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COOPERATIVE EXTENSION SERVICE, PURDUE UNIVERSITY, WEST LAFAYETTE, INDIANA 47907

Indiana Station Boar Testing Program

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Purpose of the Program

The Indiana Station Boar Testing Program offers a service to Indiana swine breeders in which central station performance records on boar pigs may be obtained under standardized conditions. The boar pigs will be evaluated at the Indiana Swine Evaluation Station at Purdue University.

In the program, boars are measured for growth rate, feed efficiency, backfat probe, loin eye area and visual appraisal; and they are sold at public auction if they meet sales standards.

This program assists the Indiana swine industry in these ways: (1) serving as a partial progeny test for the sire of a test group, (2) acting as a "show window" for the breeder's herd, (3) helping to merchandise desirable breeding stock, and (4) identifying genetically superior seed stock herds for purebred and commercial producers. It also assists the breeder in selection of replacement breeding stock. In addition, it serves to supplement records on progeny from the same herd sire obtained through the Indiana On-Farm Boar and Gilt Testing Programs, the Indiana Swine Progeny Testing Program for market animals, and various breed association testing programs.

Any swine breeder in Indiana may participate in the Boar Testing Program if he can meet the eligibility requirements.

Program Supervision and Direction

Technical supervision and coordination of the program, including operation of the Station, is the responsibility of Purdue University's Animal Sciences Department. The rules and regulations of the program and operation of the Station are the responsibility of the Advisory Committee.

The Advisory Committee shall consist of: (1) two persons from each recognized Indiana swine breed association—each to be elected for a 2-year term; (2) four commercial swine producers—two to be elected or appointed each year by the Indiana Pork Producers Association; (3) the executive vice-president of the Indiana Pork Producers Association; (4) the Swine Evaluation Station manager; (5) the Purdue Extension swine specialist with responsibility of advising on the program; (6) the Purdue veterinarian who serves as Station veterinarian; and (7) the head of the Animal Sciences Department. The latter four are non-voting members on rules and regulations concerning evaluation procedures.

Eligibility

To be eligible, the sow must be owned by an Indiana breeder at farrowing. Boar pigs must be from litters of eight or more pigs at farrowing and have 12 or more prominent, well-spaced nipples. Boars must also be free from inherited defects, such as hernia or cryptorchid (ridgling) condition. Boar pigs will be individually identified by litter and pig number.

Testing Seasons

Fall test shall include those boars farrowed in July and August. These boars are delivered to the Station for start on test between September 1 and November 1. Sales following completion of the test will be held in January and February.

Spring test shall include those boars farrowed in January and February. These pigs are delivered to the Station for start on test between March 1 and May 1. Sales following completion of the test will be held in July and August.

Application

Application forms for consignment of test-groups to upcoming Spring or Fall tests shall be distributed each year in early December and early June. The completed application and entry fee shall be returned by February 1 for the Spring test and by August 1 for the Fall test.

Entry fee: a fee of \$100 per pen of two boars is required at time of application for pen space.

Health Requirements

For entry. No pigs will be accepted from premises on which any swine are under state quarantine for any reason. All pigs selected for entry to the Station must have blood drawn, tested and found negative for pseudorabies within 30 days prior to date of delivery.

At delivery. Pigs must be delivered in a clean, disinfected vehicle. They will be examined at delivery and before unloading. Any pig exhibiting signs of disease will be rejected by the Station veterinarian. Upon delivery, pigs will be treated for external and internal parasites, and vaccinated for erysipelas and five strains of leptospirosis.

Pigs entering the Boar Testing Station must be accompanied by a health certificate issued by a licensed, accredited veterinarian certifying that the pigs are free of disease. Examination of the pigs and herd from which they come, pursuant to issuing the health certificate, must be made within 7 days of the entering date.

