計畫，並包括冷凍精液之製作、分配與人工授精技術輔導。

肆、心得與建議

- 一、 本次參加菲律賓畜產學會 (Philippine Society of Animal Science, PSAS) 在達沃市 (Davao) 所舉辦的第 55 屆科學研討會及年度會議 (Scientific Seminar and Annual Convention)，該研討會主軸設定為「Animal Health Management：A Critical Control Point For Food Safety (動物健康管理：食物安全的關鍵控制要素)」，顯示食安問題儼然已成為世界各國畜產經營或研究所關心的重點。畜產品食安議題，除了以防治全球傳播性傳染病為出發點之外，其他有如：畜禽飼養經營、屠宰、運輸、儲存備料及販售過程等，皆易遭受細菌或病毒的侵害。因此，如何在各個過程建立有效且關鍵的衛生安全機制，乃為本次研討會討論重點。
- 二、 菲律賓生乳產業以乳用水牛為發展主，少量為羊乳。水牛乳總產量尚未達牛乳總產量，致菲律賓鮮乳自給率不到 2%。菲律賓推展新的生乳政策，期望於 2024 年能提升鮮乳自給率至 10%，此為我國高乳量高品質天噸乳牛品系外銷菲律賓之契機。藉由本計畫得以至菲律賓水牛研究所 (Philippine Carabao Center, PCC) 分享我國亞熱帶飼養天噸乳牛與高肉質土雞遺傳育種成功經驗，引導菲律賓水牛研究所加入國際畜政聯盟 (ICAR) 活動，藉以協助菲律賓提升產乳量及生乳品質。
- 三、 極力促成我國高產天噸乳荷蘭乳牛種原外銷至菲律賓，輔以我國科技化人工授精技術以提高授精率，並分享我國亞熱帶飼養荷蘭乳牛成功經驗，協助提升乳量及乳品質；此外，菲律賓國內鮮乳尚未以進口方式提供，建議其先以局部地區開放臨近國家進口鮮乳供當地民眾依其口味接受程度，以提供我國高產鮮乳出口機會。

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伍、照片紀實



照片 1. 菲律賓畜產學會第 55 屆科學研討會及年度會議會場與菲律賓水牛研究所研究人員 Dr. Bing Atabay (左二) 及 Dr. Edwin Atabay (左三) 合影。



照片 2. 本所遺傳育種組吳明哲組長於菲律賓畜產學會第 55 屆科學研討會及年度會議上發表專題演講「Calving Ease and Age at First Calving of Dairy Cows in Tropical Climate」。



照片 3. 本所遺傳育種組吳明哲組長於菲律賓畜產學會第 55 屆科學研討會及年度會議上獲頒終身會員證書。



照片 4. 參觀菲律賓水牛研究所水牛奶展售中心 (Milka Krem)。



照片 5. 參觀菲律賓國家級畜產種原中心。



照片 6. 菲律賓水牛研究所所屬國家級種公牛育種中心及人工授精站。



照片 7. 參觀菲律賓水牛研究所所屬國家級種公牛育種中心種牛舍。



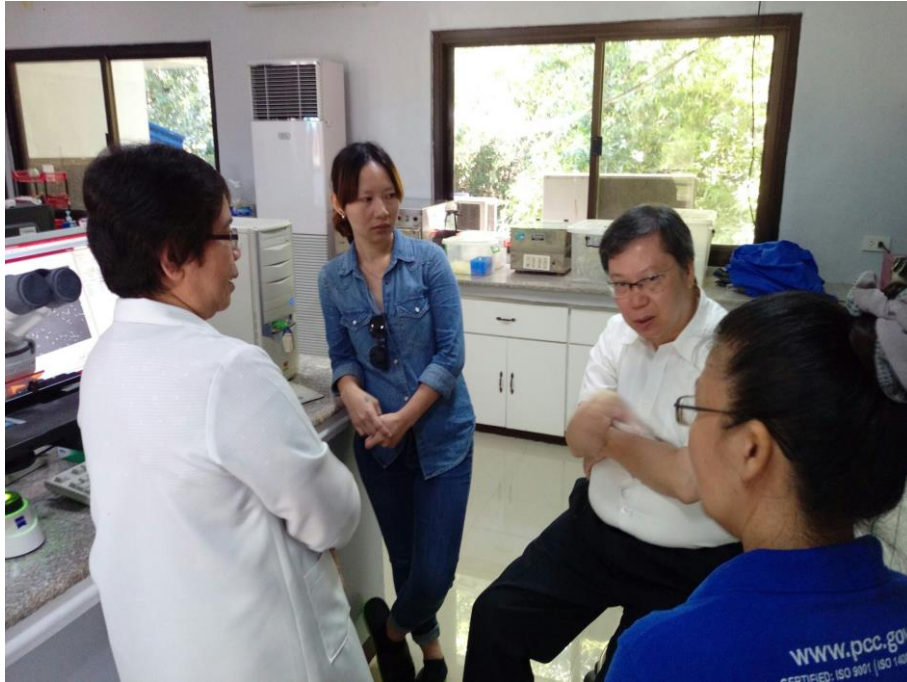
照片 8. 參觀菲律賓水牛研究所所屬國家級種公牛育種中心種牛舍。



照片 9. 菲律賓水牛研究所所屬國家級種公牛育種中心種公牛採精舍。



照片 10. 菲律賓水牛研究所所屬國家級種公牛育種中心種公牛採精訓練。



照片 11. 參觀菲律賓水牛研究所所屬國家級人工授精站之精液研究實驗室。



照片 12. 菲律賓水牛研究所所屬國家級人工授精站冷凍精液製造過程。



照片 13. 菲律賓水牛研究所所屬國家級人工授精站冷凍精液製造過程。



照片 14. 參觀菲律賓水牛研究所所屬國家級人工授精站。



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**



*"Animal Health Management:
A Critical Control Point
for Food Safety"*

**55TH SCIENTIFIC SEMINAR AND
ANNUAL CONVENTION**

16 - 19 October 2018

Grand Menseng Hotel Davao City

SOUVENIR PROGRAM



PHILIPPINE SOCIETY OF ANIMAL SCIENCE

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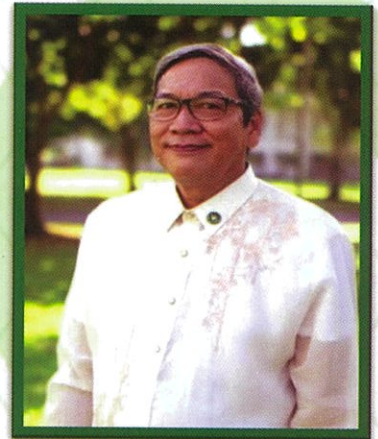


PHILIPPINE SOCIETY OF ANIMAL SCIENCE

MESSAGE

Mabuhay!

On behalf of the **Philippine Society of Animal Science (PSAS)**, it is with great honor and pleasure to welcome you all to the 55th PSAS Scientific Seminar and Annual Convention at the “King City of the South”, the “Durian Capital of the Philippines”, Davao City. Surely, all of us are excited to meet our colleagues once again but more importantly, to exchange knowledge and discuss recent developments in the field of animal science.



At present, based on the report from the Philippine Statistics Authority (PSA), livestock and poultry production is increasing, a good indicator that the animal industry is performing well but this does not mean that we stop here. Food security and safety are the major issues faced by all regions of the world today. The challenge of producing quality and healthy food for the Filipino people is always pressing our industry. We, in the animal sector must ensure that all animal products conform to the global standards of food quality and safety through good animal husbandry practices. With this year's theme “Animal Health Management: A Critical Control Point for Food Safety”, the society hopes to highlight the role of animal producers in providing nutritious and safe food for Filipino families.

I hope this year's scientific conference will be a success in its endeavor to serve as a venue for exchanging information among stakeholders to better address the challenges of the industry. I have great faith that each one of us will take this opportunity to share and learn from different discussions so that together we could uplift the animal industry to even greater heights.

Thank you very much and enjoy the conference!

ENRICO P. SUPANGCO, Ph.D.
PSAS President

MESSAGE



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**



Welcome and congratulations to all colleagues and participants of the 55th PSAS Scientific Seminar and Annual Convention. Once again, let this be a venue to further advance the mission and vision of PSAS.

This year's theme "Animal Health Management: A Critical Control Point for Food Safety" is very relevant as animal health management is a constant pressing issue with serious economic implications. The topics our keynote speaker and plenary speakers, as well as the various scientific presentations, should be able to provide the latest information and technologies relevant to this year's theme. Let this convention be a fellowship and learning event that could help each and every one of us strive to create awareness on food safety and assist the livestock industry increase its productivity.

Lastly, I would like to thank all officers and members of the 2017 - 2018 PSAS Governing Council as well as the General Assembly for making this event happen.

Mabuhay ang PSAS!

