



Member Resource

HANDBOOK

- About NSR
- Membership
- Registration
- Pedigree
- Transfers
- Ear Notching
- Markings/Identification
- DNA/Stress Gene
- Test Mating
- Code of Fair Practice
- Breed Information
- NJSA
- Governance



What's Inside

Member Resource Handbook



About NSR 3

Membership Information 4

Registration of Animals 4

Pedigree Information 6

Transfers 7

Universal Ear Notching System 8

STAGES 9

Breed Markings and
Registration Requirements

 Duroc 9

 Hampshire 9

 Landrace 10

 Yorkshire 10

Stress Gene Policy 10

Test Mating Policy 11

DNA Genotyping 11

Code of Fair Practice 12

Breed History

 Duroc 13

 Hampshire 13

 Landrace 14

 Yorkshire 14

National Junior Swine Association 15

NSR Commercial Services 16

International Marketing 16

Communications 16

Shows and Sales 17

Governance 17

NSR STAFF

Chief Executive Officer
Darrell D. Anderson

Vice President of Operations
Mike Paul

Administrative Assistant
Robin Lucas

Director of Commercial Services
Clint Schwab, Ph.D.

Director of Communications
Christy Couch Lee

Director of Junior Activities
Jennifer Shike

Junior Activities Coordinator
Katey Brattain

**Administrative Secretary/
Hampshire and Landrace Secretary**
Lisa Kennedy

Data Entry Specialist
Rhonda Eller

Duroc Secretary
Jessica Goyette

Office Assistant
Linda Trapp

FIELD STAFF

Field Representative
Ralph Doak
765.427.9910

Field Representative
Kade Hummel
765.427.3481

Seedstock EDGE STAFF

Editor
Darrell D. Anderson

Managing Editor
Christy Couch Lee

Assistant Editor
Kati Leslie

Production Coordinator
Tammy Taylor

Graphic Designer
Stephen Weintraut II

National Swine Registry

2639 Yeager Road
West Lafayette, IN 47906

765.463.3594 • 765.497.2959 fax

nsr@nationalswine.com

www.nationalswine.com

Office hours: 7:30 a.m. - 4 p.m. ET

About NSR

National Swine Registry Background

The National Swine Registry (NSR) formed in 1994 as a result of the consolidation of the American Yorkshire Club, the Hampshire Swine Registry and the United Duroc Swine Registry. In January 1998, the American Landrace Association joined the NSR. These four breed organizations are located in one central office in West Lafayette, Ind.

The four breeds comprising the NSR are making significant contributions to the overall profitability of the swine industry. Durocs, Hampshires, Landrace and Yorkshires represent 75 percent of the total purebred hog population in the United States. The Duroc breed continues to set the pace for growth rate. In addition, Durocs were proven to be superior for muscle quality in the National Pork Producers Council Terminal Sire Project. Hampshires continue to lead the industry in leanness and muscle. As well, they have increased lean value premiums on thousands of operations from coast to coast. Landrace genetics are found in the most progressive commercial units in the world and have become known as “America’s Sowherd.” Yorkshires have further solidified their role as the “Mother Breed,” and are the undisputed leader in sow productivity. Genetic trends are monitored at the NSR for all four breeds, and incredible advances have been made in the past few years.

NSR Mission Statement

To provide leadership and implement programs, services and technologies to enhance the value, influence and image of purebred Durocs, Hampshires, Landrace and Yorkshires in all segments of the swine industry.

NSR Goals

1. To provide ancestry by pedigrees and maintain breed purity.
2. To assist all NSR members in adding value to purebred genetics.
3. To provide programs that improve the quality of all NSR breeds.
4. To offer programs and opportunities to realize the full potential of youth development.
5. To provide consumer-driven swine genetic improvement programs.
6. To be the world leader in swine genetics.

NSR Core Values

We acknowledge that our (NSR) members have varied and diverse business structures, goals and scope, but we respect these differences and commit ourselves to the future and success of all NSR members by:

1. Servicing all NSR members.
2. Within each division, strongly supporting, encouraging and coordinating efforts with one another.
3. Embracing new technologies and opportunities.
4. Advocating breed purity and ethical business practices.

Providing vital services

The NSR’s services include litter registrations, performance pedigrees, breed promotion and marketing assistance. As well, the NSR has created various promotional and educational materials, including a swine judging video. The NSR is capable of meeting all of your genetic needs, including free genetic consultation, across-herd genetic evaluations (STAGES), and a National Four-Breed Sire Summary. This national sire summary is published every six months and includes all the trait leaders in each NSR member breed and also can be found on the Web at www.nationalswine.com.

Along with these benefits, the NSR also uses an advanced computer network and modem software to provide an advanced pedigree system to make registration and transferring of animals quicker and easier. The NSR offers its membership the opportunity to record animals online.

The NSR sponsors several national shows and sales that provide a source for top genetics in the Duroc, Hampshire, Landrace and Yorkshire breeds, as well as providing an atmosphere for breed improvement.

The NSR promotes the use of purebred Duroc, Hampshire, Landrace and Yorkshire genetics in all aspects of the swine industry. These professionals are available for genetic consultation and assistance with your breeding program.

The NSR staff has developed an international marketing program, and representatives travel abroad to present educational seminars promoting the use of purebred Duroc, Hampshire, Landrace and Yorkshire genetics worldwide.

The NSR publishes a magazine, *Seedstock EDGE*, nine times a year, which provides the latest show and sale reports, news articles and producer features for its subscribers. *Seedstock EDGE* also offers a venue for NSR members and purebred enthusiasts to promote and advertise their genetics and breeding programs. The *Seedstock EDGE* staff can assist NSR members in developing promotional materials and advertising programs.

The National Junior Swine Association (NJSA) is a division of the NSR, established for the youth members. The NJSA sponsors many activities, including the National Junior Summer Spectacular and regional shows. There are many different activities offered to the youth at these shows, such as gilt shows, showmanship contests, judging contests, skillathons and speech contests. NJSA members also receive “The Pinnacle,” a quarterly newsletter which updates members on junior activities.

NSR Commercial Solutions was developed to meet the specific needs of NSR members and the commercial swine industry. This program utilizes the latest information and technology to assist NSR members in developing genetic programs and services for the commercial swine industry. NSR Commercial Solutions promotes the use of purebred-based genetic programs to the commercial swine industry at national and state pork conferences.

Membership Information

Senior Membership

Membership in the NSR is a privilege and is subject to the conditions and terms established by the NSR Executive Committee. You are encouraged to join the individual breed association, if you are interested in breeding purebred Duroc, Hampshire, Landrace or Yorkshire swine. A senior member must be 21 or older and a resident of the United States (or a corporation incorporated under United States law). The senior membership fee is \$10. This fee is paid only one time and should accompany the application for membership. When you apply for a senior membership, you should indicate clearly the name in which the membership is to be recorded. If registrations are to be recorded in the name of a farm or ranch, memberships should be in the name of the farm or ranch; if to be recorded in the name of a partnership, the membership should be in the name of the partnership and at least two officers of the a corporation must sign the application. At


the time you apply for membership, you should select the herdmark of your choice. Senior member herdmarks are made up of three capital letters. If they are not already in use by another breeder, they will be assigned to you. Acceptance of senior membership is subject to approval of the NSR Executive Committee.

Active Status

To be an active senior member, an annual maintenance fee (annual dues) of **\$75 per breed** is due and payable on Jan. 1 for Durocs, Hampshires, Landrace and Yorkshires each year. With this \$75 annual maintenance fee, the member will automatically receive a yearly *Seedstock EDGE* subscription and member rates for registration and transfers. Their name and address will also be listed in the breeder directory and on the NSR Web site. An active senior member is entitled to participate in the election process of their respective breed association. NOTE: "First year" membership fees are \$85; \$10 for senior membership fee, and \$75 for first year's maintenance fee. After the first fiscal year, which runs Jan. 1-Dec. 31, a maintenance fee of \$75 per breed is all that is required. The second criterion for active status membership is to record breeding stock – at least one litter during the previous year.

Membership Application

APPLICATION FOR MEMBERSHIP in the National Swine Registry



Yes! I want to become a member of the National Swine Registry.

Name: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Phone: (____) _____ E-mail: _____

Please indicate the three capital letters you prefer to use for your herdmark. If they are not already in use by another breeder, they will assigned to you.

1st choice: _____ 2nd choice: _____ 3rd choice: _____

Please indicate which breed: Yorkshire Hampshire Duroc Landrace

(Check one)

I am applying for Senior Life Membership. I am enclosing my check for \$85 to cover my first year's fees (includes \$10 for Lifetime Membership Fee plus \$75 for first year's Maintenance Fee).