At time of inspection, the veterinarian and owner must certify on the health certificate that none of the following diseases or conditions are present: *In the herd:* (1) hemorrhagic dysentery (free for previous 365 days), (2) erysipelas, (3) atrophic rhinitis (visible), (4) jowl abscesses, (5) brucellosis, (6) leptospirosis, (7) pseudorabies, and (8) abortions and stillbirths affecting no more than 5 percent of the pigs farrowed. *In the group:* (1) acute or chronic salmonellosis, (2) transmissible gastroenteritis (TGE) (free for previous 60 days), (3) influenza and (4) pneumonia. *In the litter:* myoclonia congenita (shaker pigs, jittery pigs).

Test Group and Pen Assignment

A test group shall consist of two boar pigs from the same sire. These may or may not be from one litter.

Allocation of pens will be made by the Advisory Committee in mid-February for the Spring test and

mid-August for the Fall test. Entry fees will be returned for those applications that cannot be accepted. If applications are accepted by the Advisory Committee and test groups are not delivered, the breeder forfeits his entry fee.

Testing Procedure

Testing area. Testing area is a 6-foot x 12-foot pen with solid concrete floor, in an open-fronted building. Pens will be bedded.

Delivery. The test group boar pigs will be delivered to the Station when weights average between 45 and 55 pounds. Test groups with average weights of less than 40 pounds and over 60 pounds will not be accepted.

Initial weights. Boars will be individually weighed and started on test when test group averages 60 pounds, plus or minus 3 pounds.

Intermediate weights. Boars will be weighed individually and feed consumption records obtained at 35 days after going on test. As boars approach 220 pounds, they will be weighed once weekly.

Ration. All boars will be self-fed the same high energy, pelleted, 17% protein corn-soy ration while on test. This is important in identifying the animals with genetic potential for rapid growth. Boars will be self-fed a high fiber, pelleted, 15% protein conditioner ration from completion of test until sale time.

Final weights. Test group boars will be off test for daily gain on the date that the test group average weight reaches or exceeds 220 pounds.

Feed efficiency. Feed efficiency (final) will be calculated for the pen when the group boars average 220 pounds in weight. In case of death or disease loss, average daily feed consumption will be determined by dividing total feed consumption by number of animal days.

Backfat sonoray probe. Each boar will be sonorayed for backfat near time of test completion for daily gain. Backfat probe is the average of three probes taken 2 inches off the midline at the shoulder, back and loin. This average is adjusted to 230 pounds live weight using the NSIF adjustment formula: $Adj. \text{ avg. backfat} = [((230 - \text{final wt.}) \times .004) + 1.0] \times \text{actual adj. backfat}$.

Loineye sonoray. Values will be obtained on each boar near time of test completion. Loineye measurement is adjusted to 230 pounds live weight using the conversion factor of 0.015 inch per pound.

Visual rating. Following completion of gain test, all boars are evaluated individually for structural soundness and underline by a committee of three people: a university person, a purebred breeder and a commercial producer. Boars which the committee rate as unsound for feet and legs, and boars with unacceptable underlines will be ineligible for sale.

Boar Index

Boars will be individually indexed using their test average daily gain, pen feed efficiency and adjusted backfat probe, and the deviation of their records from the test-sale group average for these traits. The point system used in calculating individual boar index is: $100 + 60(DG - \overline{DG}) - 75(FE - \overline{FE}) - 70(BF - \overline{BF})$, where DG, FE and BF are the individual boar records and \overline{DG} , \overline{FE} and \overline{BF} are averages for all boars in test-sale group. Average boar index for all boars within a test-sale group will be 100 points. Approximately two-thirds of the boars within a test-sale group will have indexes between 75 and 125 points.

Boar Records and Ratios

Test-sale group averages and individual boar records are reported for daily gain, pen feed efficiency, adjusted backfat and adjusted loin eye area. Individual boar ratio values are reported for daily gain, pen feed efficiency and adjusted backfat. These ratio values give the boar's relative superiority to other boars in the test-sale group for these traits.