ESTER B. FLORES, Ph.D.
PSAS Vice President
and President-elect

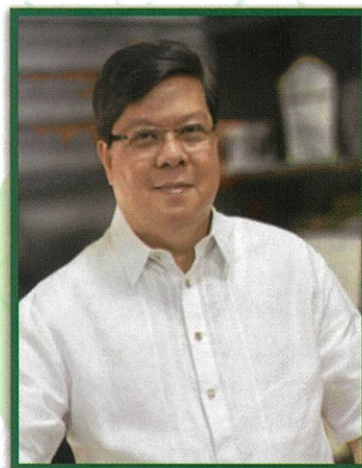


BUREAU OF AGRICULTURAL RESEARCH

Department of
Agriculture

MESSAGE

I congratulate the Philippine Society of Animal Science (PSAS) for spearheading the 55th PSAS Scientific Seminar and Annual Convention. The theme, “Animal Health Management: A Critical Control Point for Food Safety,” which you have chosen for this year’s convention, reinforces the Department of Agriculture’s (DA) call for food security and safety. The thrust of DA underscores the need to be self-sufficient, competitive, sustainable, and technology-based agriculture anchored on a strong livestock sector.



The livestock and poultry sector is vital to the growth and development of the agriculture sector. As reported, the livestock subsector grew by 1.88 percent sharing a 16.67 percent in the total agricultural output. The subsector’s gross earnings at current prices amounted to Php 79.0 billion, an increase of 9.85 percent from the previous year’s record. In the first half of 2018, the subsector’s gross output likewise increased by 1.95 percent.

The challenge therefore, for the livestock sector is to sustain its upward trend that will contribute to inclusive growth and poverty reduction. The DA and the agencies involved in livestock production and management, including research and development, will ensure that all its resources and manpower are maximized to achieve a responsive and dynamic sector.

The role of PSAS is crucial in the development of the sector. Therefore, we call on the Society to continue its mission on empowering the farmer-producers, veterinarians, and animal scientists. The Bureau of Agricultural Research (BAR), on its part, will continue this partnership with PSAS and will further collaborate with and among researchers, animal nutritionists, agricultural economists, and the academe throughout the process of reaching for our goal.

Encompassing this commitment, BAR is putting forward the research and development, and extension agenda and program for the livestock and poultry sector. The researchable agenda, strategies and methods are the bureau’s continuing effort to seek a more efficient and effective means of increasing the productivity and competitiveness of the subsector through research and development.

Lastly, we need to be constantly aware of the emerging paradigm in the global and local livestock scenario, and thus, our research findings and applications in the field of animal science and veterinary medicine must be on the grounds so we can take full advantage of the potential of the livestock and poultry subsector to increase its share both in the domestic and international markets.

Congratulations to PSAS for seeing the wisdom in convening your membership towards this noteworthy endeavor. More power to your Society!


DR. NICOMEDES P. ELEAZAR, CESO IV
Director
Bureau of Agricultural Research

MESSAGE



ISO 9001:2008

DOST - PCAARRD
Department of
Science and Technol



On behalf of the Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD), let me convey my warmest greetings and congratulations to the Officials and members of the Philippine Society of Animal Scientists (PSAS).

For years, your organization has always been relevant and innovative in staging a platform where actors and key players converge to discuss current issues confronting the local animal industry. The PSAS convention also provided venue for Filipino researchers and scientists to present outputs of recently completed R&D projects that offer potential solution to current problems and/or unlock new opportunities.

This year marks your 55th anniversary with a timely theme of Animal Health Management Critical Control Point for Food Safety. The One Health global approach underscores the interdependence of human and animal health concepts. When a breach in the human-animal-ecosystem interface occurs, food safety is significantly affected.

The DOST-PCAARRD recognizes the important contributions of S&T interventions in animal health management as one of the key factors in addressing food safety concerns. The Council's Livestock R&D Roadmap outlines the priority animal health management initiatives i.e. detection of chemical residues and antimicrobial resistance (AMR) and development of diagnostic kits for the detection of major swine pathogens and of bacterial species associated with intra-mammary infections in goats.

As food production intensifies in order to meet the increasing demand, the World Organization for Animal Health (OIE) One Health platform emphasizes on the key roles of international organizations in synergistic collaboration to better understand the risks involved when animal health problems are inadequately managed, thus posing global risks to public health.

Again, on behalf of DOST-PCAARRD, I congratulate PSAS for a well-lived 55 years relevant service to the Philippine animal industry!

4


REYNALDO V. EBORA, Ph.D.
Acting Executive Director

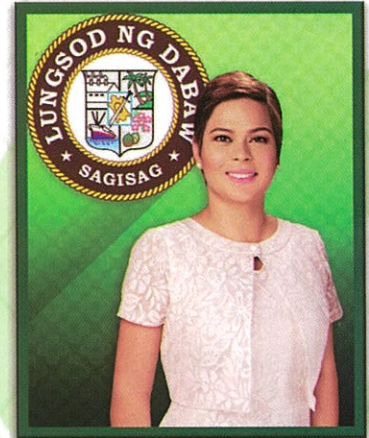


PROVINCE OF DAVAO

MESSAGE

Madayaw!

On behalf of the City Government of Davao, I would like to welcome all the members and officials of the Philippine Society of Animal Science from across the country gathered here in Davao City for your 55th Scientific Seminar and Annual Convention with the theme "Animal Health Management: A Critical Control Point for Food Safety".



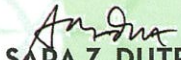
May you enjoy your stay in the city, and please allow me to invite you to discover Davao City and experience the many things that we offer - great food, unique adventures, and various points of interest.

Human diet, majority of which is sourced from animal food products, demands proper animal health management critical for food safety. In order to address food borne diseases, outbreaks and substandard quality products in the market, it is only fitting that animal science and veterinary medicine be given ample attention towards ensuring food safety and security and towards furthering other aspects of agricultural development in the country.

Thus, let this assembly provide an exchange of best practices and other fresh insights among animal scientists, veterinarians, agriculturists, extensionists, researchers, and faculty members in the country towards encouraging a preventive over a reactive approach in animal healthcare management.

Know that the City Government of Davao, through the Office of the City Veterinarian, is one with you in the ceaseless pursuit of promoting animal health management towards ensuring food safety for all Filipinos.

Congratulations!


SARA Z. DUTERTE
City Mayor

PROGRAM OF ACTIVITIES



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

"Animal Health Management: A Critical Control Point for Food Safety"
55th PSAS Scientific Seminar and Annual Convention
16-19 October 2018
Grand Menseng Hotel, Davao City, Philippines

October 16, 2018

2:00pm - 5:00 pm On-site registration
(Crimson Burgundy Room)

October 17, 2018

7:30 am - 9:00 am On-site registration
(Crimson Burgundy Room)

8:00am - 8:30 am Opening of the Exhibit

8:30am - 10:00 am Opening Program

10:00am - 12:00 nn Plenary Session I

12:00 nn - 1:00 pm Lunch Break

1:00 pm - 3:00 pm Business Meeting

3:00 pm - 6:00 pm PCAARRD Round-table Discussion
(by invitation)

3:00 pm - 5:00 pm Plenary Session II

October 18, 2018

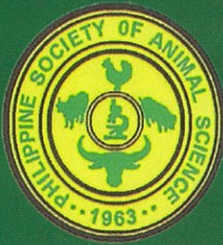
8:00 am - 4:00 pm Scientific Sessions
(Oral and Poster Presentations)

4:00 pm - 5:00 pm Practical Courses

6:00 pm - 8:00 pm Closing and Awarding Ceremonies

October 19, 2018

8:00 am - 5:00 pm Technical Visit
(on personal account)



PHILIPPINE SOCIETY OF ANIMAL SCIENCE

OPENING PROGRAM

Day 1 – October 17, 2018

9:00 am – 10:00 am

Monte Clair and Granada Rooms

**“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention**

Entrance of Colors
Processional

Invocation
National Anthem
Welcome Remarks

Welcome Address

Introduction of the
Keynote Speaker

Keynote Address

Briefing on Scientific Paper
and Poster Presentations

Masters of Ceremonies:

PSAS Chapter Officers
PSAS Past Presidents
PSAS National Governing Council
2018 PSAS Honoree
Keynote Speaker

DR. ENRICO P. SUPANGCO

*PSAS President
Dean/Professor, College of Agriculture
and Food Science, UPLB*

ENGR. RICARDO M. OÑATE, RPAE

*Regional Executive Director
DA Regional Field Office XI*

DR. CARO B. SALCES

*Deputy Director
Philippine Carabao Center*

DR. ENRICO P. GARZON, Jr.

