

DOST-PCAARRD SWINE Industry Strategic S&T Program (Swine ISP)

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3rd Pig Genetic Networking Conference: Philippines and Taiwan, 20-24 November 2017

OUTLINE OF PRESENTATION

- I. Introduction to PCAARRD
- II. PCAARRD's Industry Strategic S&T Programs
- III. Swine ISP



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INTRODUCTION TO PCAARRD

- PCAARRD or Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development - sectoral councils under the Department of Science and Technology (DOST)
- Established June 22, 2011 - consolidation of the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) and the Philippine Council for Aquatic and Marine Research and Development (PCAMRD).



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INTRODUCTION TO PCAARRD



- Mandates:
 - formulates policies, plans and programs for S&T-based R&D in the different sectors
 - coordinates, evaluates, and monitors the national R&D efforts in the agriculture, aquatic and natural resources (AANR) sectors.
 - allocates government and external funds for R&D and generates resources to support its program.



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INTRODUCTION TO PCAARRD

Vision

Sustained dynamic leadership in science and technology (S&T) innovation in the agriculture, aquatic and natural resources (AANR) sectors

Mission

Provide strategic leadership in promoting S&T as a platform for AANR products innovation and environment resiliency



PCAARRD-DOST's Industry Strategic S&T Programs (ISPs)

What is ISP?

- Commodity-based, long-term S&T plan/program for each priority industry
- A blue print for operationalizing the DOST's vision of a modern, innovative, world class and strongly science-based AANR sector;



PCAARRD-DOST's Industry Strategic S&T Programs (ISPs)

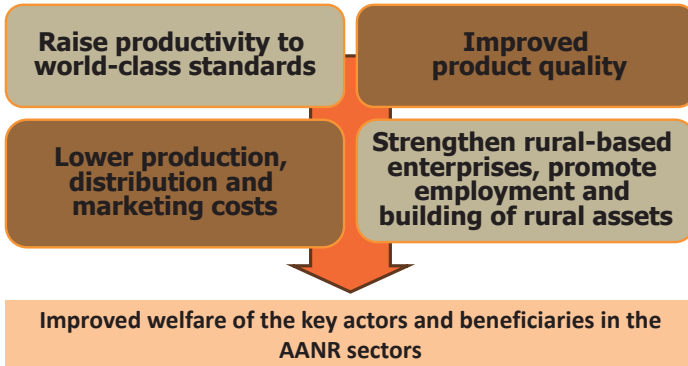
Objectives:

- Set the S&T vision and direction for the AANR sector; and
- Influence/advocate other actors/ stakeholders to align collective efforts towards a common S&T vision.



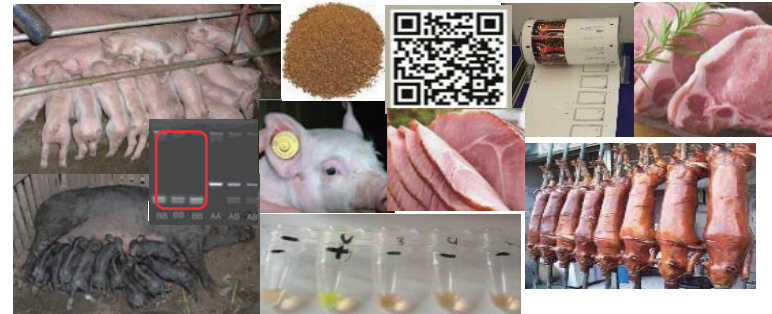
DOST-PCAARRD's Industry Strategic S&T Programs (ISPs)

DESIRED OUTCOME: Generate science-based know-how, tools & products that enable the agri, aqua & forestry subsectors to:



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SWINE INDUSTRY STRATEGIC S&T PROGRAM (SWINE ISP)



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The Philippine swine industry

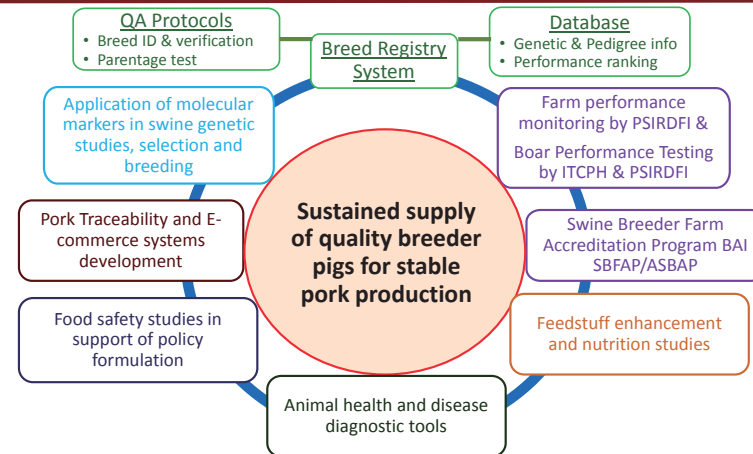
- 2016 swine inventory is estimated at 12.48 M hd of which 63.78% are in backyard and 36.22% are in large commercial farms
- 2016 volume of production is estimated at 2.2 million MT
- 2016 value of production is Php211.43 B
- Swine ranks 2nd to rice in terms of contribution to GVA in Agriculture
- 2015 per capita pork consumption is 19.39 kg (15.05kg, carcass and 4.34kg, offal)
- 2015 self sufficiency in pork is 90%
- The Philippines is FMD free