I am applying for Junior Membership. (Free)
Junior Members Only: Birth Date: ____/____/____
Parent/Guardian Name: _____

Mail to: National Swine Registry • P.O. Box 2417 • West Lafayette, IN 47996-2417 • Fax: 765.497.2959

MEMBERSHIP INFORMATION

Major Classes of Membership – There are two types of National Swine Registry membership: Senior Life Membership and Junior Membership. Within each of these classes there shall be active and inactive status for members.

Senior Life Membership – You are encouraged to join the individual breed association if you are interested in breeding purebred Yorkshire, Hampshire, Duroc and Landrace swine. A Senior member must be over 21 years of age and a resident of the United States (or a corporation incorporated under United States law). The Senior Life Membership fee is \$10. This fee is paid only one time and should accompany the application for membership.

Active Status – To be an active Senior Life Member an annual maintenance fee (annual dues) of \$75 per breed is due and payable on January 1 for Yorkshire, Hampshire, Duroc and Landrace of each year. With this \$75 annual maintenance fee, the member will automatically receive a *Seedstock EDGE* subscription. NOTE: "First Year" Senior Life Membership fees are \$85; \$10 for the lifetime membership fee and \$75 for the first year's maintenance fee. After the first fiscal year, a maintenance fee of \$75 per breed is all that is required. The second criterion for active status membership is to record breeding stock at least one litter during the previous fiscal year.

Application for Senior Life Membership – When you apply for a Senior Life Membership, you should indicate clearly the name in which the membership is to be recorded. If registrations are to be recorded in the name of a farm or ranch, the membership should be in the name of the farm or ranch; if to be recorded in the name of a partnership, the membership should be in the name of the partnership, and at least two officers of a corporation must sign the application.

Senior Life Member Herdmark – At the time you apply for membership, you should select the herdmark of your choice. Senior Life Member herdmarks are made up of three capital letters. If they are not already in use by another breeder, your choice will be assigned to you.

Junior Membership – Activities for youth are a growing part of the National Swine Registry program. To encourage junior activity, junior memberships are available, at no charge, to all breeders under 21 years of age. Junior memberships are issued only in the name of an individual person. Junior memberships register and transfer under the same conditions as Senior Life Members.

Junior Member Herdmark – At the time you apply for membership, you should select the herdmark of your choice. Junior herdmarks are made up of three capital letters. If your herdmark preference is not already in use, it will be assigned to you.

Junior Membership

Junior memberships are available, at no charge, to all breeders under 21. Junior memberships may register and transfer under the same conditions as active senior members. At the time you apply for membership, you should select the herdmark of your choice. Junior herdmarks are made up of three or four capital letters. If your herdmark preference is not already in use, it will be assigned to you. Once you become a NSR junior member, you automatically become a member of NJSA, and you can register litters. For more information on NJSA memberships, refer to page 15.

Registration of Animals

In order to register a litter of pigs, you must obtain an Application for Registration from the NSR or get a username and password from the NSR to use the online registration at www.nationalswine.com. If the sire of the litter was used by artificial insemination (A.I.), you are required to submit an A.I. Breeding Certificate. This certificate must be obtained from the A.I. firm where the semen was purchased. The original certificate must be on file before the litter registration will be released. A.I. firms may obtain and complete A.I. certificates online at www.nationalswine.com.

Application for Registration

To complete the application you will need the owner's herdmark, owner's breeder number, dam-sire ear notch and registration number,

Application for Registration

National Swine Registry

P.O. Box 2417
West Lafayette, IN 47996-2417
Phone: (765) 463-3594
Fax: (765) 497-2959

PLEASE CHECK BOX FOR APPROPRIATE BREED

- American Yorkshire Club
 Hampshire Swine Registry
 United Duroc Swine Registry
 American Landrace Association

OWNER'S
HERD
MARK _____

OWNER'S
BREEDER
NUMBER _____

NAME _____

ADDRESS _____

TOWN _____ STATE _____ ZIP _____

PHONE _____

Use shaded area for sow productivity data.

APPLICATION FOR REGISTRATION	EAR NOTCH	REGISTRATION NUMBER	LITTER NUMBER	FARROW DATE	EAR NOTCH OF BOARS	EAR NOTCH OF GILTS	BREEDER NAME and ADDRESS (if different from owner)	NUMBER OF PIGS			21 DAY INFORMATION			PARITY	
								TOTAL BORN	BORN LIVE	AFTER TRANSFER	NUMBER WEIGHED	LITTER WEIGHT	DATE WEIGHED		
DAM															
SIRE															
					BOAR NAME	GILT NAME									
DAM															
SIRE															
					BOAR NAME	GILT NAME									
DAM															
SIRE															
					BOAR NAME	GILT NAME									
DAM															
SIRE															
					BOAR NAME	GILT NAME									
DAM															
SIRE															
					BOAR NAME	GILT NAME									
DAM															
SIRE															
					BOAR NAME	GILT NAME									
DAM															
SIRE															
					BOAR NAME	GILT NAME									

I hereby certify the above information is true to the best of my knowledge and that the animals described meet all requirements for registry with the National Swine Registry.

SIGNATURE _____

A.I. Breeding Certificate

YORKSHIRE DUROC HAMPSHIRE LANDRACE

Artificial Insemination Breeding Certificate

National Swine Registry • P.O. Box 2417 • West Lafayette, IN 47996-2417

This is to certify that semen labeled as shown here was collected from the Yorkshire/Duroc/Hampshire/Landrace boar shown here and was delivered for use as follows, and that same boar has passed the brood-specific color test mating and stress gene requirements as outlined by the respective breed association(s) that comprise the National Swine Registry.

Boar Name _____ Reg. No. _____

Semen Vial Number or Other Identification _____ Date Collected ____/____/____

This semen supplied to _____ on ____/____/____
Name of Semen Collector

DNA Test Status:

This boar has been DNA Genotyped (Fingerprinted) Yes _____

Stress Gene Status: *nm* (normal) _____ *mm* (carrier) _____ *dm* (homozygous positive) _____

Signature of Owner of Boar: _____

Signature of Collecting Firm or Authorized Agent _____
(if not owned by Collecting Firm)

Name of Sow _____ Reg. No. _____

Signature of Owner of Sow _____ Date Sow Inseminated ____/____/____

This certificate is non-transferable or non-refundable and must accompany litter application for registration.

Natural Breeding Certificate

National Swine Registry • P.O. Box 2417 • West Lafayette, IN 47996-2417

BREEDING CERTIFICATE

Not valid for litters artificially from purchased semen.

Date _____

This certifies that the sow _____ Reg. No. _____

was bred to my boar _____ Reg. No. _____

On this date _____

Signed _____

Breeder No. of Boar Owner _____

Please Circle Appropriate Breed

H: HAMPSHIRE D: DUROC Y: YORKSHIRE L: LANDRACE

litter number, farrowing date, ear notches of boars, boar names (if desired), ear notches of gilts, gilt names (if desired), breeder name and address, number of total pigs born, and number born alive. Sow Productivity Information is determined by completing the 21-day information, including the number weighed, litter weight, date weighed and parity. There is a one-time fee of \$25 (per breed) to participate in the SPI program.

No litter or animal in any herd shall be eligible to record unless each pig in the litter is distinctly ear notched at farrowing time for litter and individual pig identification by the Universal Ear Notching System, also known as the 1-3-9-27-81 system. Each litter is to be ear notched in consecutive order. The ear notch numbers may be repeated, but not in less than six months or during any one farrowing season. The six-month period shall start Jan. 1 and again July 1 with the litter No. 1. The key to this litter-pig system is as follows: Notches in the right ear indicate the litter identification, while the notches in the left ear indicate the pig identification. In herds farrowing more than 161 litters a season, special permission may be granted upon request for the use of the inner and upper half of the left ear as an additional litter notch.

There will be a \$12 charge to members (\$24 for non-member) for a litter that is 90 days of age or under. Litters more than 90 days of age cost \$24 for members (\$48 for non-members). Litters more than three years of age, at the time of application for registration, will be charged \$48. Individual registration certificates or litter certificates are available. Please contact NSR to indicate the type of registration certificate needed. You may also register online at www.nationalswine.com, "For

Members Only." Contact the NSR office for a password.

DNA for Parentage Verification

Under the NSR rules, each animal for which an application for registration is received may be subjected to a DNA test to verify both accuracy of parentage and DNA. The NSR staff must supervise the collection of blood samples.