*Assistant Secretary
Department of Agriculture*

**DR. AMADO A. ANGELES and
DR. CONSUELO AMOR S. ESTRELLA**

*Scientific Paper Committee
Associate Professors, UPLB*

DR. LORETTA C. ROMERO

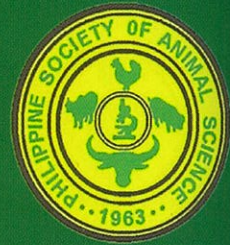
*Assistant Professor
Benguet State University*

DR. JOSH ELISHA R. OCTURA

*Professor
Mindanao State University*

PLENARY SESSION 1

Day 1 – October 17, 2018
10:00 am – 12:00 nn
Monte Clair and Granada Rooms



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

**“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention**

“HEALTHY ANIMALS FOR A PROSPEROUS PHILIPPINES”

DR. RONNIE D. DOMINGO
OIC, Bureau of Animal Industry, DA

“ASSESSMENT OF ANTIMICROBIAL RESISTANT ENTEROBACTERIACEAE IN PIGS FOR DEVELOPMENT OF COMPREHENSIVE MANAGEMENT SYSTEM”

DR. NORIKAZU ISODA
Associate Professor, Hokkaido University, Japan

“GLOBAL STANDARDS ON THE USE OF ANTIMICROBIALS TO MITIGATE ANTIMICROBIAL RESISTANCE”

DR. PENNAPA MATAYOMPONG
Programme Coordinator, OIE Sub-Regional Representation

Moderator

DR. MARVIN A. VILLANUEVA
Senior Science Research Specialist
Philippine Carabao Center



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

PLENARY SESSION 2

Day 1 - October 17, 2018
3:00 pm - 5:00 pm
Monte Clair and Granada Rooms

“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention

***“ROLE OF NMIS IN ANIMAL HEALTH MANAGEMENT
AND CONTROL FOR FOOD SAFETY ”***

DR. MA. ELIZABETH D. CALLANTA
National Meat Inspection Service, Department of Agriculture

***“THE DOWNER COW COMPLEX (DISEASES AND DISORDERS OF
TRANSITION DAIRY AND BEEF COWS): CLINICAL FINDINGS
AND PATHOGENESIS, ETIOLOGY, DIAGNOSIS, TREATMENT,
PREVENTION AND CONTROL ”***

DR. JORGE S. VILLAMIL
Associate Professor, Pampanga State Agricultural University

***“PJVAS GUIDELINES ON ARTICLE PREPARATION
AND SUBMISSION”***

DR. PERCIVAL P. SANGEL
Associate Editor-in-Chief, PJVAS
Associate Professor, UPLB

Moderator

DR. MARY JOY S. CANOLAS
Associate Professor
University of Southern Mindanao



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

PLENARY SESSION 3

Day 2- October 18, 2018

3:30 pm – 4:00 pm

Monte Clair and Granada Rooms

“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention

“CALVING EASE AND AGE AT FIRST CALVING OF DAIRY COWS IN TROPICAL CLIMATE”

DR. MING-CHE WU

Taiwan Livestock Research Institute

Moderator

Dr. Percival P. Sangel
Associate Professor

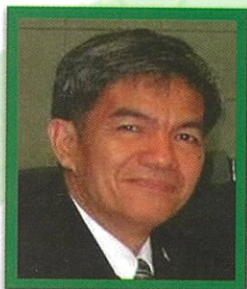
University of the Philippines Los Baños

PLENARY SPEAKERS' PROFILE



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

DR. RONNIE D. DOMINGO

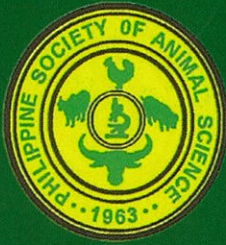


Dr. Ronnie D. Domingo is a licensed veterinarian and currently the head of Bureau of Animal Industry. He obtained his Doctor of Veterinary Medicine degree from University of the Philippines Diliman. He had his Master of Science in Tropical Veterinary Medicine from University of Edinburg, United Kingdom. He also had Master in Christian Leadership from Asian Center of Leadership Education. He was a former Assistant Professor at the Department of Veterinary Para clinical Sciences, College of Veterinary Medicine, UPLB. He is a member of the Veterinary Epidemiology Network, Philippine Veterinary Medical Association, Philippine College of Ruminant Practitioners, Philippine Society of Animal Science and Nueva Ecija Veterinary Medical Association. He received numerous awards and recognitions as practicing veterinarian and researcher. PSAS recognized his invaluable contribution to the animal industry as veterinary epidemiologist, consultant, educator, and public servant. He is the 2018 PSAS Lecture Series Honoree. His effort as veterinary epidemiologist lead to the timely and effective control of Avian Influenza (AI) outbreak that occurred in August 2017.

DR. NORIKAZU ISODA



Dr. Norikazu Isoda is currently an Associate Professor at the Risk Assessment and Management Unit of the Research Center for Zoonosis Control in Hokkaido University Sapporo, Japan. He obtained his DVM and PhD from the same university as well. He started his professional career at Hokkaido University as a research assistant at the Global COE program "International Collaboration Centers for Zoonosis Control" in Hokkaido University. He later became a doctoral research fellow and a research fellow, also in the same institute. He is no stranger to the Philippines as shortly after being appointed an Associate Professor, he worked for about a year on a secondment basis, at the World Health Organization Western Pacific Regional Office, Philippines.



PHILIPPINE SOCIETY OF ANIMAL SCIENCE

PLENARY SPEAKERS' PROFILE

DR. PENNAPA MATAYOMPONG

Dr. Pennapa Matayompong is currently the Technical Officer for Antimicrobial Resistance of OIE Sub-Regional Representation for South-East Asia (OIE SRR SEA). She has collaborated with the ASEAN Member States (AMS), FAO, WHO and other organizations in promoting the "One Health" approach particularly in addressing the antimicrobial resistance issues. She supported the AMS in strengthening their Veterinary Services by providing specific technical assistance, financial support, workshops and seminars to address weaknesses highlighted in the OIE Performance of Veterinary Services (PVS) Evaluation and PVS Gap Analysis reports as well as focusing on strengthening veterinary education, modernizing veterinary legislation and establishing veterinary statutory bodies. Dr. Matayompong obtained her Ph.D. in Animal Science from University of Nebraska, USA.

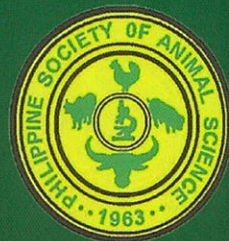


DR. MA. ELIZABETH D. CALLANTA

Dr. Ma. Elizabeth D. Callanta started her stint in the government service in May 1, 1987 as a Meat Control Officer of then National Meat Inspection Commission (NMIC) now National Meat Inspection Service (NMIS) and rose from the ranks to Chief Meat Control Officer then currently designated Officer In Charge in NMIS Regional Technical Operating Center IV-B (MiMaRoPa). In her 31 years in the government service she has worked closely with several government agencies on special assignments and projects. She is a graduate of Doctor of Veterinary Medicine in Gregorio Araneta University Foundation and Masters of Science in Animal Health at the Royal Veterinary College, University of London, England, United Kingdom.

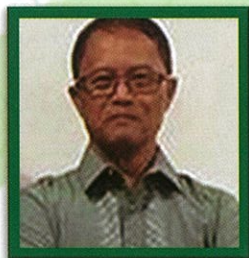


PLENARY SPEAKERS' PROFILE



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

DR. JORGE S. VILLAMIL



Dr. Jorge S. Villamil is currently an Associate Professor at the College of Veterinary Medicine, Pampanga State

Agricultural University (PSAU) in Magalang, Pampanga. He graduated with a degree of Doctor of Veterinary Medicine from the University of the Philippines Diliman, Quezon City. He also obtained a post-graduate diploma in management from the United Kingdom Open Learning University. His fields of specialization include ruminant production, reproduction, medicine and surgery. He had extensive training on various aspects of dairy herd fertility and health management. As a large animal practitioner, he has technical consultancies in various private farms and companies. Thus, veterinary students under his tutelage benefit from his knowledge in both theoretical and practical aspects of veterinary medicine.

DR. PERCIVAL P. SANGEL



Dr. Percival P. Sangel is the current Associate Editor of the Philippine Journal of Veterinary and Animal Science. He is also serving as an Associate Professor of the Institute of Animal Science, College of Agriculture and Food Science, University of the Philippines Los Baños. Dr. Sangel received his Doctor of Philosophy in Frontier Biosciences from Osaka University, Japan in 2014. He was also conferred with the Degree of Master of Science in Animal Science in 2006 and Doctor of Veterinary Medicine in 1999 (*cum laude*) from the University of the Philippines Los Baños. Dr. Sangel has authored several articles published in various journals of international circulation.



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

BUSINESS MEETING

Day 1 - October 17, 2018

1:00 pm - 3:00 pm

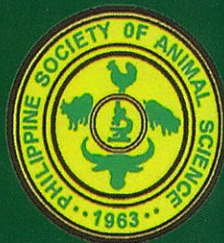
Monte Clair and Granada Rooms

“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention

Agenda:

1. Call to Order
2. Verification of Quorum
3. Approval of the Agenda
4. Approval of the Minutes of the 54th PSAS
General Assembly Meeting
5. Matters Arising from the Minutes
6. Report of the Chapter Presidents
7. Report of the Treasurer
8. Report of the President
9. Election of Officers PSAS Governing Council
10. Survey of Venue for Next Convention
11. Constitution and By-laws Amendment
12. PSAS Identification Card
13. Other Matters
14. Adjournment

PRESIDENT'S REPORT



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

“Animal Health Management: A Critical Control Point for Food Safety” **55th PSAS Scientific Seminar and Annual Convention**

It is my honor to serve the Philippine Society of Animal Science for the last two years. The preparations and the conduct of activities have been challenging but everything turns out well with the support of the hardworking members of the Governing Council (GC) and non-GC members. For the non-GC members who readily accepted our request for manpower support, I am forever grateful.

