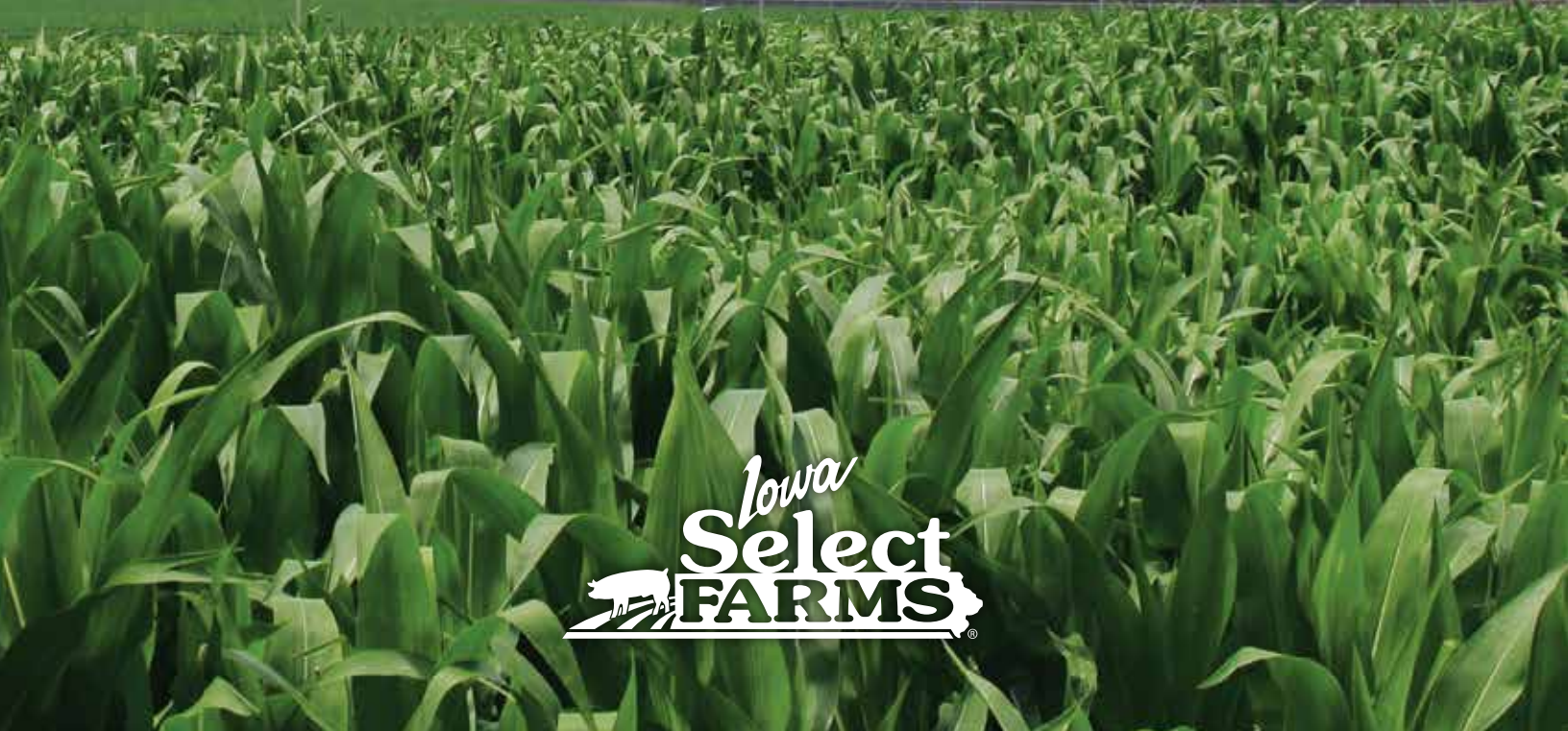
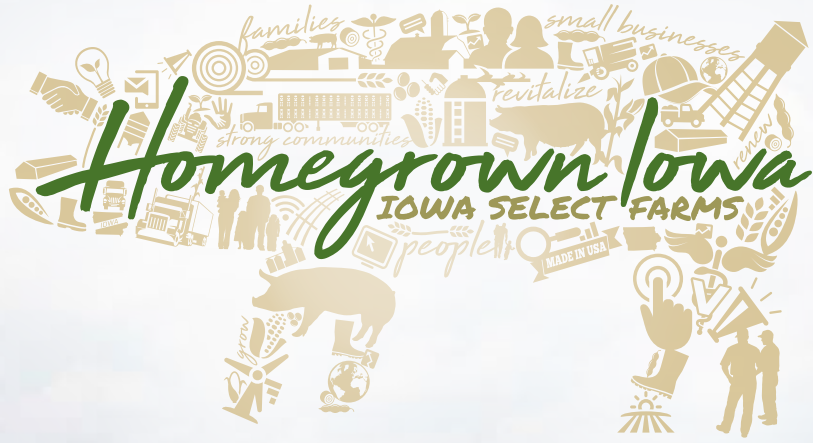