Source: <http://www.bas.gov.ph/?ids=swinesituation>




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The swine ISP framework



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PCAARRD Swine ISP

R&D activities	Status	Accomplishments/Deliverables
Breed registry and information system development 	Ongoing	Philippine swine breed registry <ul style="list-style-type: none"> - breed ID system - parentage testing protocol - genetic and pedigree info - breeder pig performance ranking Info system on qualitative and quantitative traits of native pig breeds
Molecular marker-aided genetic studies, selection and breeding Native pig breed dev't.	Ongoing	<ul style="list-style-type: none"> • Optimized 17 DNA markers associated to productivity, meat quality, disease resistance and genetic defects • Established a swine genetic analytical service laboratory • Developed 7 breeding true-to-type Philippine native pig populations

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7 Genetic Groups of Philippine Native Pig



Marinduke



Bondoc Peninsula



Kalinga



Benguet



Nueva Vizcaya



Isabela



Sinirangan (Samar)

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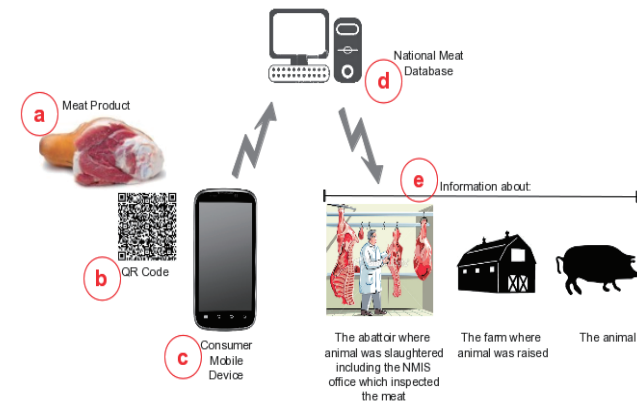
PCAARRD Swine ISP

R&D activities	Status	Accomplishments/Deliverables
Pork Traceability and E-commerce systems development	Completed	<ul style="list-style-type: none"> • Developed fully automated pork traceability system from pen to plate • Completed E-commerce system for breeder animals and boar semen
Food safety studies in support of policy formulation	Completed	<ul style="list-style-type: none"> • Information on anti microbial resistance of common pathogens • Info on the rate of microbial contamination of pork from the slaughter houses, transport vehicle to retail stalls

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Pork Traceability ICT Framework



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Screenshots of Web Application System

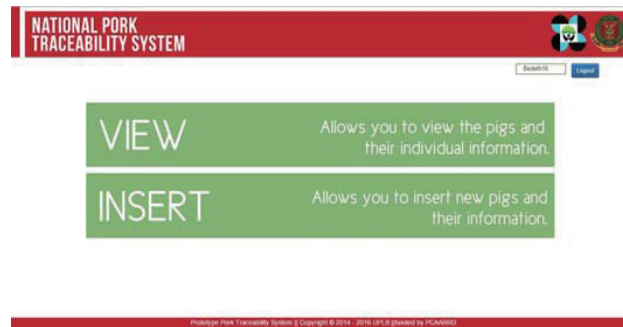


Log-in page

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Screenshots of Web Application System



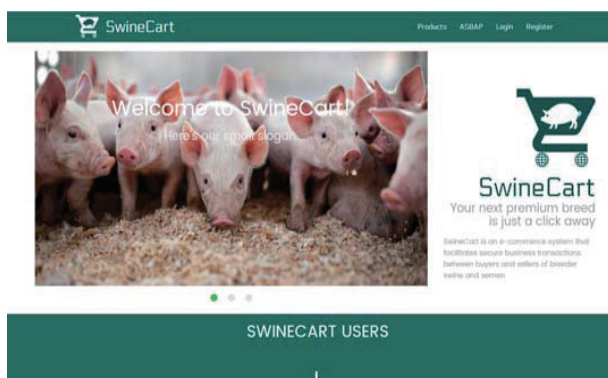
Choose if the user wants to view details of pig or insert new pig.

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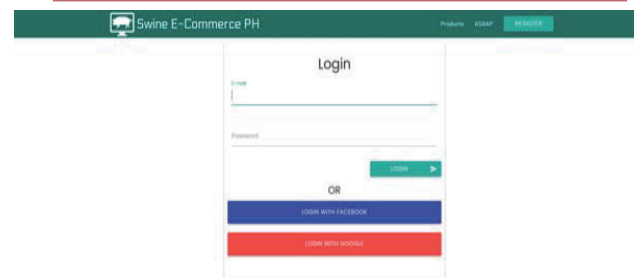
- E-commerce Web page <https://www.swinecart.cf/>



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- E-commerce Web page




Login page

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R&D activities	Status	Accomplishments/Deliverables
Animal health and disease diagnostic tools 	Ongoing	<ul style="list-style-type: none"> • Dry format RT-LAMP Kit for CSF and PRRS • Developed LAMP based laboratory diagnostic protocols for respiratory pathogens • Developed LAMP based quick diagnostic kits (wet and dry format) for PED
Feedstuff quality enhancement and nutrition studies	Ongoing	<ul style="list-style-type: none"> • Protein enhanced copra meal • Range area enhancement protocol for free range native pig production

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Other Initiatives in support of the Swine Industry

- Establishment of swine genetic analytical service laboratory (SGASL)
- Enhancement of research farm facilities and artificial insemination laboratories of R&D institutions
- Provision of graduate degree scholarships for researchers

PCAARRD's Partnership with:

- Swine Breeder Farm Accreditation Program by BAI & SBFAP/ASBAP
- Farm performance monitoring by PSIRDFI & Boar Performance Testing by ITCPH & PSIRDFI

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THANK YOU FOR YOUR ATTENTION!

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