Governing Council Meeting

We had ten regular GC meetings for the period of December 2017 to October 2018. Most of the meetings were held in Los Baños and one in Benguet State University. On its first meeting, the results of the post-convention evaluation was presented, and committee assignments were finalized.

Post-convention Evaluation

The 2017 54th PSAS Scientific Seminar and Annual Convention got an overall rating of 3.78 which is fair enough considering that the participants got squeezed in the small venue. The convention had a total of 380 participants which is the highest in the last five years. The comments given by the participants were discussed and considered during the preparations for this year's convention.

Convention Committees

The committee membership included non-GC members. They were chosen because they have been involved in PSAS convention preparations for several years that their support helped us to accomplish the tasks on time. For this year, there was no committee created for the souvenir program. With the close similarity of some responsibilities of the souvenir program with the Technical Committee, the preparation of the souvenir program was assigned to the latter. The Scientific Paper Committee was not chaired by the Editor-in-Chief of the Philippine Journal of Veterinary and Animal Sciences (PJVAS). This is to enable the Editor-in-Chief to focus on the work for the journal. We were also able to generate financial support from government agencies and private companies for this year's convention.

Animal Industry Technical Committees

The GC wants to maintain its linkage with animal industry committees, so the following were appointed as representatives: Ms. Ma. Mercedes C. Buyoc - Committee on Animal Feed Standards; Dr. Julienne Maria Undine Paz H. Quimio - Committee on Animal Welfare; Dr. Daniel A. Rodriguez - National Advisory Committee on Animal Disease Control and Emergencies (NAC-ADCE). Through the active involvement of Dr. Rodriguez in committee meetings, he was able to promote the PSAS status to a regular voting member of the committee NAC-ADCE. This is one big leap for the Society. Kudos, Dr. Rodriguez!

Lecture Series

The first leg of the 2018 PSAS lecture series was conducted on 27 April 2018 at the Institute of Animal Science, College of Agriculture and Food Science, UPLB. This year's lecture series with the theme: "Animal health management: A critical control point for food safety," is in honor of the



PHILIPPINE SOCIETY OF ANIMAL SCIENCE

PRESIDENT'S REPORT

"Animal Health Management: A Critical Control Point for Food Safety" 55th PSAS Scientific Seminar and Annual Convention

outstanding contribution of Dr. Ronnie D. Domingo, Officer-in-Charge Director, Bureau of Animal Industry. During the LS, Director Domingo presented a paper entitled Healthier Animals for a Prosperous Philippines. Dr. Loinda R. Baldrias, former Dean of the College of Veterinary Medicine also discussed a topic related to the theme. The event was graced by 95 participants including students, faculty members, Bureau of Animal Industry staff, UPLB alumni, PCC staff and PSAS members. The 2018 PSAS lecture series was conducted with the help of the Animal Science 299-Graduate Seminar class and the sponsorship by Diconex Philippines, Inc.

The second leg of the 2018 PSAS Lecture series was held within the Annual Animal Health and Welfare Forum sponsored by the Department of Agriculture Cordillera Regional Office. The lectures concluded the two-day activity on 24-25 June 2018 at Hotel Supreme, Baguio City. There were 84 participants coming from the municipal and provincial agriculturist and veterinary offices across Abra, Benguet, Kalinga, Ifugao, Mt. Province, Apayao and Baguio City. Dr. Clarissa Yvonne Domingo, a professor of the College of Veterinary Medicine, Central Luzon State University, briefly discussed the principles behind the loop-mediated isothermal amplification (LAMP) as diagnostic kit for porcine epidemic diarrhea. With the help of Dr. Rayniel Joshua D.G. Aquino, the test procedure was demonstrated showing positive and negative fecal samples. The use of locally - fabricated field test kit (MASTI-CHECK) for mastitis in goats was explained by Dr. Virginia Venturina. With the assistance of Dr. Jaypee Abenoja, the technique was demonstrated using goat milk samples from does with and without mastitis. Dr. Daniel Aquino talked about alternative large ruminant feed sources such as banana trunk and water lily, and the economics of replacing conventional feed sources with the mentioned materials. My deepest gratitude to the DA Cordillera Regional Office for sponsoring the activity.

PJVAS

Dr. Consuelo Amor S. Estrella was appointed as the new Editor-in-Chief of PJVAS, following the resignation of Dr. Marianne Leila Flores. Dr. Percival P. Sangel was appointed as the Associate Editor. The work for PJVAS was fast-tracked with the assistance of Ms. Karla Joy Ty. The accomplishments of the team include: creation of a new set of guidelines for the preparation of manuscripts for publication and, uploading of latest issues of the journal in the PJVAS website.

PSAS Constitution and By-Laws Review

An intensive review on the PSAS Constitution and By-Laws (CBL) was done by the committee chaired by Dr. Luzviminda T. Simborio and co-chaired by Dr. Jezie A. Acorda and Dr. Rosalina M. Lapitan. The amendments that were proposed would hopefully safeguard the Society and its members

PRC CPD Points and CHED Endorsement

Alas! PSAS is already a CPD provider for Agriculturists. This is by its membership to the Philippine Association of Agriculturists (PAA). All the requirements for accreditation of the PSAS convention was submitted to the Philippine Regulatory Commission (PRC) through PAA. On the other hand, Dr. Ester B. Flores worked on the renewal of PSAS as a CPD provider for veterinarians. We are also grateful to CHED for endorsing this year's convention.

PRESIDENT'S REPORT



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

“Animal Health Management: A Critical Control Point for Food Safety” **55th PSAS Scientific Seminar and Annual Convention**

Online Registration System

As an off-shoot of the CPD requirements, the GC agreed to use the online registration system and the QR code. The data that will be submitted to PRC can be easily generated through the system. The development of the computer program for registration was made possible through the coordination of Dr. Veneranda A. Magpantay.

PSAS Foundation Funds

The PSAS Foundation funds were withdrawn and deposited as time deposits at the Philippine National Bank and Landbank under the name of PSAS. Since the passbooks were turned over late, the GC was not aware of the existence of a dollar account under the name of the late Dr. Vicente Momongan. There was no immediate action done to recover the money right after Dr. Momongan's demise. The GC decided not to recover the content of the said dollar account because of the steep requirements by the bank. The cost of recovering the money would be higher than the content of the bank account. The passbook is with the current PSAS treasurer, Ms. Sarmago. The passbook of another peso savings account of PSAS has yet to be turned over by the former PSAS Treasurer.

Philippine Association of Agriculturists (PAA)

During the PAA Summit held on July 2018, the presidency of PAA was turned over to PSAS. The term for presidency will be from 2018 to 2020. Dr. Rosalina M. Lapitan, the lead representative of PSAS to PAA, is holding the presidency in behalf of the Society. This is a huge responsibility, so I am enjoining everyone to get actively involved in the activities of PAA and let us support PSAS in leading the association.

AAAP Congress

Dr. Arnel N. Del Barrio together with Dr. Veneranda A. Magpantay, Dr. Consuelo Amor S. Estrella and Dr. Rommel Sulabo attended the 2018 Asian Australasian Animal Production Congress held in Kuching, Malaysia on 1-5 August 2018. The responsibility of hosting the 2020 AAAP Congress was turned over to Dr. Del Barrio, being the chair of the organizing committee for the event. With PSAS as the lead professional organization for the preparation for the congress, we should do our part in supporting the Organizing Committee until 2020.

I am grateful to all our sponsors for continuously supporting PSAS activities. I would like to personally thank the PS Governing Council 2017-2018, for all the support and personal sacrifices to make possible the conduct of activities during my term. To all PSAS members, thank you for giving me a chance to serve this prestigious organization.

More power to the Society! Mabuhay!

ENRICO P. SUPANGCO, Ph.D.
President



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

FINANCIAL REPORT

01 OCTOBER 2017 - 31 AUGUST 2018

"Animal Health Management: A Critical Control Point for Food Safety"
55th PSAS Scientific Seminar and Annual Convention

I. BEGINNING CASH BALANCE AS OF 30 SEPTEMBER, 2017

A. Dollar Accounts (USD)

	US\$	PhP
1. PNB SA#(4467002401)/39969010013/246460028301	597.57	
2. PNB CTD#(659963) /3997006460000015145	4,997.79	

B. Peso Accounts (PhP)

1. Trust Fund		
a. PNB SA#396112900014/246410014761		122,658.62
b. PNB CTD#3961127400000027/0124646000008733		118,688.03
Sub-Total		241,346.65

2. Savings Accounts		
a. PNB SA#396112700016/396112700024/246410014750		108,034.90
b. PNB CTD#3961127400000016/0124646000008722		72,309.77
c. LBP SA#1891049443		898,721.41
d. BPI CTD#(58077132026)/5807149824		181,070.58
Sub-Total		1,260,136.66

3. Checking Account LBP # 001892-1038-32		185,504.00
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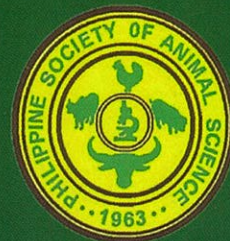
Total Cash in bank **1,686,987.31**