If a recorded parent is excluded (as a parent) as a result of DNA, the owner may request, at his own expense, the NSR to determine the actual parent. Failure to determine the sire and dam disqualifies the animal's eligibility in the respective breed (Duroc, Hampshire, Landrace or Yorkshire) herdbook, and the registration certificate becomes null and void.

Pedigree Information

One of the most valuable services the NSR offers is the pedigree. A pedigree is a documented ancestry of an animal. This pedigree is necessary for predicting the progeny performance and is a tool to assist in making wise breeding decisions that can lead to breed improvement and production efficiencies. This pedigree has increased in value dramatically in recent years, as it is now a true performance pedigree that is based on all the relative data accumulated through the STAGES program.

Example Landrace Pedigree

CERTIFICATE OF REGISTRY

3 Registration: 87741001
Sex: Gilt
Ear Notch: 422-1
Date Born: 9/9/05
Special EN:

2 CR4 SAMPSON 494-1
Sire: 83410001 SPI: 115.0

CR1 SAMPSON 294-1
Sire of Sire: 74000001 SPI: 117.4

1 WHIH5 D DORA 422-1
Animal: 87741001

CR1 SPECIAL 519-7
Dam of Sire: 74493007 SPI: 112.5

BCF1 ZEBU 88-6
Sire of Dam: 71380006 SPI: 104.9

4 Total Born: 12
Born Alive: 11
No. Weaned: 11
Adj. Wt.: 215

WHI4 D DORA 388-1
Dam: 83544001 SPI: 110.7

WHI2 D DORA 45-3
Dam of Dam: 76974003 SPI: 111.6

Breeder: **WHITESHIRE/HAMROC HOME**

Buyer No.:
Sold To:

Owned As Of: 9/9/05

5 Owner No.: 117085
Owner: **WHITESHIRE/HAMROC HOME**
4728 N 200 W
ALBION, IN 46701

7

6 Traits

Born Alive	0.39*	EPD	112.8
21 Day Weight	5.62*	Index	118.7
Days to 250	-1.95	Maternal	112.9
Backfat	-0.05	Terminal	
Lbs of Lean	1.27		

* = Average of Parents

Bred To:

Date Bred:

NATIONAL SWINE REGISTRY	LANDRACE
DATE REGISTERED 11/7/05	PO. Box 2417 West Lafayette, IN 47996-2417 Phone: 765-463-3594 Fax: 765-497-2959 www.nationalswine.com
050406110045	<i>Darrell D. Anderson</i> CHIEF EXECUTIVE OFFICER

Reading a Pedigree

1. Animal's official name and registration number.
The name starts with the herd prefix unique to each breeder and ends with the animal's ear notch.
2. Animal's pedigree including parents and grandparents, and their Sow Productivity Index.
3. Individual information including registration number, sex, ear notch and birth date.
4. Litter performance information.
5. Breeder's and/or owner's name and address.
6. Individual EPDs and indexes on the date the certificate was issued.
7. Current owner's name and address.

Transfers

The NSR holds the certificate of registration as an integral part of every purebred transaction. In every change of ownership of a registered animal, the seller shall, at his own expense, furnish to the buyer a certificate of registration from the NSR showing transfer of ownership to the buyer. To transfer a registered animal, you must obtain a transfer form from the NSR and complete this form, or complete the required information on the back of the animal's pedigree, and mail it to the NSR. Transfer by e-mail is available. Animals transferred 60 days and under from the date of sale are \$2. Transfers more than 60 days from the date of sale have a charge of \$5. Transfers of Convenience (transfers within your family) are free.

When you sell a bred gilt, you must provide a breeding

certificate to the NSR office. You must submit the following information on the form: the name and registration number of the sow, the name and registration number of the boar, the date of breeding and the signature of the owner of the boar. Natural breeding certificates can be ordered through the NSR office.

This information can also be entered on the back of the pedigree when you send in the transfer information.

Back of Pedigree

TRANSFER OF OWNERSHIP	
SOLD TO:	_____

ZIP	_____
DATE OF SALE:	_____
SIGNATURE OF SELLER	_____
DATE BRED:	_____
SERVICE SIRE:	_____

Transfer Form

National Swine Registry Transfer Form					
EN _____	Sex _____	Breed: _____	Reg. # _____	Sale Date _____	
Buyer's Name _____			Breeder _____		
Address _____					
City _____		State _____		Zip _____	
Bred Sow Bred To _____		Reg. # _____		Date Bred _____	
EN _____	Sex _____	Breed: _____	Reg. # _____	Sale Date _____	
Buyer's Name _____			Breeder _____		
Address _____					
City _____		State _____		Zip _____	
Bred Sow Bred To _____		Reg. # _____		Date Bred _____	

Universal Ear Notching System

The Universal Ear Notching System must be used to identify purebred hogs. NSR requires that litter numbers start over at litter No. 1 every Jan. 1 and July 1 with no repeats in any six-month period. Please refer to the Universal Ear Notching Key for details of the notching system.

Universal Ear Notching System

Ear-Notching System

The Key



RIGHT
Left ear - Litter number
Left ear - Pig number

Litter Mark: Right ear is used for litter mark and all pigs in same litter must have the same ear notches in the ear. Right ear is on pigs own right.

Individual Pig Marks: Left ear is used for notches to show individual pig number in the litter. Each pig will have different notches in this ear.

Notches are shown on this page for 149 litters. You can mark up to 161 litters with this system. Litter number and notches for that number are shown in each square.

1	20	39	58	77	96	114	132
2	21	40	59	78	97	115	133
3	22	41	60	79	98	116	134
4	23	42	61	80	99	117	135
5	24	43	62	81	100	118	136
6	25	44	63	82	101	119	137
7	26	45	64	83	102	120	138
8	27	46	65	84	103	121	139
9	28	47	66	85	104	122	140
10	29	48	67	86	105	123	141
11	30	49	68	87	106	124	142
12	31	50	69	88	107	125	143
13	32	51	70	89	108	126	144
14	33	52	71	90	109	127	145
15	34	53	72	91	110	128	146
16	35	54	73	92	111	129	147
17	36	55	74	93	112	130	148
18	37	56	75	94	113	131	149
19	38	57	76	95	Individual Pig Notches		
					1	6	11
					2	7	12
					3	8	13
					4	9	14
					5	10	15

STAGES

STAGES is NSR's industry-recognized genetic evaluation system that utilizes advanced technology to evaluate swine breeding stock for purebred and commercial producers. STAGES is the acronym for Swine Testing and Genetic Evaluation System. It is an integrated program that evaluates animals on their reproductive performance and postweaning (or growth period) performance. Postweaning traits include backfat, days/250 and pounds of lean. Reproductive traits evaluated and reported are number born alive and 21-day litter weight. Recent additions of return to estrus, litter birth weight and meat quality EPDs demonstrate STAGES' ability to adapt to the industry's needs.

EPDs are the key

Current genetic evaluation of livestock, including swine, is based on the concept of Expected Progeny Differences (EPDs). An EPD is the predicted performance of future offspring of an individual and is expressed as a deviation from the mean of the base group of animals. EPDs are based on direct measures of an animal's performance, along with measures of the performance of an animal's relatives, including ancestors, siblings and progeny. These are adjusted for the differing amount of information available for each animal (number of records, number of progeny and the structure of the contemporary groups they are in, number of relative records, heritability of each trait, etc.) Best Linear Unbiased Prediction (BLUP) genetic evaluation procedures are utilized to evaluate the information on each animal and the results are reported as EPDs. This allows for the direct comparison of all animals evaluated and ranks the animals according to their genetic merit as parents, thus identifying genetically superior seedstock.

Indexes are also developed by combining EPDs with specific goals in mind. A Sow Productivity Index (SPI) evaluates the maternal performance of an animal while a Maternal Line Index (MLI) places a combined emphasis on all of the reproductive and postweaning traits and is useful for commercial producers breeding and selecting their own replacement gilts. A Terminal Sire Index (TSI) combines those traits of leanness, growth and muscle content into an index allowing for the selection of fast-growing, lean, muscular sires that will produce market hogs desired by the industry. NSR members, as well as their customers, can make the fastest genetic improvement by utilizing the available EPDs in making their selection decisions.

Informative and Valuable Reports

The STAGES program is maintained in the NSR office and operates nightly; assuring breeders and commercial producers that EPDs and indexes are up to date. This information is available by simply contacting the NSR office and requesting the latest on a given animal. Trait leader lists are revised every three months and are accessible from the NSR Web site, www.nationalswine.com, and a printed version is published semi-annually as a reference issue.

