A.I. programs that work

Producer Panel: Kirk Caldwell, Russiaville;

Don Hoeing, Rushville; David Walter, Warren

Index:

Application of artificial insemination (A.I.) technology has increased from less than 1% before 1990 to an estimated 25 to 30% at the present time. Many factors have contributed to this increase. These include: packer demand for lean pork, increased awareness of genetics, potential cost benefits, and proven systems for application of A.I. technology.

The following is a brief description of how three Indiana producers are utilizing different approaches to A.I. in their genetic and breeding management programs.

On-farm collection program

Kirk Caldwell

The Caldwell operation is located in Clinton county near Russiaville, Indiana. It consists of 600 sows with a weekly farrowing and breeding schedule. A tether breeding and gestation facility is utilized. About four and a half years ago, A.I. was initially used by purchasing semen from high indexing maternal sires to produce replacement gilts. In 1994, a moderately equipped semen processing lab was constructed and the operation has been converted to 100% A.I. at the present time. Semen is collected and processed from one of two sires (Irish Large White or Landrace), usually on Mondays and Thursdays. The goal is to use semen prior to 48 hours of storage. A few additional sires are housed and collected for neighboring producers. Pigs are weaned on Thursdays after a 16-18 day lactation. A majority of the matings occur on the following Tuesday and Wednesday. Sows and gilts are heat checked and inseminated once per day.

Since a majority of the offspring are sired by one or two sires, the uniformity of market animals has been improved. At the present time, the same very high indexing white-line

sires are used for both terminal and maternal matings. Farrowing rate and litter sizes have remained at or above previous levels. Percent lean of market animals has increased from about 51.5 to 55%. Labor requirements have decreased substantially with the A.I. program. Patience and experience have been the keys to the success of the Caldwell A.I. program.

Purchased semen A.I. program

Don Hoeing

The Hoeing family partnership farming operation near Rushville, Indiana, consists of five brothers. It includes a 400 cow dairy, 2,000 crop acres, and a 550 sow farrow-to-finish hog operation. Don Hoeing is responsible for the hogs.

A.I. had been utilized on a limited basis in the purebred operation since about 1981. In 1988, plans were completed to convert the purebred operation to a commercial unit. A hand-mating, weekly breeding schedule was used until about one year ago. Semen from terminal sires is purchased from Progressive Sires once per week. Sows are weaned on Thursday or Saturday and insemination takes place on Tuesday or Thursday of the following week, with second insemination the next day. Pigs are weaned at 23 to 25 days of age and sows are moved to crates in the breeding barn until serviced; then they are moved to a pen gestation barn (8 to 10 or 5 to 6 sows per pen). A majority of the sow matings (15 to 20 sows per week) are from A.I., while gilts are still pen-mated in outside facilities. Farrowing rates and litter sizes have been comparable to previous natural mating levels.

By purchasing semen, the Hoeing operation has been able to convert to A.I. on a gradual basis. Several superior natural service sires were in the inventory prior to A.I. and they have been gradually culled during the transition period. A.I. has allowed the opportunity to sample several sire lines without owning them, and the risk of health problems has been greatly reduced. Skills related to heat detection and insemination have been critical. Labor requirements for these have actually increased as compared to the previous system.

Custom boar housing and collection

D and L Custom Swine Genetics

An on-farm A.I. program had been used in the Walter seedstock herd, located at Warren, Indiana, for several years to maximize the use of certain sire lines. Boars were housed in a remodeled barn and semen was transported to the nearby farm home for processing and storage. Most of the semen was used on the farm, but a limited quantity was sold to other producers.

In 1995, after several months of study, Jerry, David and Lynette Walter constructed an offsite, state-of-the-art, 24' x 112', custom boar housing and semen processing center. The 24' x 82' evaporation-cooled facility has the capacity to house 52 boars (40 in crates and

12 in pens). A 24' x 30' laboratory area for semen processing and storage is attached. Presently, semen is distributed to 13 farms on a regular basis. Some are local producers who obtain semen directly from the stud, while others receive semen shipped by overnight delivery.

New sires are isolated in off-site facilities and are blood tested prior to entrance into the stud. Fees for the custom collection service are based upon a standard housing charge and the number of semen units produced per month.

The major benefit of this arrangement is that sire owners can control their own genetics and utilize A.I. without investing in specialized boar housing, processing equipment, and labor. It also provides a means for joint ownership of sires. It has allowed the Walter family to expand their swine genetics supply business by capitalizing on their previous experience with A.I. and contact with previous customers.