C. Cash on Hand **311,318.91**

TOTAL BEGINNING CASH BALANCE **5,595.36** **1,998,306.22**

FINANCIAL REPORT

01 OCTOBER 2017 - 31 AUGUST 2018



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention

D. New Source

Bank Interest	5.21	2,616.21
Convention Fee (2017)		647,938.00
Membership Fee (Life)		42,000.00
Membership/Annual fees		126,000.00
Guest/Students		4,000.00
Exhibitor/Advertisements (2017)		177,900.00
Donations		154,500.00
Sponsorship (2017)		98,000.00
Printing of Proceedings and Souvenir Program		150,000.00
Convention Fee (2018) Pre-reg		438,100.00
Convention Fee (2018)		88,000.00
Membership Fee (Life)		12,000.00
Membership/Annual Fees		95,500.00
Printing of PJVAS Colored pages		2,000.00
Exhibitor/Advertisement/Donation		113,000.00
Sub-Total	5.21	2,151,554.21

TOTAL

5,600.57 4,149,860.43

II. DISBURSEMENT

A. 2017 Convention Expenses

Convention Venue		848,632.00
Souvenir Program/Proceedings		109,300.00
Printing of PJVAS 2017 (Vol. 2) full payment		27,000.00
Awards		160,000.00
Miscellaneous Expenses (van rentals, meals, notarial fees, etc.)		127,890.10
Other Expenses (supplies, honorarium, communication, Accountant's fee)		67,549.75

B. November 2017 to August 31, 2018 Expenses

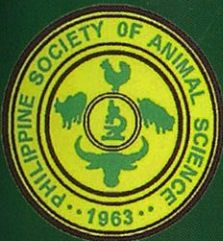
Reservation fee (Convention venue)		177,755.00
Printing of PJVAS 2018 (Vol. 1)		71,000.00
Business Permit/Accountant's Fee		17,037.50
Miscellaneous Expenses (meals, notarial fees, van rental, travels, etc)		227,103.80
Lecture Series		31,363.00
Other expenses (supplies, communication, honorarium, etc.)		97,599.47
Travel expenses (AAAP)	66.00	

TOTAL DISBURSEMENT

66.00 1,962,230.62

ENDING CASH BALANCE AS OF AUGUST 31, 2018

2,187,629.81



PHILIPPINE SOCIETY OF ANIMAL SCIENCE

FINANCIAL REPORT 01 OCTOBER 2017 - 31 AUGUST 2018

"Animal Health Management: A Critical Control Point for Food Safety"
55th PSAS Scientific Seminar and Annual Convention

III. DISTRIBUTION OF CASH BALANCE

A. Dollar Accounts (USD)

	USD	PhP
1. PNB SA#(4467002401)/39969010013/246460028301	532.82	
2. PNB CTD#(659963) /39970064600000015145	5,002.61	
3. LBP CTD# 797848/1899-00321-40	6,662.69	
Sub-Total	12,198.12	

B. Peso Accounts (PhP)

1. Trust Fund		
a. PNB SA#/396112900014/246410014761		130,737.85
b. PNB CTD#(539072)/3961127400000027/0124646000008733		119,013.82
c. PNB CTD #0539496/0124646000011759		178,873.88
Sub-Total		428,625.55
2. Savings Accounts		
a. PNB SA#/396112700016/ 396112700024/ 246410014750		326,703.63
b. PNB CTD# /3961127400000016/ 0124646000008722		72,508.26
c. LBP SA#1891049443		981,869.33
d. BPI CTD#(58077132026)/5807149824		182,391.03
Sub-Total		1,563,472.25
3. Checking Account LBP # 001892-1038-32		142,407.91

Total Cash in bank	12,198.12	2,134,505.71
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Cash on Hand		53,124.10
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TOTAL CASH AS OF 31 AUGUST 2018		2,187,629.81
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Prepared by:

IONE G. SARMAGO
Treasurer

Audited by:

MA. MERCEDES C. BUYOC
Auditor

SCIENTIFIC SESSION

(Oral Presentations)

Day 2 – October 18, 2018

8:00 am – 2:00 pm

Monte Clair Room



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

“Animal Health Management: A Critical Control Point for Food Safety” 55th PSAS Scientific Seminar and Annual Convention

ANATOMY, PHYSIOLOGY, AND BIOCHEMISTRY

8:05 – 8:20 AM

“Volatile Fatty Acids and Total Sugars in the Rumen Fluid of Dairy Cows Fed Water Hyacinth [*Eichhornia crassipes* (Mart.) Solms] and Banana (*Musa sp.*) Pseudostem”

Caren R. Tumaming, Ma. Karina P. Degoma, Thalia J. Bacorro, Elsie Erika C. Abes, Gleeza L. Manulat, Teofila DC. Villar and Amado A. Angeles

NUTRITION

8:20 – 8:35 AM

“Guava Leaf Meal as A Dietary Supplement for Growth in Broiler Chickens”

Alford Glenn C. Mangoba, Joel L. Reyes, Oliva M. Gaffud and Mark Joker L. Marcos

8:35 – 8:50 AM

“Nutritional and Feeding Values of *Trichanthera (Trichanthera gigantea)* for Improved Philippine Mallard Duck (*Anas platyrhynchos*) Layers Under Litter-Floor Management System”

Janine Isidro Berdos, Ernesto A. Martin, Oliver F. Celestino and Ella Joyce S. Paragas

8:50 – 9:05 AM

“Production Performance and Egg Quality of Layers fed Diets Formulated based on Digestible Amino acids with or without Minimum Crude Protein Restriction”

Zarina Gail D. Sambalod, Ernesto A. Martin, Oliver F. Celestino and Ella Joyce S. Paragas

9:05 – 9:20 AM

“Requirement for Standardized Ileal Digestible Lysine to Metabolizable Energy Ratio of Black Tiaong Native Pigs from 20- to 40-kg”

Jesse Jay O. Villanueva and Rommel C. Sulabo



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SOCIETY
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SCIENTIFIC SESSION

(Oral Presentations)

Day 2 - October 18, 2018
8:00 am - 2:00 pm
Monte Clair Room

"Animal Health Management: A Critical Control Point for Food Safety" 55th PSAS Scientific Seminar and Annual Convention

9:20 - 9:35 AM

"Agronomic Performance and Nutrient Composition of *Indigofera zollingeriana* Under Different Planting Distance and Cutting Intervals"

Karlo Paulo L. Quintos, Remedios N. Acasio, Fe Bien R. Garcia and Rene C. Santiago

9:35 - 9:50 AM

"Effect of Addition Organic and Inorganic Fertilizer for Cultivation from Tropic Weed *Synedrella nodiflora*"

Bambang Suwignyo and Galih Pawening

9:50 - 10:05 AM

"Effects of Dietary Supplementation of Synbiotics On Growth Performance of Nursery Pigs"

Noah Jamil P. Tandang, Francis Carlo C. Reyes, Emily P. Angeles, Anthony Francis S. Regaspi and Medallaine I. Dimaiwat

10:05 - 10:20 AM

"Performance Indices of Growing Dairy Bull Calves Fed Different Inclusion Rates of Water Hyacinth [*Eichhornia crassipes* (Mart.) Solms]"

Annalyn Il R. Esaga, Nieta C. Amit, PhD, Gleeza L. Manulat, Elsie Erika C. Abes, Thalia J. Bacorro and Amado A. Angeles

10:20 - 10:35 AM

"Effect of Multi-enzyme Supplementation on energy Concentration, Nutrient and Fiber Digestibilities and Growth Performance of Nursery Pigs fed diets with Cassava Meal"

Leonilo B. Abella, Rommel C. Sulabo, Elipidio M. Agbisit, Jr. and Florinia E. Merca

10:35 - 10:50 AM

"Growth Performance of Growing Heifers Fed Fresh Mulato II (*Brachiaria ruziziensis* x *B. decumbens* x *B. brizantha*) and Mombasa (*Panicum maximum*) compared to Napier (*Pennisetum purpureum* Grass)"

Mary Joy C. Andal, Karla Joy S. Ty, Amado A. Angeles and Menandro M. Loresco

SCIENTIFIC SESSION

(Oral Presentations)

Day 2 - October 18, 2018

8:00 am - 2:00 pm

Monte Clair Room



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

“Animal Health Management: A Critical Control Point for Food Safety” **55th PSAS Scientific Seminar and Annual Convention**

10:50 - 11:05 AM

“In situ Dry Matter Degradability of Five Napier Grass (*Pennisetum purpureum*) Varieties in Dairy Cattle”

Thalia J. Bacorro, Catherine P. Cala, Elsie Erika C. Abes,
Emily E. Victorio, Albert F. Astillero and Luisito M. Avante

11:05 - 11:20 AM

“In situ Nutrient Degradability of Banana (*Musa sapientum*) Pseudostem and Water Hyacinth [*Eichhornia crassipes* (Mart.)] in Dairy Cattle”

Elsie Erika C. Abes, Thalia J. Bacorro, Gleeza L. Manulat,
Mila Gracia E. Villanueva, Amado A. Angeles and Antonio A. Rayos

APPLIED RESEARCH

1:05 - 1:20 PM

“Prediction of Performance Test Traits in Growing Landrace and Large White Pigs under Philippine Conditions”