Performance Pedigrees

A pedigree contains three generations of ancestry for an individual animal. In addition, when a pedigree is printed, the latest EPD and index predictions are printed for use by the breeder or owner. This combined documentation is an inherent advantage

over other swine seedstock suppliers. As a buyer, it is your assurance that the animal will meet your expectations for performance.

STAGES – A selection tool for large and small

Whether you are a small breeder raising project pigs and breeding stock to a large breeder producing commercial seedstock, there are elements of STAGES that can assist you. An example may be to select a group of gilts that excel in the number born alive EPD for inclusion in your breeding program. Another may be a herd challenged by slow growth rate. By selecting a sire with a desirable EPD for growth, you can make progress in reducing your days to market or producing heavier hogs at a given age. The NSR can assist you in understanding STAGES and locating genetics to suit your needs.

Getting Started

Like all livestock improvement programs, STAGES has certain criteria that must be met to insure that the EPDs are as accurate as possible. Contemporary group sizes and measurement methods are standardized to increase this accuracy. The NSR can assist you in setting up a performance-testing program that will benefit your operation. There are no special forms to fill out. Reproductive data can be submitted when litters are registered. Off-test data including growth, backfat and leanness can be submitted using the litter record sheets provided by the NSR. Call today to enroll your herd!

Breed Markings and Registration Requirements

Duroc

Duroc Barrows

1. Must be red in color and possess Duroc breed character. (Ears must be down and medium in size.)
2. Must be ear notched within seven days of birth.
3. Must NOT have any white hair located on the animal.
4. Must NOT have any black hair located on the animal.
5. Must NOT have more than three black spots on the skin, and none of these spots can be larger than 2 inches in diameter.
6. Must NOT have any shading or indication of a belt.
7. Must have no evidence of an extra dew claw.
8. Must be stress negative.

Duroc Boars and Gilts

Duroc boars and gilts must meet the above requirements, and they must have at least six functional upper sections on each side of the underline.

Hampshire

Hampshire Barrows

1. Must be black in color with a white belt starting on a front leg. (Animal is eligible if the head is black and the body is totally white.)
2. Must be ear notched within seven days of birth.
3. Must possess Hampshire breed character.

4. Must NOT have any red hair.
5. Must have no evidence of an extra dew claw.
6. Must be stress negative.

Hampshire Boars and Gilts

Hampshire boars and gilts must meet the above requirements (except color markings), along with the following to be eligible to show in a breeding animal class.

1. Black in color with a white belt totally encircling the body, including both front legs and feet. Animal can have white on its nose as long as the white does not break the rim of the nose, and when its mouth is closed, the white under the chin can NOT exceed what a U.S. minted quarter will cover. White is allowed on the rear legs as long as it does NOT extend above the tuber calis bone (knob of the hock).
2. Must have at least six functional udder sections on each side of the underline.
3. For animals farrowed on or after Jan. 1, 2005, the swirl is no longer a disqualification for registration.

Hampshire swine classified as off-belts may be used for breeding purposes, with offspring eligible for registration with the NSR. Off-belts will continue to be eligible to be shown in market hog classes, but will not be eligible for exhibition in breeding swine shows. This policy is retroactive and will allow litters to be registered that were not eligible previously, due to the Hampshire Swine Registry off-belt requirements.

Landrace

Landrace Barrows

1. Must be white in color and possess Landrace breed character (ears must be down).
2. Must be ear notched within seven days of birth.
3. Must NOT allow any color hair other than white.
4. Must NOT allow more than three spots of skin pigmentation.
5. Must NOT allow any spot of skin pigmentation larger than one U.S. minted quarter.
6. Must have no evidence of an extra dew claw.
7. Must be stress negative.

Landrace Boars and Gilts

Landrace boars and gilts must meet the above requirements and they must have at least six functional udder sections on each side of the underline.

Yorkshire

Yorkshire Barrows

1. Must be white in color and possess Yorkshire breed character (ears must be erect).
2. Must be ear notched within seven days of birth.
3. Must NOT have any color hair except for white.
4. Must NOT have more than two pigmentation spots larger than a U.S. minted dime, one pigmentation spot larger than a U.S. minted quarter. These spots (combined) can NOT exceed a U.S. minted silver dollar.
5. Must have no evidence of an extra dew claw.
6. Must be stress negative.

Yorkshire Boars and Gilts

Yorkshire boars and gilts must meet the above

requirements, and they must have at least six functional udder sections on each side of the underline.

Stress Gene Policy

1. As of April 1, 1998, no known stress positive or stress carrier animals will be allowed to be exhibited or sold at any NSR-sponsored event. If any animal sold, at a NSR-sponsored event, is found to be stress-gene positive or a carrier of the stress gene, the purchaser has the right to receive a full refund of the purchase price. DNA testing for the stress gene must be done within 90 days of the sale, and all cost associated with this test must be paid by the purchaser. The seller has the right to review the test results and the right to retest the animal at a laboratory of his choice. Cost associated with the retest by the seller is at the seller's expense. There will be no refund of NSR commission from stress positive or stress carrier animals.

2. As of Jan. 1, 2000, the National Swine Registry requires the DNA stress gene status of A.I. sires to be declared on all A.I. Certificates issued for the registration of litters. All A.I. certificates issued after Jan. 1, 2000, must include the HAL 1843 test status of the sire, regardless of when the boar was placed in service. Test results must be reported as one of the following: 1) nm = normal, 2) mm = carrier, or 3) dm = homozygous positive. The NSR also recommends that owners of A.I. sires make this information available in their promotional literature.

In addition to the previous steps, the following policy was adopted by the Board of Directors of the American Yorkshire Club, the American Landrace Association, the United Duroc Swine Registry, and the Hampshire Swine Registry with the effective dates indicated.

3. Any **Yorkshire** or **Landrace** that is farrowed on or after Jan. 1, 2000, that is proven to be a stress positive or stress carrier by a documented DNA test from a certified lab will have its pedigree cancelled. Any **Duroc** farrowed on or after Jan. 1, 2001, that is proven to be a stress positive or stress carrier by a documented DNA test from a certified lab will have its pedigree cancelled. Any **Hampshire** farrowed on or after Jan. 1, 2002, that is proven to be a stress positive or stress carrier by a documented DNA test from a certified lab will have its pedigree cancelled. The purchaser has the right to receive a full refund of the purchase price. DNA testing for the stress gene must be done within 90 days of the sale, and all cost associated with this test must be paid by the purchaser. The seller has the right to review the test results and the right to retest the animal at a laboratory of his choice. Cost associated with the retest by the seller is at the seller's expense. Any warranty regarding the stress gene status of the animal is solely that of the seller and not that of the American Yorkshire Club, American Landrace Association, Hampshire Swine Registry or the United Duroc Swine Registry and the American Yorkshire Club, American Landrace Association, Hampshire Swine Registry and the United Duroc Swine Registry assume no liability in connection with such warranty by the seller.

4. As the result of a NSR Executive Committee decision, all sires must be DNA banked before any litters can be recorded, effective with all litters farrowed after July 1, 2002. This new requirement will provide for the establishment of an extensive DNA data bank for the four NSR breeds, as well as help us in our effort to maintain breed purity.

5. As a requirement for registration of litters that are farrowed on or after July 1, 2004, all sires (Duroc, Hampshire, Landrace and Yorkshire) must have a negative stress status on file (by DNA test or parent verification) before the litter can be registered.

No animals will be grandfathered in with this policy.

Approved Labs for PSS Testing

GenAlysis Labs, Lakeside, Ohio

Contact GenAlysis Labs directly at 1.888.300.4363 for service.

GeneSeek, Lincoln, Neb.

Contact NSR for GeneSeek testing forms.

Test Mating Policy

Hampshire Test Mating Procedures

The Hampshire Swine Registry (HSR), in order to ensure and preserve the purity of Hampshire swine resulting from the artificial insemination of sows by a boar not owned by the owner of the sow at the time of breeding, requires that such boar must meet the DNA color test requirements set by the HSR Board of Directors. No pigs will be registered from a litter resulting from artificial insemination if the DNA color test requirements has not been completed. All imported Hampshires (boars, gilts and/or sows) must meet the DNA color test requirements and stress requirements set by the HSR Board of Directors.

