



Swine Resources

To order the *Pork Industry Handbook*, visit thepress.purdue.edu and search for *Pork Industry Handbook*.

Swine Learning Laboratory Kit

Contents:

Educators' Curriculum Guide

Educators' Resource Materials Set

This resource contains masters of the learning laboratory kit contents—situation/task statements, charts and diagrams, identification tags, and instructions.

Critical Points of Quality Assurance and Animal Care Video

Kit components provide the basis for interactive learning experiences.

This kit includes the following units:

Anatomy

Animal external features identification poster is used with *situation/task statements* and *name piece identification tags*.

Breeds

Color breed identification prints are used with *situation/task statements*, *task and answer key*, and *name and trait description identification tags*.

This unit includes the following breeds: Berkshire, Chester White, Duroc, Hampshire, Landrace, Poland China, Spotter Swine, and Yorkshire.

Conformation

Feet and leg diagram poster is used with *task and answer key*, and *name description identification tags*.

Identification Systems

Universal swine ear notching system and *reading ear notches posters* are used with *situation/task statements*, *v-cut ear notcher*, and *pig head template*.

Meat Science

Color retail meat identification prints are used with *situation/task statements* and the *National Live Stock and Meat Board Retail Cuts chart*.

This unit includes the following cuts: Blade Steak, Center Loin Roast, Center Rib Roast, Loin Chop, Rib Chop, Smoked Ham Center Slice, Smoked Ham Shank Portion, and Spareribs.

Color wholesale meat cut identification poster is used with *situation/task statements* and *name piece identification tags*.

Quality Assurance

Animal medication product label and insert posters are used with *situation/task statements* and *name piece identification tags*.

Animal skeletal structure poster is used with *situation/task statements*, *medication bottle with label affixed*, and *syringe style pipette*.

Safe animal handling and management poster is used with *situation/task statements* and *safe animal handling manipulative*.

All posters, charts, prints, and situation/task statements are laminated for increased durability with answer keys on reverse side. These products may be written on with a water-based marker and then wiped off. Kit includes velcro to adhere identification tags, and zipper pouches for tag storage. Each kit is packaged in a durable canvas carrying case for easy use, storage, and transportation.

Swine Learning Lab Interactive CD

This CD is based on the **Swine Exploratory Learning Laboratory Kit**. The CD provides unique quizzing exercises covering the following topics.

- **Anatomy:** External features
- **Breed Identification:** Berkshire, Chester White, Duroc, Hampshire, Landrace, Poland China, Spotted Swine, and Yorkshire.
- **Conformation:** Feet and Leg
- **Identification Systems:** Universal swine ear notching system/Reading ear notches/Using av-cut ear notcher
- **Meat Science:** Retail meat cuts identification—Blade steak, Center loin roast, Center rib roast, Loin chop, Rib chop, Smoked ham center slice, Smoked ham shank portion, and Spareribs/Wholesale meat cut identification
- **Quality Assurance:** Animal medication product label and insert/Administering medications/Safe animal handling and management

To order the **Swine Learning Laboratory Kit** or **Swine Learning Lab Interactive CD** visit extensionpubs.osu.edu.

Livestock Show Ethics and Quality Assurance Educational Materials

1. **Quality Assurance materials from the National Pork Producers Council**—*The Pork Quality Assurance Plus Education Handbook (3rd Edition)* is a multi-level producer education program to enhance the quality of pork sold to the world's pork consumers. The booklet emphasizes good management practices and the handling and use of animal health products, and

encourages producers to review their approach to their herd health program. This program also examines the 10 Good Production Practices for quality assured pork production. Points covered include establishing an efficient and effective herd health plan, storing and administering drugs, treatment records, and drug residue tests. *The Pork Quality Assurance Plus Education Handbook* and other resources are available at no charge: National Pork Board, lms.pork.org/Tools/View/pqa-plus/program-materials.

2. For more information and resources regarding livestock show ethics and food animal quality assurance, contact: National Institute for Animal Agriculture, 13570 Meadowgrass Drive, Suite 201 Colorado Springs, Colorado 80921 Phone: 719-538-8843 Fax: 719-538-8847 Email: niaa@animalagriculture.org animalagriculture.org

Ohio 4-H Publications

These books and other Ohio State University Extension, 4-H Youth Development publications are available through local OSU Extension offices and online at extensionpubs.osu.edu.