Orville Bondoc, Joemary F. Isubol, Melanie B. Miranda
and Arlon B. Arganda

1:20 - 1:35 PM

“Monitoring of Aflatoxin M1 and Dairy Farm Management of Water Buffalo”

Ma. Wynne A. Pagaduan, Gemerlyn G. Garcia and Marvin A. Villanueva



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

SCIENTIFIC SESSION

(Oral Presentations)

Day 2 – October 18, 2018
8:00 am – 2:00 pm
Granada Room

**“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention**

UNDERGRADUATE THESIS

8:05 – 8:20 AM

“Morphometric Characteristics of Female Piglets from Different Sex Ratios”

Jay Matthew C. Hernandez and Consuelo Amor S. Estrella

8:20 – 8:35 AM

“Detection of Mercury in Backyard Pigs’ Carcass and Water Source in Impact Communities of Aroroy, Masbate”

Liem Ezra Pasiona and Ilene Basitan

8:35 – 8:50 AM

“Rumen Fluid Cellulolytic Activity in Dairy Steers Using In Vitro Syringe and Microplate Assays”

Ronace N. Petilla, Joe Poblete and Amado A. Angeles

8:50 – 9:05 AM

“Analysis of the Material Lineage of the Philippine Native Cattle (*Bos indicus* Linn.) Using the Mitochondrial DNA D-Loop Sequence Variation ”

Celeste Aleena V. Fariñas and Agapita J. Salces

9:05 – 9:20 AM

“Effect of Supplementation and Duration of Feeding of Dietary Plant Extracts Mixture on Growth Performance and Carcass Characteristics of Growing-Finishing Pigs”

Hannah Mae A. Rustia and Rommel C. Sulabo

9:20 – 9:35 AM

“Effect of a Performance Enhancer Mixture as Replacement for Antibiotic Growth Promoters on Broiler Performance and Carcass Characteristics”

Bea Angelic A. Garcia, Rommel C. Sulabo and Aira Therese A. Reyes

SCIENTIFIC SESSION

(Oral Presentations)

Day 2 - October 18, 2018

8:00 am - 2:00 pm

Granada Room



**PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE**

“Animal Health Management: A Critical Control Point for Food Safety” 55th PSAS Scientific Seminar and Annual Convention

9:35 - 9:50 AM

“Effect of Diet Complexity and Phase Feeding on Growth Performance, Caloric efficiency and Diarrhea Incidence in Nursery Pigs”

Lenitta Lopez and Rommel C. Sulabo

9:50 - 10:05 AM

“Enhancement of Sow Mothering Ability Traits, Suckling Pig Performance and Livability Using Exogenous Insulin-Like Growth Factor-1 (IGF-1)”

Evanka Jey C. Favorada and Percival P. Sangel

BREEDING AND GENETICS

10:20 - 10:35 AM

“Screening for Genetic Polymorphism of B-Casein Gene in Different Breeds of Buffaloes (*Bubalus bubalis*) in the Philippines”

Paulene S. Pineda, Jonalyn D. Delos Santos, Melinda N. Reyes and Ester B. Flores

10:35 - 10:50 AM

“Heterosis in Reproductive Traits of Landrace x Large white Crossbred Sows from a Local Swine Breeding Farm in the Philippines”

Orville L. Bondoc, Joemary F. Isubol and Marc Anthony P. Chua

10:50 - 11:05 AM

“The Growth Curve and Weight Estimates of Philippine Swamp Buffalo (*Bubalus bubalis* Linn.) in Cagayan”

Jennifer F. Maramba, Agapita J. Salces, Jose Arceo N. Bautista, Josefina T. Dizon and Ester B. Fores

11:05 - 11:20 AM

“Genome-wide Association Study for Milk Yield in Philippine Dairy Buffaloes”

Jesus Rommel V. Herrera and Ester B. Flores



PHILIPPINE SOCIETY OF ANIMAL SCIENCE

SCIENTIFIC SESSION (Oral Presentations)

Day 2 - October 18, 2018
8:00 am - 2:00 pm
Granada Room

"Animal Health Management: A Critical Control Point for Food Safety" 55th PSAS Scientific Seminar and Annual Convention

BIOTECHNOLOGY

1:05 - 1:20 PM

"Molecular Characterization and Association of Lactoferrin Gene to Sub-clinical Mastitis in Goats (*Capra hircus*)"

Yancy O. Waminal, Claro N. Mingala and Gabriel Alexix S. Tubalinal

1:20 - 1:35 PM

"Bioconversion of Lignocellulosic Agricultural By-products by Microorganisms into High Protein Feeds"

Joel B. Ellamar, Maria Teresa S.J. Valdez, Alexis E. Inalvez, Mark C. Marquez, Janice M. Rodriguez and Denzelle B. Tarozza

1:35 - 1:50 PM

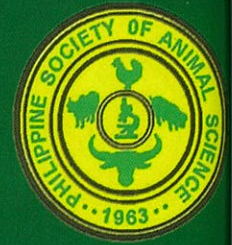
"Effect of Different Prostaglandin (PGF₂) Analogues during Synchronization in Dairy Buffaloes (*Bubalus bubalis*)"

Rebecca Ruby G. Gabriel, Eufrocina P. Atabay, Edwin C. Atabay, Jessica Gay M. Ortiz, Jhon Paul R. Apolinario and Edgar A. Orden

SCIENTIFIC SESSION

(Oral Presentations)

Day 2 – October 18, 2018
8:00 am – 2:00 pm
Moonshine Room



PHILIPPINE
SOCIETY
OF ANIMAL
SCIENCE

“Animal Health Management: A Critical Control Point for Food Safety” 55th PSAS Scientific Seminar and Annual Convention

DISEASE AND DIAGNOSTICS

8:05 – 8:20 AM

“Assessment of Environmental Contamination of Avian Chlamydiae From Free-Range Chicken Flocks”

Ana Marquiza M. Quilicot, Danijela Horvatek Tomi , Željko Gottstetter, Stella Marie D. Lapiz and Estella Prukner-Radovic

8:20 – 8:35 AM

“Identification of Bacterial Community in Mastitic Milk Water from Buffalo in Selected Cooperatives of the National Impact Zone Using PCR And DGGE Method ”

Niña Rica A. Pagaduan, Paula Blanca V. Gaban, Jervin R. Undan and Claro N. Mingala

8:35 – 8:50 AM

“Surveillance and Characterization of Antimicrobial Resistant Escherichia coli and Salmonella from Livestock Milk and Meat in the Philippines”

Marvin A. Villanueva, Claro N. Mingala, Paula Blanca V. Gaban, Michelle M. Balbin, Yasuhiko Suzuki and Chie Nakajima

PRODUCTION AND PROCESSING

9:05 – 9:20 AM

“Antimicrobial Sensitivity Profile of Fecal Escherichia coli Isolate from Broilers Fed with Different Levels of Chlortetracycline”

Julienne Maria Undine Paz H. Quimio, Maria Cynthia R. Oliveros, Veneranda A. Magpantay, Christine B. Adiova and Loinda R. Baldrino

9:20 – 9:35 AM

“Antioxidant Activity of Different Milk Fermented with Locally Isolated Lactic Acid Bacteria”

John Kenneth T. Malilay, Maria Cynthia R. Oliveros, Jose Arceo N. Bautista and Katherine Ann T. Castillo-Israel



PHILIPPINE SOCIETY OF ANIMAL SCIENCE

SCIENTIFIC SESSION

(Oral Presentations)

Day 2 - October 18, 2018
8:00 am - 2:00 pm
Moonshine Room

“Animal Health Management: A Critical Control Point for Food Safety” 55th PSAS Scientific Seminar and Annual Convention

9:35 - 9:50 AM

“Effects of Somatic Cell Count on the Quality Characteristics of Soft -White Cheese (Kesong Puti)”

Ivy Jamela R. Nieves, Maria Cynthia R. Oliveros, Jose Arceo N. Bautista, Ma. Josie V. Sumague and Lerjun M. Penaflor

9:50 - 10:05 AM

“The Effect of Lactobacillus acidophilus Fermentation on the Physicochemical and Sensory Characteristics of Buffalo Milk Whey Beverage”

Rhoijean T. Viodor, April Shayne L. Sulabo, Maria Cynthia Oliveros, Amado Angeles and Dennis Marvin Santiago

SOCIO- ECONOMICS

10:35 - 10:50 AM

“Risk Perceptions of Newcastle Disease Among Backyard Chicken Raisers in Selected Areas in Baybay City and Hilongos, Leyte ”

Melvin A. Bagot, Jan Kristofer M. Villa, Donna Mae I. Igot and Eugene B. Lañada

10:50 - 11:05 AM

“Understanding the Importance of Record Keeping to Assess Profitability and Enhance Financial Literacy of Selected Smallholder Pig Raisers in San Simon, Pampanga, Philippines”

Tessa Lyrene DC. Lantican, Tamsin S. Barnes, Gomathy Palaniappan, Alvin G. Allam, Eduardo L. Lapuz and Patrick Blackall