S U S T A I N A B L E

Sow Farm Model





Controllers

SUSTAINABLE SOW FARM DESIGN

Iowa Select Farms is as passionately committed to responsibly producing pork for our customers, as we are to continuously improving how we do it.

OUR BREED-TO-WEAN FARMS ARE:

- Better for our environment
- Better for our animals
- Better for our neighbors
- Better for our caretakers



Gestation

BETTER FOR THE HEALTH AND CARE OF OUR ANIMALS

Designed to leave a more sustainable and efficient footprint, our new 7,500-head sow farm plan is a reflection of the work and collaboration of many dedicated people and teams.

The first benefit of the improved plan is the opportunity to engineer the new barns for positive filtration—a technology that filters disease out of the air. Investment in filtration significantly improves the health of the sows and their piglets and fosters a more pleasing work environment for animal caretakers.

Diseases such as Porcine Respiratory and Reproductive Syndrome (PRRS) and Porcine Epidemic Diarrhea virus (PEDv)—both of which can be transmitted long distances through the air—annually cost pork producers millions of dollars in death loss and productivity.

HERE'S HOW OUR INNOVATIVE POSITIVE-FILTRATION DESIGN WORKS

Air is pulled into the barn through evaporative cooling pads and then through one of six filter banks, each housing over 800 filters. As the air moves through a MERV 8 filter and then a MERV 15 filter, it is purified to the same level as a hospital surgery room. The purified air is then pushed up to the attic and circulated throughout the barn through ceiling inlets, then out of the barn through shutters.

The breeding and gestation area is designed with open-pen gestation—a style of animal care requested by many of today's retail, foodservice and wholesale pork customers. Open-pen gestation allows the sow to freely move throughout the 12-14 head pens, lie down without touching another animal and easily access food and fresh water.

The farrowing stalls, which help protect piglets from being crushed by the sow, have been redesigned to be more spacious. The bigger area is required because of the larger litters being born due to genetic improvement, the positive air filtration technology and enhanced animal care.



Filter bank



Farrowing

BETTER FOR OUR NEIGHBORS

We are committed to building farms that are aesthetically pleasing and take the extra steps required to keep them properly manicured and landscaped for our employees, suppliers and neighbors.

Iowa Select Farms has also collaborated with research institutions, building-design experts and industry leaders to create innovative solutions to reduce odor and dust. Here are a few of the significant changes and efforts we've made to be better neighbors:

- **REDUCTION OF DUST MOVEMENT**

The new design significantly reduces the flow of dust in many ways. Because the filter banks are removing dust from air entering the barn, there is a significant reduction (>50 percent) in dust leaving the barn. Increased inlets inside the barn paired with the elimination of exhaust fans (see below) has reduced the air velocity inside the barn. As a result, less feed dust is released from the barn.

- **ADDITION OF EXTERNAL ODOR BARRIERS**

At the points where air is released through the barn's shutters, equally-sized windbreaks are placed four feet in front of the shutters to prevent strong gusts of wind (backpressure) from entering the farm. These windbreaks also break up the odor coming out of the farm, allowing the air to hit the structure and drop the dust particles to the ground. According to Iowa State University, the addition of windbreaks reduce odors up to 90 percent.



Windbreaks

THE
ADDITION OF
WINDBREAKS
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ODORS
UP TO 90%

- **DEEP PIT MANURE STORAGE**

Fewer barns, paired with improved manure-storage design, reduces odors and better preserves the nutrients in the manure—good news for neighboring crop farmers. Manure captured beneath the building in concrete pits and is safely stored until after harvest, when professional, certified manure application teams apply manure to the nearby fields, replenishing the soil with essential nutrients.