Landrace Test Mating Procedures

The American Landrace Association (ALA), in order to ensure and preserve the purity of Landrace swine resulting from the artificial insemination of sows by a boar not owned by the owner of the sow at the time of breeding, requires that such boar be test mated successfully to at least two different sows of a breed of solid color (purebred Duroc, Hampshire or Duroc/Hampshire); that there be live pigs born from at least two litters, that there be at least eight live pigs born and that none of the pigs born in any of the litters have any solid color. "Solid color" means hair color other than white or roan. No test breeding to Spots, Pietrain, Pietrain cross or any white breed will be accepted. After the test matings, the affidavit obtained from the NSR must be filed with the ALA by the owner of the boar. No pigs will be registered from a litter resulting from artificial insemination by a boar not owned by the owner of the sow on the date of breeding, if this affidavit is not on file with the ALA. The affidavit must be filled out completely, signed by the registered owner of the boar and returned to the NSR. All imported Landrace (boars, gilts and/or sows) must complete the appropriate test mating requirements and stress requirements set by the ALA Board of Directors.

Yorkshire Test Mating Procedures

The American Yorkshire Club (AYC), in order to ensure and preserve the purity of Yorkshire swine resulting from the artificial insemination of sows by a boar not owned by the owner of the sow at the time of breeding, requires that such boar be test mated successfully to at least two different sows of a breed of solid color (purebred Duroc, Hampshire or Duroc/Hampshire); that there be live pigs born from at least two litters, that there be at least eight live pigs born and that none of the pigs born in any of the litters have any solid color. "Solid color" means hair color other than white or roan. No test breeding to Spots, Pietrain,

Pietrain cross or any white breed will be accepted. After the test matings, the affidavit obtained from the NSR must be filed with the AYC by the owner of the boar. No pigs will be registered from a litter resulting from artificial insemination by a boar not owned by the owner of the sow on the date of breeding, if this affidavit is not on file with the AYC. The affidavit must be filled out completely, signed by the registered owner of the boar and returned to the NSR. All imported Yorkshire (boars, gilts and/or sows) must complete the appropriate test mating requirements and stress requirements set by the AYC Board of Directors.

DNA Genotyping

DNA Testing Procedures

The NSR is pleased to be associated with GeneSeek Inc. of Lincoln, Neb., our exclusive DNA testing facility for DNA genotyping, RN typing and Color Gene typing. This new opportunity will aid our members in genetic selection, as well as maintaining the purity of our breeds. GeneSeek, Inc. is a molecular biology service provider specializing in DNA sequencing and genotyping. Below is a brief description of each of the tests offered and costs associated with them:

1. *Blood Banking* – Enables NSR to build a DNA database as future reference for parentage and breed purity. May also serve as a research bank when additional genes are identified and typed.
 - All purebred Duroc, Hampshire, Landrace and Yorkshire boars that are used to sire litters farrowed after July 1, 2002, that have not previously been DNA genotyped, are required to have a blotter card on file at the NSR.
 - \$4 blotter card fee.
 - \$6 storage cost per animal.
2. *Typing of RN Mutation (Napole gene)* – This gene is found predominately in the Hampshire breed.
 - HSR has purchased the license to reduce member's costs of this test. Only registered Hampshires that submit a registration number and ear notch are eligible to use this test.
 - \$25 per sample.
3. *Typing of the HAL 1843 Mutation (stress gene)*
 - GeneSeek is providing this test as a convenience to our members.
 - All A.I. sires must have a stress status on file at the NSR. This test result must be submitted from any certified lab.
 - \$24 per sample.
4. *Color Gene Test for Hampshires* – This DNA test replaces the physical test mating procedure and will be the only color test accepted on Hampshire A.I. sires after Oct. 1, 2002. Only registered Hampshires that submit a registration number and ear notch are eligible to use this test.
 - HSR has purchased the license to reduce member's costs of this test.
 - \$80 per sample.
5. *Seek-Gain-Total Gain* – This is a group of porcine performance trait DNA marker tests utilizing information from eight unique genes that impact: Litter Size, Feed Intake/conversion, Weight Gain, Lean Growth, Fat Content, Meat Quality.

- Gene Markers Tested: MC4R, HMGA, CCKAR, PRKAG3, CAST 249, CAST 638, ER, EPOR.
 - \$35 per sample.
6. *Seek Gain-Litter Size* – This is a group of porcine performance trait DNA marker tests utilizing information from two unique genes that impact litter size: reproduction rates, uterine capacity.
- Gene Markers Tested: ER, EPOR.
 - \$12 per sample.
7. *Seek-Gain: Animal Growth & Meat Quality* – This is a group of porcine performance trait DNA marker tests utilizing information from six unique genes that impact animal growth: feed intake/conversion, lean growth, meat quality, weight gain, fat content.
- Gene Markers Tested: MC4R, HMGA, CCKAR, PRKAG3, CAST 249, CAST 638.
 - \$25 per sample.
8. *Seek-Gain: Animal Growth* – This is a group of porcine performance trait DNA marker tests utilizing information from three unique genes that impact animal growth: feed intake/conversion, lean growth, weight gain, fat content.
- Gene Markers Tested: MC4R, HMGA, CCKAR.
 - \$16 per sample.
9. *Seek-Gain: Meat Quality* – This is a group of porcine trait DNA marker tests utilizing information from four unique genes that impact meat quality: tenderness, juiciness, glycogen level, pH, color.
- Gene Markers Tested: PRKAG3, CAST 249, CAST 638.
 - \$16 per sample.
10. *Parentage Verification*
- Blood banking is required for parentage verification. Costs for parentage will be assessed on a per-case basis. Contact the NSR for costs and correct procedures.

Important Notes

- Blotter cards (\$4 per card) and DNA Testing Forms must be requested from the NSR.
- Results will be reported to you. Tests may take up to 30 days after receipt of the sample(s) at GeneSeek.
- All results are reported only from the NSR office. Billing for the tests will be included with your monthly statement, and will be payable to NSR. Do not contact GeneSeek for results.

Code of Fair Practices

Buyers of purebred, registered boars and gilts buy them to be breeders. Many factors may affect an animal's breeding capabilities. Many of these are not visible at the time of purchase. Some problems may be the result of management before the sale. Some the result of handling and management by the buyer after the purchase. Some may be hereditary. Because of this, adjustments need to be a sharing of responsibilities.

All adjustments are a matter between buyer and seller.

The National Association of Swine Records or

individual registries assume no responsibilities for enforcement of these recommendations.

Standard Warranty

All purebred, registered hogs over 5 months of age (not used for breeding under 7 months of age) sold as breeding animals for breeding purposes, are sold with a warranty that they are capable of and will breed. If, and when, any said animal does prove to be a non-breeder, the seller shall make an adjustment to the satisfaction of the buyer, provided the buyer informs the seller of the situation within 90 days after purchase. In all purebred transactions, the registration certificate is an integral part of the transaction and shall be delivered to the buyer, properly transferred on the association records, at the expense of the seller. (These are only suggestions considered as generally acceptable within the industry. Other adjustments may be made if satisfactory to both the buyer and seller.)

Boars failing to serve or settle sows

1. Refund the difference between purchase price and market value as shown by sales receipt, if the boar is sold on the market.
2. Make a replacement of another boar satisfactory to the buyers.
3. Give the buyer credit (amount to be agreed on by both buyer and seller) on the purchase of another animal or animals.

Gilts sold as open

- If proven to be bred:
 1. Refund of purchase price upon return to the seller.
 2. Refund difference, if any, between price paid for gilt and value of a commercial bred sow.
- If proven to be a non-breeder:
 1. Make a replacement of another gilt satisfactory to the buyer.
 2. Refund difference between purchase price and market value of gilt as shown by a sales receipt, if gilt is sold at market.
 3. Give buyer credit (amount to be agreed upon by both the buyer and seller) on the purchase of another gilt in the future.

Bred Sows

- Are expected to be bred to a designated boar on date of service. When proven otherwise:
 1. Replace the sow with another sow satisfactory to the buyer.
 2. Refund the difference between the purchase price and market value of the sow as shown by a sales receipt, if the sow is sold at market.
 3. If the buyer desires to keep the sow, refund one-half the difference between purchase price and market value of the sow at the time of the purchase.

NSR Guidelines for boars sold for A.I. collection

These are only recommendations and the relationship between the buyer and the seller is the most important part of the whole process.

1. If a boar is determined to have a physical defect (including but not limited to an adhered or tied penis, limp penis, infantile penis, and coiling of the penis in the diverticulum), which would hinder proper delivery of semen, a full refund would be due the buyer. The boar must extend his penis without physical manipulation excluding the expression of the sheath fluid.