DEVELOPMENT

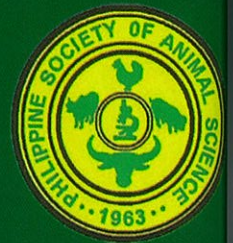
11:05 - 11:20 AM

“Lung Scoring as a Tool to Evaluate Thoracic Lesions in Pigs from selected Slaughterhouses in the Province of Albay, Philippines”

Paul John J. Alvaran, Tamsin S. Barnes, Rona P. Bernales, Eduardo L. Lapuz, Jr., Edwin C. Villar and Patrick Blackall

SCIENTIFIC SESSION

(Poster Presentations)



PHILIPPINE
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"Animal Health Management: A Critical Control Point for Food Safety"
55th PSAS Scientific Seminar and Annual Convention

**Cryopreservation of Spermatozoa Collected from the Excurrent Duct
of Nondescript Rooster**

Flocerfida Aquino, Maureen Gajeton and Lerma C. Ocampo

Preliminary Trial on the use of Barium chloride for Pregnancy Diagnosis in Goats

Olivia Gaffud, Aubrey Joy M. Balbin, Jonathan N. Nayga, Ellaine O. Sotelo,
Aldwin O. Cachapero and Domingo S. Marcelo

**Application of Polymerase Chain Reaction Assay for Diagnosis of
Hemorrhagic Septicemia in Region O2**

Roxan Grace Cacho- Rubia, Manuel M. Galang Jr., Aira D. Cuarteros, Christine V. Mamaua
Judith Z. Tattao and Gerly T. Zulueta

**Sperm Analysis by Computer Assisted Sperm Analyzer (CASA) of Epididymal Sperm
Retrieved from Post Mortem Testicles of Philippine Native Pigs (*Sus scrofa*)**

Ivan Carl J. Dela Rosa, Katrina E. Aquino, Joseph Oliver C. Lofranco, Reymond N. Seralde
Lerma C. Ocampo and Marlon B. Ocampo

**Prediction of Offspring Probabilities for Observed Haplotype Variants
and its Future Applications in the Philippines**

May Anne E. Mata and Genevieve Mae B. Aquino

**Potential of Genotype and Ultrasound Information to Improve Meat Quality
of Local Swine in The Philippines**

Sherwin D. Matias, Ester B. Flores, Kristine Joy B. Prades and Jonathan C. Pablo

**Bovine Brucellosis: Epidemiological Study at Dairy Cattle Farms
in Bicol Region, Philippines**

Vivienne Mae C. Alvina



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SCIENTIFIC SESSION

(Poster Presentations)

“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention

In vitro Activity of Tawa - tawa (*Euphorbia hirta* Linnaeus) Leaf Extract Against *Trichophyton mentagrophytes* Priestly, *Candida albicans* Berkhout and *Malassezia pachydermatis* Dodge

Carl Leonard M. Pradera and Vera Stephanie Ballentes

In-vivo Application of Commercialized Mixed Herbal Medicine in Diarrheic Water Buffalo Calves

Gabriel Alexix SP. Tubalinal, Misao Onuma, Marvin A. Villanueva, Cyril P. Baltazar and Claro N. Mingala

Responses of Broiler Chickens Fed Varying Levels of Pinto Peanut Leaf Meal

Mark Joker L. Marcos, Oliva M. Gaffud, Joel L. Reyes and Alford Glenn C. Mangoba

Level of Dietary Energy for Optimum Production Performance, Carcass Yield and Sensory Characteristics of Banana Chicken Raised in Confinement

Justin R. Caoagdan, Remedios N. Acasio and Maria Laarni. P. Cerna

Production Performance and Economics of Broilers Given Feeds Fermented with Lactic Acid Bacteria Serum Solution

Roberto T. Nagrampa Jr. and Luz P. Napoles

Response of Broiler to Different Levels of Guyabano Decoction in Drinking Water

Lilibeth S. Languido and Olive Gaffud

Effect of Spray Drying and Fat Content on the Physico-chemical Properties of Buffalo Milk Powder

Gilda Melanie O. Babaran, Eileen B. Bandalan, Rhojjean T. Viodor and Maria Cynthia R. Oliveros

SCIENTIFIC SESSION

(Poster Presentations)



PHILIPPINE
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SCIENCE

"Animal Health Management: A Critical Control Point for Food Safety"
55th PSAS Scientific Seminar and Annual Convention

Status of Native Pig Production in Marinduque, Philippines

Cherry Rose R. Mantala

**Utilizing Sociology in Understanding the Adoption of Record Keeping Among
Smallholder Pig Farmers in San Simon, Pampanga, Philippines**

Alvin G. Allam, Tamsin Barnes, Gomathy Palaniappan, Eduardo L. Lapuz, Jr. and Patrick Blackall

Profile and Practices of Native Pig Raisers in Marinduque, Philippines

Giselle M. Perlas

Recovery of Viable Epididymal Sperm from Post Mortem Testicles of Philippine Native Pigs

Katrina E. Aquino, Evaristo A. Abella, Ivan Carl J. dela Rosa,
Joseph Oliver C. Lofranco, Flocerfida P. Aquino and Lerma C. Ocampo

Evaluation of Fecal Samples from Smallholder Pig Farms in San Simon, Pampanga, Philippines

Mr. Ryan Bismark C. Padiernos, Paul John J. Alvaran, Milagros R. Mananggit,
Christopher R. Parke, Tamsin S. Barnes and Patrick Blackall



**PHILIPPINE
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PRACTICAL COURSES

Day 2 - October 18, 2018

4:00 pm - 5:00 pm

Monte Clair and Granada Rooms

“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention

***“APPLICATIONS OF ULTRASONOGRAPHY IN VETERINARY
AND ANIMAL SCIENCES”***

DR. JEZIE A. ACORDA
Professor, UPLB

***“REAL-TIME ULTRASOUND SCANNING OF BACK FAT AND
EYE MUSCLE AREA IN SWINE AND CATTLE”***

DR. ESTER B. FLORES
Project Development Officer IV
Philippine Carabao Center
and

DR. KRISTINE JOY B. PRADES
Senior Science Research Specialist
Philippine Carabao Center

Moderator

DR. PERCIVAL P. SANGEL
Associate Professor
University of the Philippines Los Baños

CLOSING AND AWARDING CEREMONIES

Day 2 – October 18, 2018
6:00 pm – 8:00 pm
Monte Clair and Granada Rooms



**PHILIPPINE
SOCIETY
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SCIENCE**

“Animal Health Management: A Critical Control Point for Food Safety” 55th PSAS Scientific Seminar and Annual Convention

Invocation

National Anthem

Introduction of the 2018
PSAS Honoree

Message from the Honoree

Presentation of 2018 PSAS
Standing Awards

Induction of new PSAS
Regular Members

Induction of new PSAS
Life Members

Induction of new PSAS
Governing Council

Turn-over of the symbol
of responsibility

Message from the incoming
PSAS President

Awarding of 2018 PSAS Best
Papers and Poster

Closing Remarks

Masters of Ceremonies:

DR. ARNEL N. DEL BARRIO

*Executive Director
Philippine Carabao Center*

DR. RONNIE DOMINGO

*OIC, Bureau of Animal Industry
Department of Agriculture*

DR. ENRICO P. SUPANGCO

PSAS President

DR. ENRICO P. SUPANGCO

PSAS President

DR. ENRICO P. SUPANGCO

PSAS President

DR. ROSALINA M. LAPITAN

PSAS Past President/PAA President

DR. ENRICO P. SUPANGCO

PSAS President

DR. ESTER B. FLORES

PSAS Vice President & President-elect

DR. ESTER B. FLORES

PSAS Vice President & President-elect

**DR. AMADO A. ANGELES and
DR. CONSUELO AMOR S. ESTRELLA**

*Scientific Paper Committee
Associate Professors, UPLB*

DR. ESTER B. FLORES

PSAS Vice President & President-elect

DR. LORETTA C. ROMERO

*Assistant Professor
Benguet State University*

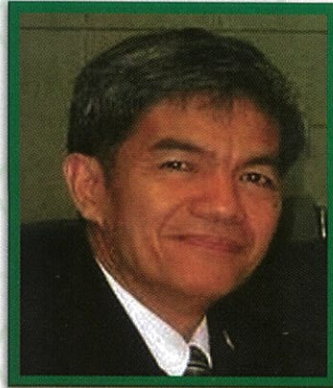
DR. JOSH ELISHA R. OCTURA

*Professor
Mindanao State University*



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PSAS LECTURE SERIES HONOREE PROFILE



RONNIE D. DOMINGO, Ph.D.

This year's Honoree is currently the OIC-Director of the Bureau of Animal Industry. A native of Muñoz, Nueva Ecija, it is no wonder therefore that he started his teaching career at the Central Luzon State University (CLSU) in Muñoz, Nueva Ecija.

