

THE IMPORTANCE OF ARTIFICIAL INSEMINATION TO THE PHILIPPINE SWINE INDUSTRY



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Seminar on Boar Semen Application for Meat Quality

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



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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



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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



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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



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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 15.05kg
- 2015 self sufficiency in pork is 90%
- The Philippines is FMD free



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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



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Recent technologies in pork production

- 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



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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



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Thank you for your attention!

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