2. If semen quality of a boar is not up to the suggested performance standards listed below; the seller will be notified of the problem within 60 days of purchase and/or 60 days after the animal reaches 7 months of age, and the semen will be monitored up to 120 days following the date of notification. The seller may have 30 days out of the 120-day period to prove the animal reproductively sound.
3. Using a third party reproductive specialist as a consultant may be needed. This reproductive specialist would be agreed upon by the buyer and the seller. All costs involved with the use of the reproductive specialist would be divided equally between the buyer and the seller.
4. If the boar does not satisfactorily meet the suggested performance standards listed below in No. 1 (A or B) and No. 2; the seller would refund 100 percent of the purchase price less the dollar value of the semen that has been sold, or an agreed upon settlement with the buyer.

Suggested Performance Standards

1. A. 40 billion sperm cells (total) per week by 8 months of age.
B. 60 billion sperm cells (total) per week by 11 months of age.
2. 70 percent viable sperm produced. (This figure is a composite, calculation of motility times (x) normal morphology [normal heads, normal tails and proximal drops]).

Disclaimer of Warranties

Except as specifically stated in these provisions, the NSR, a partnership of the American Yorkshire Club, Hampshire Swine Registry, American Landrace Association and United Duroc Swine Registry make no warranties, either express or implied, regarding any animal consigned for sale. The aforementioned participating breed associations do not make, and hereby expressly disclaim, any warranty, whether express or implied for merchantability or of fitness for any purpose. The descriptions and other information contained in the sale catalog, to be distributed the day of the sale, regarding individual animals has been supplied by the individual consignors, and the participating breed associations neither warrant, nor assume, any liability for the accuracy or completeness of such information.

Breed History

Duroc

Durocs are red pigs with drooping ears. They are the second most recorded breed of swine in the United States and a major breed in many other countries, especially as a terminal sire or in hybrids. Durocs can range from a very light golden, almost yellow color, to a very dark red color that approaches mahogany.

In 1812, early “red hogs” were bred in New York and New Jersey. They were large in size. Large litters and the ability to gain quickly were characteristics Durocs possessed from the beginning. The foundation that formed today’s “Duroc” was comprised of Red Durocs from New York and Jersey Reds from New Jersey.

In 1823, a red boar from a litter of 10, whose parents were probably imported from England, was obtained by Isaac Frink of Milton in Saratoga County, N.Y., from Harry Kelsey. Kelsey owned a famous trotting stallion, Duroc, and

Frink named his red boar in honor of the horse. This boar was known for his smoothness and carcass quality. His progeny continued the Duroc name, and many of them inherited his color, quick growth and maturity, deep body, broad ham and shoulder, and quiet disposition. The Duroc was smaller than the Jersey Red, with finer bones and better carcass quality.

Beginning in the early 1860s, Durocs were made from a systematic blending of the two very different strains. This produced a moderate hog that was well suited for the finishing abilities of the Cornbelt farmer. At the 1893 Chicago World’s Fair, Durocs gained wide popularity at the first successful Duroc hog show. This was only the beginning of the Duroc popularity and success, which continues today.

The first organization for the purpose of recording, improving and promoting red hogs was the American Duroc-Jersey Association, which was established in 1883. No other breed of hogs made more progress, in terms of numbers recorded, over a period of years. As a result, numerous other recording organizations were formed to accommodate the growth. In 1934, all the groups were united to form one organization, named the United Duroc Swine Registry, for the sole purpose of recording and promoting the Duroc breed.

When the U.S. population moved westward, the Duroc and many noted breeders moved westward as well. Most of the breed improvement after the formation period took place in Ohio, Kentucky, Illinois, Indiana, Iowa and Nebraska. Durocs have become a sire of choice to the American farmer. The climb of the breed has been accelerated by many distinguished accomplishments in prolificness and longevity in the female line and lean-gain efficiency, carcass yield and product quality as a terminal sire. The purebred Duroc is distinguished for breed potency in today’s picture of swine improvement and holds forth – inviting promise of future usefulness and value.

Durocs were identified as a superior genetic source for improving eating qualities of pork in the National Pork Producers Council Terminal Sire Line Evaluation. Their advantage in muscle quality combined with their well-established ability to grow fast has positioned the Duroc breed as an outstanding terminal sire choice.

Hampshire

Hampshires hogs are black with a white belt. They have erect ears. The belt is a strip of white across the shoulders that covers the front legs around the body. The Hampshires, which are a heavily muscled, lean-meat breed, are the third most recorded breed of pigs in the United States.

The Hampshire breed is possibly the oldest early-American breed of hogs in existence today. The Hampshire hog, as we know it today, originated in southern Scotland and Northern England. These pigs were known as the “Old English Breed.” They were noted and criticized for their large size, as pigs were commonly killed at 125 pounds liveweight. However, they were admired for their proficiency, hardy vigor, foraging ability and outstanding carcass qualities. Hampshire pigs were imported into America between 1825 and 1835 from Hampshire County in England. Some of the first importations were also known as the McKay hog because a man by that name was thought to have imported these hogs from England to America.

Most of the offspring of these early importations went to Kentucky where the breed had most of its early development.

The common name for these hogs was “Thin Rinds” because their skin was thinner than that of most hogs. The hogs in this area became rather popular due to their hardiness, vigor, prolificacy and foraging characteristics. Butchers from Ohio traveled yearly into Kentucky to contract ahead for these belted hogs at a premium price. These original desirable traits have been further developed within the Hampshire breed, causing steady growth in popularity and demand.

In May 1893, a small group of Kentucky farmers met at Erlanger, Ky., to form the first record association in order to keep the blood pure in these black hogs with a white belt. The first record association was called the American Thin Rind Association.

This belted hog had various other names in those days, including McGee hog, McKay, Saddleback and Ring Middle. Because this hog was known by so many different names, the name was changed in 1904 to the American Hampshire Record Association.

In 1907, the organization in Kentucky was discontinued. At that time, they adopted American Hampshire Swine Record Association as their name. The name was shortened to Hampshire Swine Record Association in 1922 and, in 1939, the name Hampshire Swine Registry was adopted.

Between 1910 and 1920, Hampshires were a big hit in the Corn Belt. During the 1920s, the breed continued to grow in numbers and in favor. The greatest popularity of the Hampshires did not come until after 1930. Since that time, they have been very popular and have sold for high prices, as their genetic value has been documented.

Through the years, Hampshires are still being produced that are productive, lean, full of meat, durable, profitable to raise, and popular on dinner tables. They are the leaders in leanness and muscle with good carcass quality, minimal amounts of backfat and large loin eyes. Boars are more aggressive now than in recent years. Hampshire females have gained a reputation among many commercial hogmen as great mothers. These females are excellent pig raisers and have extra longevity in the sow herd. They have passed the test on confinement and on concrete. This black animal with the distinct and unique white belt is still known universally as “The Mark of A Meat Hog.” Their ability to sire winning carcasses is unequalled, and they continue to set the standard by which all other terminal sires are evaluated.

Landrace

Landrace are white in color. Their ears droop and slant forward with their top edges nearly parallel to the bridge of a straight nose. Landrace, which are noted for their ability to farrow and raise large litters, are the fourth most recorded breed of swine in the United States.

The American Landrace descended from the Danish Landrace that had its origin in 1895. At that time, the Large White hog was brought from England and crossed with the native swine. After that infusion, the Landrace was developed and improved by selection and testing. It was mainly through the use of Landrace that Denmark became the chief bacon-exporting country. To protect this position, Denmark, for many years, refused to export purebred Landrace breeding stock.

In the early 1930s the United States Department of Agriculture (USDA) entered into an agreement with the Ministry of Foreign Affairs in Denmark for the purchase of 24 Danish Landrace. This

stock was to be used for swine research studies at agricultural experiment stations, with the stipulation that this breed would not be propagated as a pure breed for commercial use.

During the 15 years following the original importation, Landrace were used in numerous comparisons with American breeds.

In May 1949, the USDA petitioned the Ministry of Foreign Affairs of Denmark to release its restrictions on the propagation of purebred Landrace in the United States. This request was granted, and the American Landrace Association was formed in 1950 to register and promote the sale of purebred breeding stock.

Following the removal of restrictions on commercial use of Danish Landrace, the importations of Norwegian and Swedish breeding stock provided the outcrosses necessary for the expansion and development of the American Landrace breed of today. More than 700,000 offspring have been registered from the parent stock.