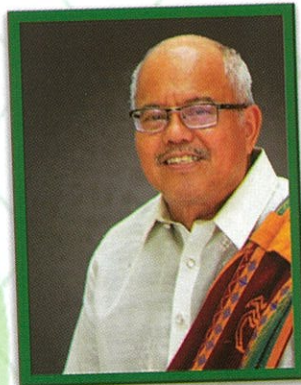
Dr. Domingo obtained his degree in Veterinary Medicine from the University of the Philippines Diliman, Quezon City. After five years, while still connected with CLSU, he earned his Master's degree in tropical veterinary medicine from the University of Edinburgh. He also devoted a substantial number of years in Christian Ministry before returning to his field of interest first as lecturer/facilitator with the Food and Agricultural Organization (FAO) and eventually as Assistant Professor in the College of Veterinary Medicine University of the Philippines. Being a man of service, with animal health management and outbreak investigation as area of specialization, his recent transfer to the Bureau of Animal Industry (BAI) is an opportunity to help the livestock industry.

It was shortly during his assignment as head of the Animal Health and Welfare Division (AHWD) of BAI when the first bird flu outbreak in the country occurred. The AHWD, under his leadership, figured prominently in containing the outbreak in Pampanga. The outbreak never spread outside the province and was quickly contained. The industry stands to benefit from his stewardship of the BAI.

2018 PSAS DISTINGUISHED FELLOW AWARDEE



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CESAR C. SEVILLA, Ph.D.

Professor Emeritus
Institute of Animal Science,
College of Agriculture and Food Science
University of the Philippines Los Baños

Dr. Cesar C. Sevilla is a full professor and renowned ruminant nutritionist. He has mentored 17 PhD, 14 MSc, and 24 BS Agriculture graduates who are now leaders in their own field. He has delivered 45 lectures and scientific papers in different national and international conferences; he was a founding member of the Southeast Asian Network for Animal Science (SEANAS) aimed at standardizing animal science curriculum in the region. As a scientist, he has managed 13 national and foreign-funded research projects from which he published 90 scientific articles in international and local peer-reviewed journals. He has served as consultant and member of numerous advisory committees by government and private agencies in the Philippines and abroad. His accomplishments were recognized by many professional organizations as evidenced by the 23 awards he received while in active service to the university. He is currently a member of the editorial board of the Asian-Australasian Journal of Animal Sciences and paper evaluator for the Philippine Journal of Veterinary and Animal Sciences and Philippine Journal of Veterinary Medicine. He is a current member of the Technical Committee for Agricultural Education by the Commission on Higher Education (CHED).

The 2018 PSAS Distinguished Fellow Award is given in recognition of his outstanding contributions to the development of the Philippine animal industry through leadership, advocacy and active participation in national and international professional organizations.



**PHILIPPINE
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2018 STANDING AWARDEES

"Animal Health Management: A Critical Control Point for Food Safety"
55th PSAS Scientific Seminar and Annual Convention



ROMMEL C. SULABO, Ph.D.
2018 PSAS - Philippine Foremost Milling
Corporation Outstanding Teacher in
Animal Science Award

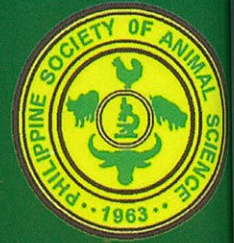


ERIC P. PALACPAC, Ph.D.
2018 PSAS Outstanding Professional
in Animal Science Extension



MARVIN A. VILLANUEVA, Ph.D.
2018 PSAS - UNAHCO, Inc. Outstanding
Young Professional in Animal Science

2017 WINNERS OF PSAS BEST PAPER AND POSTER AWARDS



**PHILIPPINE
SOCIETY
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SCIENCE**

“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention

BREEDING AND GENETICS

“Morphological and phylogenetic analysis as tools for conservation management of swamp buffaloes (*Bubalus bubalis*) in Calayan Island”

Alexander Manahan Paraguas, Ester B. Flores, Therese Patrickka C. Cailipan and Lilian P. Villamor

NUTRITION

“Response of growing dairy calves to starter diets with varying energy and protein levels”

Gleeza L Manulat, Cesar C. Sevilla, Florinia E. Merca and Amado A. Angeles

DISEASE AND DIAGNOSTICS

“Antidiabetic potential of red mold rice and its gross-histopathological description on selected organs in Alloxan-induced diabetic rats (*Rattus norvegicus*)”

Geraldine C. Sanchez, Henry F. Mamucod, Aris F. Micalat, Sharlene I. Tayag, Rafael R. Rafael and Monalisa M. Cayanan

APPLIED RESEARCH

“A Retrospective study on the efficiency of feed mixers in different diet types and mixing time”

Medallaine I. Dimaiwat, Gean Camille C. Belen, Emily P. Angeles, Francis Carlo C. Reyes and Amado A. Angeles

BIOTECHNOLOGY - REPRODUCTION

“Thermotolerance identification in water buffalo using heat shock protein 70 (HSP70) and its effect to semen quality in varying environmental conditions”

Excel Rio S. Maylem, Shanemae M. Rivera, Eufrocina P. Atabay, Edwin C. Atabay and Emma V. Venturina



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2017 WINNERS OF PSAS BEST PAPER AND POSTER AWARDS

*“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention*

PRODUCTION AND PROCESSING

*“Conjugated linoleic acid production of *Lactobacillus plantarum*
Biotech 1066 in milk”*

Angelo M. Tapia, Jose Arceo N. Bautista, Bernadette C. Mendoza,
Laura J. Pham, Ione G. Sarmago and Maria Cynthia R. Oliveros

UNDERGRADUATE THESIS

*“Herbage dry matter yield, nutritive composition and in vitro gas production of
Mulato II and Mombasa grasses at 30 and 45 days cutting interval”*

Thalia J. Bacorro, Patricia May B. Reyes, Menandro M. Loresco, Amado A. Angeles

POSTER

*“Defining the culture medium for the production of cattle embryos (*Bos taurus*)
for cryopreservation by vitrification method”*

Alfred D. Sayson, Eufrocina P. Atabay, Ma. Elizabeth C. Leoveras,
Edwin C. Atabay and Excel Rio S. Maylem

2018 PSAS GOVERNING COUNCIL MEMBERS



PHILIPPINE
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**“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention**

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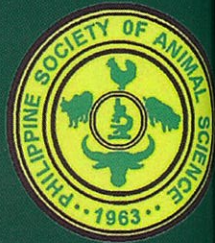
**PHILIPPINE
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PSAS GOVERNING COUNCIL MEETINGS

“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention

DATE	VENUE	SPONSOR
15 December 2017	Bandian Hacienda Resort Calauan, Laguna	PSAS
19 January 2018	Institute of Animal Science, College of Agriculture and Food Science, UPLB	Dr. Veneranda A. Magpantay and Dr. Maria Cynthia R. Oliveros
16 February 2018	Benguet State University	Dr. Monaliz M. Nagrampa and Dr. Loretta C. Romero
23 March 2018	Dean's Office Conference Rm., College of Agriculture and Food Science, UPLB	Dr. Ester B. Flores
27 April 2018	Institute of Animal Science, College of Agriculture and Food Science, UPLB	Dr. Amado A. Angeles
25 May 2018	PCAARRD, Los Baños, Laguna	Mr. Ronilo O. De Castro
4 July 2018	Conti's Restaurant, Quezon City	Ms. Ma. Mercedes C. Buyoc
10 August 2018	Dean's Office Conference Rm., College of Agriculture and Food Science, UPLB	Ms. Ione G. Sarmago
10 September 2018	Institute of Animal Science, College of Agriculture and Food Science, UPLB	PSAS
1 October 2018	Director's Office Conference Rm., Institute of Animal Science, College of Agriculture and Food Science, UPLB	PSAS

2018 PSAS CHAPTER OFFICERS



**PHILIPPINE
SOCIETY
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SCIENCE**

"Animal Health Management: A Critical Control Point for Food Safety"
55th PSAS Scientific Seminar and Annual Convention

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Mr. William N. Mamba

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Region 10: Mr. Elmer Caballes
Region 11: Mr. Jonash Binds
Region 12 and ARMM: Dr. Jane Tranquilan

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Vice-President: Dr. Acely Robenilo
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Mr. Juanita Emata - Camarines Norte
Mr. Rodol Garbeles - Camarines Sur

Regional Coordinators:

Gareth C. Bayate
Doris B. Capuno, Mag.Dev
Elsie G. Ilumba
Welmar Deronio



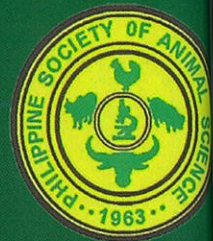
PHILIPPINE SOCIETY OF ANIMAL SCIENCE

PAST PSAS PRESIDENTS

“Animal Health Management: A Critical Control Point for Food Safety”
55th PSAS Scientific Seminar and Annual Convention

Dr. Amado E. Baladad	1963-1965	Dr. Manuel D. Rocha	1991-1992
Dr. Leopoldo S. Castillo	1965-1966	Dr. Jose V. Valenzuela	1992-1993
Dr. Teodulo M. Toparcio Jr.	1966-1967	Dr. Francisco F. Peñalba	1993-1994
Dr. Gonzalo V. Garcia	1967-1968	Dr. Carmencita D. Mateo	1994-1995
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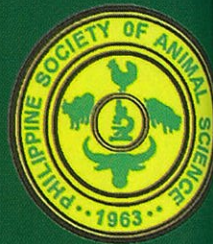


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