Health Procedures During Test

The Station veterinarian will oversee the health of the animals at the Station. He will supervise retesting of all boars for pseudorabies approximately 45 days after delivery to the Station. He will consult regularly with the Station manager, the Extension swine specialist serving as program coordinator, and the chairman of the Station Advisory Committee. He is responsible for making recommendations on health and disease problems as well as concerning management practices which affect the health of the animals.

The Station veterinarian will make regular weekly visits to the Station at a time to be agreed upon. All animals will be observed at these regular visits. Other visits will be made when necessary.

Medications are to be administered only by or under the supervision of the Station veterinarian.

Drug purchases will be made only on recommendation of the Station veterinarian. An animal shall not be treated individually so as to unfairly influence its performance.

If a particular boar (or boars) becomes ill to the extent that performance can no longer be practically measured, or if in the opinion of the Station veterinarian there is a threat to the other boars as a result of that illness, then the boar (or boars) will be removed from the Station. If there is difference of opinion, a committee consisting of Purdue Large Animal Clinic veterinarians, Advisory Committee officers, Station manager and Animal Science Department personnel will participate in the decision.

If the boar (or boars) dies, the owner will be notified as soon as possible. All boars that die will be necropsied, and a full report made to the owner, Station manager and Extension swine specialist serving as program coordinator.

A health record will be maintained for each boar. Each breeder will be immediately notified if any significant health disturbance occurs among his pigs.

Health Procedures After Test and Before Sale

All boars will be blood tested, found negative to brucellosis and pseudorabies, and will be vaccinated for erysipelas and five strains of leptospirosis within 30 days of the date of sale. Each boar will be inspected for evidence of disease 2 weeks before and again immediately before the sale date.

A separate health certificate shall be issued for each boar. All boars will meet the requirements for interstate shipment as set forth by the Board of Animal Health of the State of Indiana, and the Animal and Plant Health Service of the U.S. Department of Agriculture.

Semen evaluation will be performed at the owner's request.

All health records will be confidential unless released by the owner.

It is recognized that the sale could be cancelled or delayed by an outbreak of an infectious and/or contagious disease. Specific examples are hemorrhagic dysentery, transmissible gastroenteritis and influenza.

Boars will have access to small exercise pens after the test group has completed test.

Sale Standards, Times and Locations

Boars with indexes of 80 or higher will be eligible for sale, provided they meet health, soundness and underline requirements. They will be assigned to a group for sale (40 to 50 boars) according to test completion date.

Two or three sales will be held within each test season, depending on numbers of eligible boars. Sales of Spring-tested boars will be held during July and August; sales of Fall-tested boars in January and February. Location of the sales will be at the Indiana Swine Evaluation Station near Purdue University in West Lafayette.

Withdrawing Sale-Eligible Boars

Boars eligible for sale may be reserved and withdrawn from sale by owner by notifying Station manager prior to printing of the sale catalog and payment of testing expenses. The charge for boars withdrawn prior to printing the sale catalog is \$50 plus testing expenses; charge for boars withdrawn after sale catalog printing is \$250 plus testing expenses.

Non-Sale-Eligible Boars

All non-sale-eligible boars are taken home by the breeders or marketed after payment of testing expenses, within a 7-day period following notification of sale eligibility.

Testing Expenses

Total testing expenses will be \$220 for a group of two boars—\$100 pen reservation fee plus \$120 testing charge. (Individual boar charges total \$110—\$50 reservation, \$60 testing.)

Sale cost. All sale costs, including advertising, auctioneer, sales pavilion rental, etc., are prorated on a percentage basis for all boars sold.

Refunds to consignors. At the end of each test, each pen entry is credited with income from entry fee and sale of boars. Then testing cost and sale expense are deducted. The difference in income and expense for each pen entry is paid to the consignor.

Reporting of Results

All information on gain and feed efficiency will be sent to each consignor when his pigs have been on test 35 days. All information on gain, feed efficiency, backfat probe and loineye will be sent to the consignor when pigs finish test. Boar index, visual rating and sale eligibility notification will be sent when sale group boars finish test. All information concerning the tests (including season and yearly summaries) is made available to the public.

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