The Landrace breed is promoted on its ability to cross well with other breeds. As well, Landrace are known for their length of body, high percentage of carcass weight in the ham and loin, and ideal amount of finish. Landrace are prolific sows that farrow large pigs, and they are exceptionally heavy milkers. These traits have designated the Landrace breed as “America’s Sowherd.”

Yorkshire

Yorkshires are white in color and have erect ears. They are the most recorded breed of swine in the United States and in Canada. They are found in almost every state, with the highest populations being in Illinois, Indiana, Iowa, Minnesota and Ohio. The modern Yorkshire is very muscular, with a high proportion of lean meat and low backfat, in addition to being very sound and durable.

The Yorkshire breed was developed in England in the county of York. Later the name was changed to “English Large White,” but it is known as Yorkshire throughout most of the rest of the world. There are three types of hogs referred to as the Yorkshire: the large, the middle and the small types. Only the large type has ever gained any prominence in the United States.

In 1761, Robert Bakewell became interested in a local tribe of hogs known as the Leicestershire breed, and he molded them into a large, useful hog that became popular in England. It is very likely that some, if not most, of the best Yorkshire hogs today came from these hogs.

The first Yorkshires in the United States were brought into Ohio around 1830. The Yorkshire breed experienced many ups and downs over the years. In the early 1920s, the Morrell Packing Company of Ottumwa, Iowa, and the Hormel Packing Company of Austin, Minn., tried to promote Yorkshires to farmers around the area. This was following World War I, and the market for lard was vanishing. They failed to gain popularity with farmers due to their slow growth rate and short, pugged noses.

The favor of farmers with the Yorkshires didn’t come until the importation of many English Large Whites from the British Isles. Farmers realized what they could do with them and soon started to accept Yorkshire breeding stock. Mothering ability, larger litters, more length, more scale and frame were in such demand that many producers were ready to try Yorkshires again, and this time they were successful.

In the late 1940s there was a period of rapid breed expansion. A large percentage of Yorkshires were brought in from Canada where the breed had been the most popular breed because of its ability

to produce the kind of carcass that was in demand in that country. Yorkshires were also being imported from England where they were known for having greater substance, ruggedness and scale. By selection and the use of the imported pigs, they met the needs of the pork producer and the demands of the market in this country.

Today, Yorkshires are productive, yet more performance oriented and durable than ever. The goal of the Yorkshire breed is to be a source of durable mother lines that can contribute to longevity and carcass merit. The motto of “The Mother Breed and A Whole Lot More” indicates the improvement and changes that the industry has seen.

Yorkshire breeders have led the industry in utilization of the STAGES genetic evaluation program. Since 1990, Yorkshire breeders have submitted more than 400,000 growth and backfat records and more than 300,000 sow productivity records. This represents the largest source of documented performance records in the world.

The American Yorkshire Club was organized on April 1, 1893, in Minneapolis, Minn. The office was first in St. Paul, Minn., and was moved to Valparaiso, Ind., in 1948. The first club was a stock company. In 1948, the American Yorkshire Club was reorganized and became a membership organization.

National Junior Swine Association

Ready to reach your potential? Team up with the NJSA. We'll help you recognize your talents and introduce you to youth from across the country who share a passion for Duroc, Hampshire, Landrace and Yorkshire swine!

The NSR established the NJSA in 1998 to provide a network to unite purebred swine enthusiasts through a youth organization that offers competitive opportunities to reward excellence, enhance educational experiences, promote the value of pure genetic lines and develop leadership skills at both the state and national level.

The NJSA offers something for everyone. Whether you enjoy the competition of the show ring, the challenge of breeding better genetics, or the camaraderie of a youth organization, we provide the opportunities you need to reach your potential in the swine industry and in life.

Competition

National Junior Summer Spectacular

Youth from across the country gather in Louisville, Ky., each summer for the National Junior Summer Spectacular. Members can participate in a variety of competitive events including a purebred gilt show, showmanship, judging contest, skillathon, speech contest, extemporaneous speaking contest, state display contest, poster contest and photography contest. Points from the gilt show, showmanship contest, judging contest and skillathon are contributed toward a sweepstakes contest, where the top youth are recognized in each age division.

NJSA Shows

In addition to the National Junior Summer Spectacular, members can compete in regional shows in the Southeast,

Southwest, East and West. These regional shows consist of a gilt show, showmanship contest, judging contest or skillathon, and a sweepstakes contest. The NJSA continues to develop and support additional shows, aside from the national and regional events, to help provide more competitive events for its members. These shows include the American Royal Junior Event, NAILE Market Hog Show, NBS[®] Junior Barrow Classic, World Pork Expo Junior National and National Western Stock Show.

Communications

“The Pinnacle”

“The Pinnacle” is the official newsletter of the NJSA. This quarterly newsletter features articles and editorials written by members of the NJSA Board of Directors, as well as prominent swine judges and industry leaders. In addition, the newsletter contains information about NJSA shows and activities, as well as fun facts and quizzes.

www.nationalswine.com

Check out www.nationalswine.com for answers to all your NJSA questions. Youth can sign up to become a member online, or read stories about other junior members and swine-industry topics. They can also look up information about upcoming shows and check out results from past shows.

Youth Issue of *Seedstock EDGE*

Each year, NJSA members will be featured in a special youth issue of NSR's magazine, *Seedstock EDGE*. This youth issue will be sent out to all NJSA members, recognizing the importance of their role in the purebred swine industry.

Recognition & Scholarship

NJSA Outstanding Member of the Year Scholarships

The NJSA will offer scholarships to outstanding NJSA members, recognizing demonstrated NJSA or livestock-industry leadership, scholastic excellence, youth-leadership activities and interest in the swine industry. NJSA will award \$200 to the novice winner, \$300 to the junior winner, \$500 to the intermediate winner and \$1,000 to both senior winners.

Claude Robinson Scholarship

This \$1,000 scholarship will be awarded to one incoming college sophomore, junior or senior enrolled in a junior or senior college judging program. The scholarship will be awarded on leadership activities, livestock judging experience and interest, and community service.

Jason Shipley Memorial Scholarship

The family of Jason Shipley is graciously offering a memorial scholarship to honor an incoming freshman, sophomore or junior in college who is enrolled in an agricultural related field. Applicant must have a strong background in athletics and the swine industry.

The Maschhoffs Pork Production Scholarships

The Maschhoffs in Carlyle, Ill., is offering two pork-production scholarships to NJSA members ages 18 to 21 who are or will be enrolled in an agricultural program at a recognized college or university. The first-place winner will receive a \$1,500 scholarship and the second-place winner will receive a \$1,000 scholarship.

Gregory D. Johnson Memorial Scholarship

The family of Gregory D. Johnson is graciously offering a \$1,000 memorial scholarship to honor a graduate student. The applicant must be a spring college graduate with a bachelor's degree in an agricultural field or a current graduate student pursuing a master's or doctorate degree in swine genetics, swine reproduction or swine nutrition.

NJSA Visionary Leader Scholarship

The National Junior Swine Association Visionary Leader \$500 Scholarship has been established to recognize one member of the NJSA Board of Directors for his or her outstanding contributions and service to the members of the NJSA.

National Pork Board Leadership Scholarships

The National Pork Board is offering ten \$200 travel scholarships for youth to attend the National Junior Swine Association's National Youth Leadership Conference.

Senior Sweepstakes Scholarship

The senior sweepstakes contest recognizes the outstanding youth that excels in all areas of the National Junior Summer Spectacular. The senior sweepstakes winner will receive a \$1,000 scholarship.

Leadership

NJSA Officers and Board of Directors

The NJSA is governed by nine individuals from across the country. Offices include president, vice president and secretary. During the NJSA annual meeting, directors are elected to serve two-year terms. The junior board represents NJSA and NSR at shows and events across the country, while providing valuable support to all NJSA members.

National Youth Leadership Conference

NJSA members, ages 14-21, are invited to attend the annual National Youth Leadership Conference, where they are challenged and educated to step up in their role as a leader in the swine industry.

Regional Leadership Conference

Youth, ages 12-17, are invited to attend this one-day conference in the winter to gain more understanding of leadership skills and the swine industry.

NJSA Committees

NJSA members can improve their leadership skills by serving on one of the following committees designed to improve the association: shows, services and leadership.

NSR Commercial Services

NSR Commercial Services provides programs and opportunities for breeder/members to succeed with their purebred seedstock operation.