- 139 *Market Hog Project and Record Book*, Complete this required project book every year a market hog project is taken in Ohio. Includes Good Production Practices.
- 140 *Swine Breeding Project and Record Book*, Complete this required project book every year a swine breeding project is taken. Includes Good Production Practices.
- 103R *Beef, Sheep, and Swine Selection and Evaluation*. This resource is for beginners who want to learn more about selecting and evaluating livestock. Purchase once and refer to it when selecting projects or before attending a judging contest
- *Pennsylvania Livestock Judging Manual* is a book for older youth that builds

advanced evaluation skills. Learn to use performance data in oral reasons. Refer to it for information on how to handle market animals and understanding expected progeny differences. 1994. Available online at ohio4h.org/publications.

National 4-H Publications

National 4-H produces three swine project books and a helper's guide. These books and other National 4-H animal sciences project books are available online at shop4h.org.

- *Swine Curriculum 1—The Incredible Pig*. Activities include naming breeds, learning swine body parts, judging market hogs, exploring a digestive system, examining a healthy pig, identifying pork cuts, and practicing fitting and showing. Grades 3-5.
- *Swine Curriculum 2—Putting the Oink in Pig*. Activities in Swine 2 include managing baby pigs, balancing a ration, exploring swine diseases, preparing pork, discovering swine careers and packing a show box. Grades 6-8.
- *Swine Curriculum 3—Going Whole Hog*. Advanced youth will plan a breeding system, judge breeding gilts, design a swine operation, complete a job application, explore career opportunities and international markets plus many other challenging activities.
- *Swine Curriculum Helper's Guide*. Packed with activities to involve the entire group. Youth will plan a program, complete project records, develop a management calendar, explore the pork quality assurance program and investigate character education.
- *Exploring Swine Health & Husbandry Curriculum*. This curriculum is designed as a guide for the project facilitator. The activities and background information in this curriculum will help youth develop the requisite knowledge and skills associated with raising and showing swine. Activities are youth centered and include opportunities

for the application of knowledge and skills at three different levels of experience: beginner, intermediate, and advanced. Topics include: bio-security risk assessment and mitigation strategies; budgeting decisions associated with raising and housing swine; dietary needs of pigs at different life stages, elements of swine conformation; pre-show preparation; showmanship and judging; strategies for crossbreeding swine, ethical decision making in caring for and showing swine; tip-to-tail health assessments.

Websites

Agricultural Libraries

National Agricultural Library: nal.usda.gov

The Livestock Virtual Library:

afs.okstate.edu/breeds/swine

National Institute for Animal Agriculture:

animalagriculture.org

Animal Behavior

Livestock Behavior, Design of Facilities and Humane Slaughter by Dr. Temple Grandin: grandin.com

Governmental Departments of Agriculture

Ohio Department of Agriculture: agri.ohio.gov

United States Department of Agriculture: usda.gov

Extension

Ohio State University Extension Ohioline:

ohioline.osu.edu

Virginia Cooperative Extension: pubs.ext.vt.edu

Colorado State University Cooperative Extension: extension.colostate.edu/publications-2

National Directory of State Extension Services:
nifa.usda.gov/land-grant-colleges-and-universities-partner-website-directory

The Ohio Pork Industry Center: **ohiopork.org**

North Carolina State University's Extension Swine Husbandry: **projects.ncsu.edu/cals/an_sci/extension/swine/Default.htm**

Meat Science

American Meat Institute: **meatinstitute.org**

U.S. Meat Animal Research Center:
ars.usda.gov/plains-area/clay-center-ne/marc

U.S. Meat Export Federation (USMEF):
usmef.org

The Ohio State University

College of Food, Agricultural, and Environmental Sciences: **cfaes.osu.edu**

Department of Animal Sciences: **ansci.osu.edu**

Ohio 4-H Animal Sciences:
ohio4h.org/animalsciences

Ohio State University Extension:
extension.osu.edu

Ohio State University Extension Publications:
extensionpubs.osu.edu

Ohio Agricultural Research and Development Center is: **oardc.osu.edu**

The Ohio State University Agricultural Technical Institute: **ati.osu.edu**

Veterinary Science

The Ohio State University College of Veterinary Medicine: **vet.osu.edu**

Penn Vet, University of Pennsylvania School of Veterinary Medicine: **www.vet.upenn.edu**

