

Pork Industry Curriculum for High Schools

What are the goals of this curriculum?

- To provide high school students with a better understanding of the pork industry and of what pork producers do on a day-to-day basis in a one week program. (Optional-topic materials for two additional days are included.)

What are the lesson topics?

- The Pork Industry at a Glance
- The Industry and the Environment
- Animal Husbandry
- Breeding and Gestation, Farrowing
- Nursery and Grow-Finish
- Showmanship
- Careers in the Pork Industry

What is included?

- All lesson components will be organized on a DVD for use in a PC computer
- Seven Lesson Plans
- Seven PowerPoint Presentations
- Video Components
- Activities
- Quizzes
- Resource/Reference Documents

Who is this curriculum best suited for?

- This curriculum is designed for high school ag classes, 4-H programs and FFA programs.

What is the cost of the curriculum?

- The DVD with all curriculum materials is free of charge thanks to sponsorship from the Iowa Pork Producers Association and the Pork Checkoff.

Who do I contact for more information?

- If you would like more information, contact Jamee Eggers, producer education director at Iowa Pork Producers Association by calling (515) 225-7675 or email jeggers@iowapork.org.



Lesson Plans

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Breeding, Gestation & Farrowing

INTRODUCTION

Lesson Introduction

The "Breeding and Farrowing" lesson explains the production practices associated with two phases of the production cycle. This lesson will address the different types of housing units, the artificial insemination process, and the farrowing process.

Time Needed

Interest Approach: 5 minutes

Content Delivery: 25 minutes

The AI Process: 5 minutes

Review Quiz: 10 minutes

Standards

Agriculture Production

IA - 4.6 - Identify risk components and analyze management strategies

IA - 7.4 - Plan an animal health program / schedule

IA - 12.5 - Demonstrate safe and humane animal handling techniques

NM-SS.9-12.6 - All students should develop an understanding of natural and human-induced hazards, along with science and technology in local, national, and global challenges

LEARNING OBJECTIVES:

After completing this lesson, students will be able to:


1. Explain how individual housing units aid in the well-being of breeding stock.
2. Discuss the farrowing process.
3. Discuss piglet care and handling.
4. Identify and discuss the reproductive anatomy of sows and gilts.
5. Describe the artificial insemination (AI) process and analyze how it mimics the natural breeding process.

MATERIALS:

1. PowerPoint titled "Breeding, Gestation & Farrowing"
2. LCD projector or overhead projector (if needed, the PowerPoint slides can be used as transparency masters)
3. Enough copies of the quiz and activity sheets for every student in the class

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VOCABULARY:



Artificial Insemination - the deposition of spermatozoa in the female genitalia by artificial rather than natural means

Castration - A male that is made infertile by means of surgery

Catheter - plastic tube used during AI that carries the semen to the cervix

Cervix - narrow opening at the bottom of the uterus

Colostrum - sow's first milk that contains antibodies that build immunity to diseases

Conception Rate - percentage of females serviced that conceive

Docking - piglets' tails are cut shorter to reduce tail biting

Estrus - the period of sexual excitement (heat) and a certain hormonal profile, at which time the female will accept coitus with the male

Mastitis - inflammation of the mammary glands (udder); caused by bacteria

Ovaries - the location where eggs (ova) mature and are released

Oviduct - carries eggs from the ovaries to the uterine horn. Fertilization occurs here

Processing Piglets - a series of procedures performed on piglets around three to five days of age

Semen - a fluid substance produced by the male reproductive system containing spermatozoa suspended in secretions of the accessory glands

Uterine Horns - the area where the fetus develops

Vagina - the muscular canal extending from the uterus to the exterior of the body. It is also known as the birth canal

Vulva - external genitalia of the sow

INTEREST APPROACH:

Gather AI equipment such as a catheter, a magazine containing semen/breeding information, a cooler, etc. Place the entire set of items in the front of the classroom prior to the beginning of class (this will foster discussion among the students about what these are and what today's lesson will be). Once class begins, ask the students what they think these items are used for. Go through each item individually and discuss.

Draft Materials


PowerPoint Presentations


Environmental Protection

Producers are continually conscience of the environmental impacts of their operations.

Poor environmental/natural resource management can mean reductions in:

- Animal well-being
- Public perceptions about swine production






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Nutrition

...out once
p
ard

...ts appear
...n, a shiny
hair coat, and round, full
abdomen

- Some operations may provide supplemental feed such as milk replacer or dry creep feed





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