A wide range of services is available including, but not limited to:

1. Consultation for genetic improvement.
2. Initiating a performance testing program – STAGES.
3. Development of a marketing plan.
4. Identifying market opportunities (i.e. niche markets, branded products, etc.)
5. Evaluating pork quality with packer cut tests through Pork Quality Alliance.
6. Conducting educational and promotional seminars.
7. Coordinating and conducting research with universities and industry.
8. DNA genotyping program.

Pork Quality Alliance

The Pork Quality Alliance is NSR's solution to genetically improving pork quality. The Alliance brings NSR purebred breeders, geneticists, packer/processors, meat scientists and consumer interests together to improve pork quality at the genetic level.

The NSR Pork Quality Alliance is designed to position purebred breeders and commercial producers at the forefront of pork quality. With Pork Quality Alliance-assured genetics, producers can meet the specifications of a commodity packer/processor or the strict standards of a specialty niche market. The opportunities are endless for improving pork quality when the lines of communication from consumer to breeder are kept open. Pork Quality Alliance is the vehicle to drive this continuous improvement and create a "win-win" for all segments of the pork industry and continue NSR's commitment to the Genetics of Choice for the Meat of Choice.

International Marketing

The NSR's services are available not only in the United States, but also worldwide. U.S. purebreds (Duroc, Hampshire, Landrace and Yorkshire) have found a place in the international market. With the help of an international marketing director, thousands of U.S. purebreds have made their way around the globe. The NSR provides the service of an international marketing director to help organize trips to foreign countries for the sole purpose of promoting Durocs, Hampshires, Landrace and Yorkshires abroad. The NSR has developed an advertising program that is placed in leading swine publications worldwide to promote the use of U.S. purebreds. The NSR is a member of United States Livestock Genetics Export Inc. (USLGE). This group develops marketing programs to promote the use of U.S. genetics abroad.

Communications

The Communications Department of the NSR provides publications, Web services and many other communication mediums for its members.

Seedstock EDGE

Seedstock EDGE, with a circulation of more than 4,500,

is the official publication of the NSR. Published nine times a year, *Seedstock EDGE* is the primary communication between NSR and its members. It also serves as the premier tool for breeders to promote their product.

Special *Seedstock EDGE* issues include the February/March Showpig Issue, June Youth Issue, July Herdsire Issue, September Showpig Issue and November/December Brood Sow Issue. These special editions have additional circulations of up to 11,000.

Active senior members receive *Seedstock EDGE* as part of their yearly maintenance fee. Subscriptions are available at \$25/year or \$60/3 years. First class and foreign subscriptions are also available.

"For the Record"

"For the Record" is the quarterly association newsletter distributed to all active NSR members. Its goal is to provide NSR members with the latest up-to-the-minute association news and updates.

"The Pinnacle"

"The Pinnacle" is the official publication of the NJSA. Distributed quarterly to all NJSA and active NSR members, "The Pinnacle" informs membership on upcoming activities, shows, scholarships and leadership programs. It also contains breeder profiles and fun games and activities.

www.nationalswine.com

Visit the NSR Web site, www.nationalswine.com, for the latest association news and information; and show and sale rules, entry forms and results. Here, you can also access online pedigrees and A.I. certificates, and renew or create your subscription to *Seedstock EDGE*.

Breeders can promote their operations on the NSR Web site through banner ads and Breeder Links. Banner ads are available for \$100 a month on the NSR and NJSA homepages. Breeders can also add a link to their Web sites on the NSR Breeder Links page for \$100 a year.

Breeder flyers and A.I. catalogs

The NSR communications department is ready to assist you with any of your advertising needs, including breeder fliers and A.I. catalogs. If given a two-week notice, we can often have a flyer or catalog to you within three weeks.

Another service provided is creating overruns, or fliers, of an ad that runs in *Seedstock EDGE*. If you are interested in this service, ask as you request your ad in the magazine. Give us a call for price quotes or more information.

Shows and Sales

The NSR manages five national type conferences and co-sponsors one event. The Winter Type Conference (January), Southwest Type Conference (March), World Pork Expo (June), Summer Type Conference (July) and the Fall Classic (November) are managed by the NSR. The Southwest Hampshire Type Conference (February) and the National Association of Swine Records (NASR) manage the National Barrow Show® (September). The NSR also manages the National Weanling Pig Extravaganza

(April) and the Weanling Pig Event (November) at the Fall Classic.

The farrowing dates and breeds for each event are:

- Winter Type Conference, January
Entries farrowed: June 1 and after (D, H & Y)
- Southwest Type Conference, March
Entries farrowed: July 1 and after (D, H, L & Y)
- World Pork Expo, June
Entries farrowed: Nov. 1 and after (D, H, L & Y)
- Summer Type Conference, July
Entries farrowed: Dec. 1 and after (D, H & Y)
- National Barrow Show®, September
Entries farrowed: Feb. 1 and after (D, H, L & Y)
- Fall Classic, November
Entries farrowed: April 1 and after (D, H & Y)
- NSR Weanling Pig Extravaganza, April
(All breeds and crosses)
- Fall Classic Weanling Pig Event, November
(All breeds and crosses)

*All hogs entered at a national conference must have been owned by the exhibitor from the hog's date of birth. The exhibitor must have owned the sow when the animal to be exhibited was farrowed. All exhibitors must be active senior or junior members of their respective breed associations. All animals to be exhibited must be identified by the Universal Ear Notching System and must meet the respective breed requirements. All animals must be registered in their respective breed associations in order to be exhibited in their breed shows and sales. All animals exhibited at NSR/NJSA events must be guaranteed to be free of the stress gene and are subject to DNA testing to verify this status.

Governance

Board of Directors

Number

A Board of Directors consisting of seven (7) members shall manage the affairs of each respective breed association. Two directors should be elected from each of the three districts, with one director serving as an at-large representative. The boundaries of each district will be based on membership, recordings and geography and will be established by the NSR Executive Committee. District boundaries will be reviewed every three years thereafter, and after such review, the NSR Executive Committee shall revise the boundaries, as it deems appropriate. At no time shall more than three directors be elected in the same year. No more than two members of one state can serve on the board at one time.

Tenure and Qualifications

Directors shall serve a term of three years or until their successors are elected or are appointed. The members of the Board of Directors must be active members of their respective breed associations in good standing. No director shall serve a term of more than two consecutive three-year terms and must be off the board for three years before being reelected to the board.

Nominations and Voting Procedures

The president and vice-president will select a nominating committee. The committee will be made up of the following:

- The president of the respective breed organization
- The vice-president of the respective breed organization
- One member appointed by the president and vice-president, from each district that has a vacancy occurring that year.

Nomination and voting for Board of Directors will adhere to the following regulations:

1. The nominating committee must select nominees for the board in time for their names to be published in an official NSR publication prior to mailing of ballots. All eligible-voting members will vote for all candidates at-large.
2. There will be space provided on the official ballot for write-in candidates.
3. Ballots will be mailed to eligible active members.
4. In order to vote in the election, an active member must have registered a litter during the fiscal year and must have paid their maintenance fee for the same period.
5. Ballots will be mailed first class from the NSR headquarters. Prior to each election, the NSR Executive Committee shall set a date for the mailing of ballots to members and a reasonable deadline for the return ballots. Only those ballots postmarked by the required date, and received at the NSR office, will be counted in the election.
6. The candidate receiving the highest number of votes shall be elected as director.
7. Newly elected directors' term will take effect following the first annual meeting after the election.

Powers and Responsibilities

The Board of Directors shall be responsible for electing three representative (except Landrace, which elects one) to serve on the NSR Executive Committee. These representatives may or may not come from the Board of Directors. These representatives will serve staggered three-year terms. The Board of Directors has the authority to enforce breed purity guidelines and set other standards pertaining to breed specific issues for the respective breed organization. It may refer breed-specific disciplinary issues to the NSR CEO for disciplinary proceedings pursuant to the NSR Operating Agreement. It also may make recommendations to the NSR Executive Committee for their consideration and possible implementation.

NSR Advisory Boards

As a result of the implementation of the long-range strategic plan, three advisory boards were formed to give input regarding specific program areas. They are as follows:

1. Youth Advisory Board
2. Commercial Advisory Board
3. Shows/Services Advisory Board

Each of these boards are appointed by the NSR Executive Committee and consist of six members. They serve three-year terms, with two members being appointed each year. One NSR staff member is assigned to work closely with each group. They meet as needed and make recommendations to the NSR Executive Committee pertaining to their program area. They are a vital component of the NSR

structure and are responsible for many of the new programs, policies, and services implemented in recent years.

To receive a complete set of the NSR or respective breed bylaws, contact the NSR office.