Breed Associations and Information

National Swine Registry: **nationalswine.com**

Information on all swine breeds:
afs.okstate.edu/breeds/swine



Illustration by Galen Struve, Courtesy of the National Pork Board

SYMBOL III

A Standard of Excellence

To make U.S. Pork the Consumer's Meat of Choice.

SYMBOL III is an ideal market hog that symbolizes profitability for every segment of the industry. This hog has correctness of structure, production, performance, function, livability, attitude, health, optimum lean yield, and produces the best quality, safest pork that provides the optimum nutrients for human nutrition.

Production Characteristics*

- Live-weight feed efficiency of 2.4 (2.4)
- Fat-free lean gain efficiency of 5.9 (5.8)
- Fat-free lean gain of 0.95 lbs. per day
- Marketed at 156 (164) days of age
- Weighing 270 pounds
- All achieved on a corn-soy equivalent diet from 60 pounds
- Free of internal and external parasites
- From a high health production system
- Immune to or free of all economically important swine diseases
- Produced with Environmental Assurance
- Produced under PQA & TQA Guidelines
- Produced in an operation which has been SWAP assessed
- Free of the Stress Gene (Halothane 1843 mutation) and all other genetic mutations that have a detrimental effect on pork quality
- Result of a systematic crossbreeding system, emphasizing a maternal dam line and a terminal sire selected for growth, efficiency and superior muscle quality

- From a maternal line weaning > 25 pigs/yr after multiple parities
- Free of all abscesses, injection site blemishes, arthritis, bruises and carcass trim
- Structurally correct and sound with proper angulation and cushion, and a phenotypic design perfectly matched to the production environment
- Produced in a production system that ensures the opportunity for stakeholder profitability from the producer to retailer while providing a cost competitive product retail price in all domestic and export markets
- Produced from genetic lines that have utilized genomic technology to support maximum improvement in genetic profitability and efficiency

Quality Characteristics

- Muscle color score of 4.0
- 24 hr. pH of 5.9
- Maximum drip loss of 2.5%
- Intramuscular fat level of 3.0%
- Free of within-muscle color variation and coarse muscle texture
- Free of ecchymosis (blood splash)
- Provides an optimum balance of nutrients important for human nutrition and health
- Provides a safe, wholesome product free of all violative residues and produced and processed in a system that ensures elimination of all food borne pathogens

Carcass Characteristics*

- Hot carcass wt. of 205 lb
- LMA of 6.5 (7.1) sq. in.
- Belly thickness of 1.0 inches
- 10th rib backfat of 0.7 (0.6) inches
- Fat-Free Lean Index is 53.0 (54.7)

* Note: All numbers in parentheses represent gilt numbers corresponding to the barrow numbers shown.

Symbol history

Symbol III is the “symbol of perfection”, a package delivering a phenotypically desirable hog and excellent production performance. It is the result of genetic selection and breeding for desirable performance and carcass quality traits; a production system that provides the ideal environment, health status and inputs for its efficient growth; and a management team of dedicated pork producers caring for its health and well-being.

Symbol III represents today’s market hog and the evolution of the industry’s product shaped by consumer preferences.

It is preceded by Symbol and Symbol II. Symbol represented the market hog of the 80s. Developed as part of the Pork Checkoff’s Pork Value Program, in its description, Symbol has established production traits and some mention of performance and carcass characteristics.

Symbol II was adopted in 1995. This market hog evolved into a leaner, better muscled hog that could be marketed on the newly developed carcass merit programs. Its job description mentions, but does not elaborate on, carcass and pork quality.

In 2005, Symbol III incorporates into its description the science-based standards and practices producers have adapted into their production, such as PQA™ and SWAPSM. Carcass and meat quality have also become important traits for the new Standard of Excellence, Symbol III.

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