- **ELIMINATION OF PIT EXHAUST FANS**

Another benefit to the positive pressure filtration design is the elimination of pit-exhaust fans. ISU researchers estimate a 10 to 20 percent reduction in odor is realized by replacing pit fans with more innovative airflow solutions.

Ammonia, hydrogen sulfide and odor are reduced 10-20 percent (Jacobson et al 2007, 2008) when airflow is controlled by the positive pressure filtration system. With the elimination of pit exhaust fans, air no longer flows over the manure surface, which reduces volatilization of gases.



Concrete manure pit

• **KNIFING IN NUTRIENTS DURING APPLICATION SEASON**

During the short time period when nutrients are applied to neighboring crop ground, professional, certified nutrient-application teams utilize drag hoses, manure “injectors” and precision agriculture technology to ensure odors are minimized and contained to a short window, after fall harvest, typically within a week.

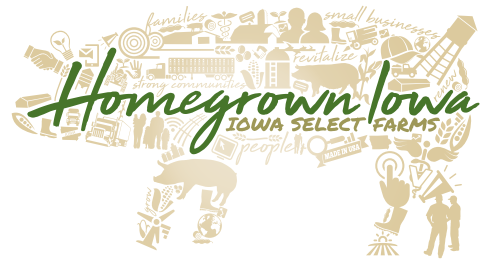
With the adoption of manure application “injectors,” also referred to as “knifing in,” farmers have:

- Reduced ammonia odor by up to 90 percent (*ISU, Hanna et al, 2000*)
- Reduced hydrogen sulfide odor by 50-75 percent (*ISU, Powers, 2004*)
- Achieved an overall reduction in odor by 50-75 percent (*ISU, Lorimor, 1998*)



BETTER WORK ENVIRONMENT FOR OUR CARETAKERS

Iowa Select Farms takes pride in how our farms look—inside and out—by providing private locker rooms, spacious kitchens and attractive artwork. Barn interiors are roomy and brightly lit with energy-efficient LED lighting systems. And thanks to the positive filtration system, air quality inside the barn is greatly improved.



Hallway in farrowing



Showers



Bench entryway



Kitchen



Breakroom

BETTER FOR OUR RURAL COMMUNITIES

Though farm numbers keep decreasing in Iowa, agriculture is still the industry sector that employs the most residents of our state. That's why it's no surprise 4,265 Iowa families rely on Iowa Select Farms for their primary income—families who live in rural communities and capture the tremendous opportunity agriculture has to offer.

- **EIGHTEEN NEW JOBS CREATED**

For each ribbon cutting at a new Iowa Select sow farm, 18 additional jobs and \$700,000 in annual payroll is added to a community. We employ caregivers, veterinarians, supervisors, truck drivers, maintenance technicians and others who, in turn, are patrons of local gas stations, grocery stores, restaurants and businesses.

- **INCREASE DEMAND FOR CORN AND SOYBEANS**

Each farm also increases demand for local grain—188,130 more bushels of corn and 30,512 more bushels of soybeans. A sow farm is a “living and breathing business,” which means it needs nurturing 24/7 through usage of energy, Internet, feed and trucking.

- **\$4.7 MILLION DOLLAR ANNUAL ECONOMIC VALUE**

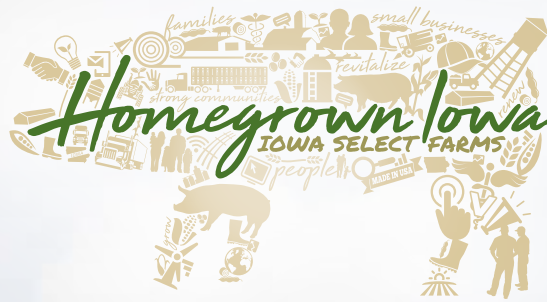
Then there's the residual value a \$15.5 million building project has on fellow Iowa businesses—those needed to move dirt, pour 11,000 yards of concrete, erect frames and trusses, engineer the farm for filtration and install equipment, electrical, feed systems and technology.



**WANT TO
KNOW THE
LOCAL
ECONOMIC
VALUE FOR
JUST ONE
SOW FARM?**

According to a recent Iowa State University analysis, its **\$4.7 MILLION** dollars that is annually pumped into Iowa's rural economy—**16 TIMES THE VALUE** of a finishing farm.





Iowa Select Farms

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