THE IMPORTANCE OF ARTIFICIAL INSEMINATION TO THE PHILIPPINE SWINE INDUSTRY

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Introduction
- AI is among the first biotechniques that was adopted by livestock industries
- It was first introduced to the Philippines in the 1930’s
- Its field application began only in 1954
- In the 1960’s, 70’s and the early 80’s adoption of AI was low
- Low adoption of AI then was blamed on:
  - lack of technical expertise to perform the procedure,
  - unavailable equipment and materials needed to perform AI,
  - lack of technology to process and preserve semen,
  - low conception rate and litter size and
  - abortion in gilts and sows that were subjected to AI

Introduction
- In the late 1980’s, interest on AI was rekindled by:
  - the desire to acquire, introduce and multiply superior genetics in breeding herds,
  - development of techniques to extend the volume of semen from one ejaculation to several doses and to lengthen the shelf life of extended refrigerated semen for several days,
  - easy access of materials (i.e. extenders, disposable catheters, squeeze bottles, sterile lubricants) needed for AI

Introduction
- to date, AI is considered part of the practices of swine breeder and commercial farms
- data from SBFAP indicated that 100% of the accredited swine breeder farms practice AI.
- semen produced in-house, acquired from local stud farms and/or purchased from foreign semen laboratories are used for AI
- some farms still practice natural mating in gilts and sows that failed to conceive after AI
Introduction

- Adoption of AI in commercial hog farms is estimated at 70-80%.
- In backyard farms, adoption of AI is estimated at 20-30%.
- Boar for hire service remains popular among small swine raisers in hard to reach areas.
- Nevertheless, AI is continuously gaining popularity among large commercial and small pig producers.
- AI technology is perceived by government and private industry players as vital in achieving the desired productivity, efficiency and growth of the Philippine swine industry.

The Philippine swine industry

- 2016 swine inventory is estimated at 12.48 M hd of which 7.96 M hd (63.78%) are in backyard and 4.52 M hd (36.22%) are in large commercial farms.
- 2016 volume of production is estimated at 2.23 million MT.
- 2016 value of production is Php211.43 B.
- Swine ranks 3rd after rice and fishery industries in terms of contribution to GVA in Agriculture.
- 2015 per capita pork consumption is 15.05 kg.
- 2015 self-sufficiency in pork is 90%.
- The Philippines is FMD free.

Recent technologies in pork production

- New technologies in swine breeding, nutrition, health care and in housing and management have significantly improved the productivity, efficiency and product quality of the swine industry.
- Molecular methods of selection and breeding are widely used swine breeders.
- Molecular methods of selection and breeding improve the efficiency of selecting desired traits and facilitates culling of individuals that carries negative genes.
- Potentials of genetically superior animals that are produced thru genomic selection will only be realized if these are multiplied and used for pork production.
- AI offers the opportunity to maximize the utilization of genetically superior animals.
- Extensive use of AI in commercial pork production is limited to extended refrigerated boar semen.
- AI component technologies to evaluate and ensure high viability of sperm after processing and preservation offer the opportunity to optimize the use of genetically superior boars.
Conclusion

- Molecular methods of breeding and selection have significantly improved the efficiency of selecting individuals that possess desired traits and culling of negative genes from swine breeding herds.
- The method facilitates identification of genetically superior breeder animals.
- The potential benefits from genetically superior animals will only be realized if their genes are multiplied, distributed, used for commercial pork production.
- AI offers the opportunity to efficiently multiply and distribute superior genetics.
- Further development of AI and its component technologies that complements genetic improvement efforts needs to be pursued.

Thank you for your attention!

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