

Challenges to the Philippine Dairy Industry



Photo by: A.J. Sales

Synan S. Baguio

Officer-in-Charge
Livestock Research Division
DOST-PCAARRD
2019

DEPARTMENT OF SCIENCE AND TECHNOLOGY
Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development



1

Outline of Presentation

- Introduction
- Challenges to the Philippine Dairy industry
 - Dairy herd build up
 - Increasing dairy animal productivity
 - Improving production efficiency
 - Ensuring milk quality and safety
- Dairy industry strategic S&T program (ISP)
- Objectives of the dairy ISP
- Current dairy R&D initiatives
- Call for action to industry players

DEPARTMENT OF SCIENCE AND TECHNOLOGY
Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development



2

Introduction

- Dairy industry development and production was not priority in government agricultural development plans
- Filipinos were thought to be non-milk drinkers
- Milk production is not suited to tropical environments
- Inventory of dairy animals is very low
- Productivity and production efficiency is also low

DEPARTMENT OF SCIENCE AND TECHNOLOGY
Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development



3

Introduction

- Milk collection, processing marketing systems were not developed
- Milk wastage and spoilage was high
- Milk production was not profitable to farmers
- The Philippines imports 99% of its demand for milk and dairy products

DEPARTMENT OF SCIENCE AND TECHNOLOGY
Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development



4

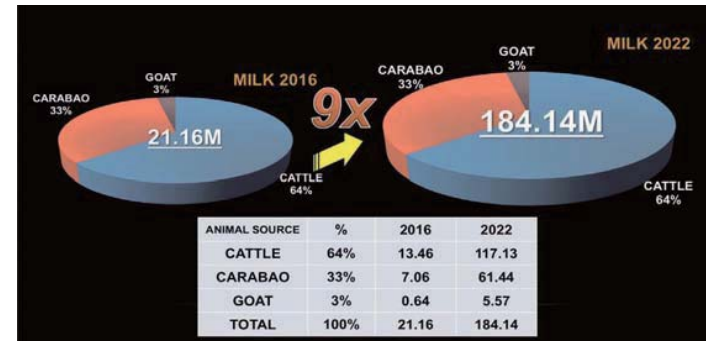
Introduction

- In 2016, the Secretary of agriculture raised the challenge to increase local milk production from 1 to 10% of demand



Challenges to the Dairy Industry

Baseline and Projected Milk Production by Species

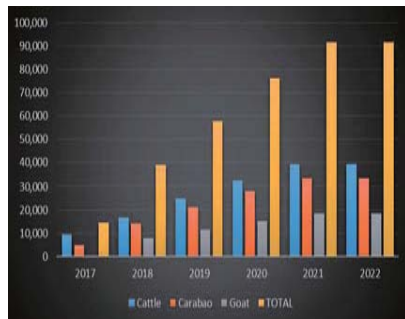


Source: NDA, 2017



Challenges to the Dairy Industry

- Dairy herd build



- Decreasing calving to conception interval from 7 to 3 months
- Decreasing calving interval from 17 to 14 months and kidding interval from 12 to 8 months
- Increasing breeding success rate
- Increasing dairy animal inventory from 14,548 to 91,456 head through local production and importation
- Importation (live, semen, embryo)



Challenges to the Dairy Industry

- Increasing dairy animal productivity
 - buffalo - from 5 to 7 li/day
 - cattle - from 8 to 12 li/day
 - goat - from 1 to 2.5 li/day

Dairy Species	2022 Inventory (hd)	Milk Production (L)
Cattle	39,283	117,849,600
Carabao	33,759	60,766,200
Goat	18,414	5,524,200
TOTAL	91,456	184,140,000



Challenges to the Dairy Industry

- Improving production efficiency
 - Reducing milk wastage and/or spoilage from 30 to 10%



DEPARTMENT OF SCIENCE AND TECHNOLOGY
Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development



9

Challenges to the Dairy Industry

- Ensuring milk quality and safety
 - Hygienic milking and milk handling practices



DEPARTMENT OF SCIENCE AND TECHNOLOGY
Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development



10

Dairy Industry Strategic S&T Program

- Aimed at implementing R&D activities that will generate, information, technologies and systems useful in overcoming the identified challenges.

DEPARTMENT OF SCIENCE AND TECHNOLOGY
Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development



11

Objectives of the Dairy ISP

1. Increase dairy animal inventory and local milk production from 1 to 10%
2. Increase dairy animal productivity and production efficiency
3. Develop and promote technologies and systems to ensure stable supply of good quality feeds
4. Develop and promote dairy herd management systems that promote optimum milk production
5. Reduce milk spoilage and wastage from 30 to less than 10%

DEPARTMENT OF SCIENCE AND TECHNOLOGY
Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development



12

Current Dairy R&D Initiatives



Current Dairy R&D Initiatives

R&D Areas	R&D Activities	Expected Outputs
Breeding, Genetics and Reproduction	<ul style="list-style-type: none"> Genetic and phenotypic quality assessment Application of molecular methods of selection and breeding Application and improvement of assisted reproduction techniques 	<ul style="list-style-type: none"> Information on the genetic quality and phenotypic characteristics of dairy animals DNA markers for specific traits Practical and improved AI and ET protocols

~50~

Current Dairy R&D Initiatives

R&D Areas	R&D Activities	Expected Outputs
Nutrition and Feeding	<ul style="list-style-type: none"> Forage production and processing Crop byproducts nutrient quality enhancement Evaluation of the feeding value of locally available feed materials Development of sustainable and farm specific feeding systems 	<ul style="list-style-type: none"> Forage production and processing technologies Dairy animal ration formulations and feeding protocols and systems

Current Dairy R&D Initiatives

R&D Areas	R&D Activities	Expected Outputs
Healthcare & Management	<ul style="list-style-type: none"> Development of farm specific mastitis control and healthcare management protocols Development of diagnostic kits 	<ul style="list-style-type: none"> Effective and efficient dairy animal healthcare protocols and systems Disease diagnostic and milk quality test kits

Current Dairy R&D Initiatives

R&D Areas	R&D Activities	Expected Outputs
Product quality and safety	<ul style="list-style-type: none"> • Development of milk storage, handling and collection systems • Development of on-farm milk quality testing protocols • Development of milk traceability system 	<ul style="list-style-type: none"> – Efficient milk handling and collection system – Practical on-farm milk quality testing protocol – Automated milk traceability system

Current Dairy R&D Initiatives

R&D Areas	R&D Activities	Expected Outputs
Policy and marketing	<ul style="list-style-type: none"> • Market studies on goat milk and milk products • Establishment of buffalo and goat milk standards • Generation of inputs to enabling policies pertaining to dairy development 	<ul style="list-style-type: none"> – Goat milk and milk products marketing strategies – PNS for buffalo and goat milk – Policy briefs on dairy development

Call for Action to Industry Players

- Active participation of private industry players in planning, implementation and evaluation of R&D projects,
- Industry support in the promotion of dairy R&D,
- Industry support in the promotion and adoption of dairy technologies.

Thank you for your attention!



For more information please contact:

Dr. Synan S. Baguio
Livestock Research Division
DOST-PCAARRD
Tel. No. (049) 536-0015
Email: synanb@yahoo.com