

**MIRACLE OF BIRTH CENTER
FREQUENTLY ASKED QUESTIONS
DISCUSSION TOPICS FOR MODERATORS**

SWINE TOPICS

What is the length of gestation in a sow?

114 days—or three months, three weeks, and three days

Why are the sows in a farrowing pen or stall?

The stalls allow us to control the environment for both the mother and her pigs. The baby pigs need a very warm environment when they are born (notice the heat lamps or warming pads) but this warm temperature would be very uncomfortable for the sow. The water drip system over the head of the sow allows us to keep the sow cool while the piglets stay warm.

The stalls allow the piglets to move about without getting crushed when the sow lies down. The most common cause of baby pig mortality is chilling or crushing. If the sows farrow in a conventional pen, many pigs die from crushing when they get trapped between the wall and the sow when she lies down.

The stalls are designed to give the piglets access to the sow's udder. The baby pigs will nurse about every twenty minutes to half hour. You might even hear the sow grunt and call her pigs when she feels full of milk.

Finally, the stalls keep a very clean environment for the babies. The flooring is designed so that manure and urine will drop to the shallow pit below. This minimizes the chances of scours (diarrhea), which is the most common infectious disease of baby pigs.

But the sow can't turn around.

These sows have been bred to thrive in a confined space. You will notice that they seem content. They are provided with feed, water, and a comfortable environment.

What about gestation stalls?

Pork producers rely on veterinarians and science to guide their decision as to how best raise their pigs in a humane manner. The AVMA has reviewed the science and has found that both group housing and stalls can provide humane housing for sows. Sows in individual stalls can be given individualized care and do not have the social stress associated with competition and fighting that can happen in group pens.

Why are the piglets' tails sometimes cut off?

The first day after the pigs are born, they are given an injection of iron (they are born anemic and get little iron from milk), the needle teeth are sometimes cut (to prevent injuries to one another when they are playing and fighting, and to prevent small cuts to the sow's udder), and the tails may be cut. If the tails are left long, there is a tendency for them to chew on each other's tails and cause spinal cord infections.

When do the piglets start to nurse?

As soon as the piglet is born its first instinct is to find the udder and nurse. The farrowing pen is designed to allow the pig to accomplish this important task easily. The first milk is called colostrum. It is rich in antibodies to protect the baby pig from infection early in life and it contains important energy and protein to get the piglet off to a good start.

How many pigs does each sow have?

A sow can have as many as twenty pigs in a litter, but an ideal litter size is 12 to 14. If she has more than that, the piglets are often very small and she may not have enough teats for them to nurse adequately. Piglets also can be “cross-fostered”, that is, moved to a sow with a smaller litter if she delivered the same day.

These little pigs will reach market weight (around 290 pounds) in about six months.

What happens to the runts?

Many small or undersized pigs may die if they become weak and cannot get adequate milk. As you see, they have to scramble and compete for their dinner. This type of farrowing stall gives small piglets the best chance for survival.

SWINE INFLUENZA MESSAGE POINTS

Swine influenza is a common viral infection in pigs. A variant strain of the influenza virus, H3N2v, has been found in some parts of the country and apparently can be passed from pigs to people. There is some risk of pig-to-human transmission, however the MOB has taken a number of precautions to minimize this risk:

There has been no history of respiratory infection in the pigs that are on display at the MN State Fair MOB Center. They have come directly from their home farm and have not been exposed to other pigs.

The pigs at the MOB Center are monitored daily for signs of influenza and other illness. If any pigs show signs of illness, they will be isolated and treated. This will benefit the pigs and people.

MOBC gilts have been vaccinated twice with Flusure XP from Zoetis, which contains the H1N1 and H3N2 strains as well as others. Vaccinating protects the pigs from disease and reduces viral shedding. The gilts are washed on arrival, which helps to minimize viruses and bacteria that may be present on the skin.

People visiting the MOB Center are encouraged to wash their hands after their visit.

People visiting the MOB Center are encouraged not to eat while visiting any barns.

Older gestating gilts and sows, like the ones on display at the MOB Center, are less likely to transmit influenza virus because they are more likely to have been exposed in the past and are now immune.

Baby pigs are born free of influenza virus and will be protected early in life because of ingesting colostrum from the mother. They are unlikely to transmit influenza virus. The MOB Center will allow the public to pet young piglets, but only from litters selected by the MOB co-chair veterinarians.

Pork is safe. You cannot get the flu from eating or handling pork or pork products.

MIRACLE OF BIRTH CENTER COMMON QUESTIONS-DISCUSSION TOPICS FOR MODERATORS

DAIRY TOPICS

Why is the calf separated from its mother?

After the calf is born, the mother licks it clean or it is dried with a towel. The calf's navel is dipped in disinfectant to prevent navel infection. The first milk or colostrum is milked from the cow and fed to the calf. It is important for the calf to get an adequate amount of colostrum in the first 24 hours of life when it can be absorbed by the intestinal track. The colostrum is rich in antibodies that protect the calf from infections early in life and it contains valuable nutrients to get the calf off to a good start.

Unlike beef calves that are allowed to nurse from the mother whenever they want, dairy calves are separated from the mothers and are fed milk or milk replacer two or three times per day. This causes the calf to develop a strong bond with humans because the calf learns to associate the humans with bringing her food and taking care of her. This is very important for a dairy cow because she must be very comfortable around humans when she becomes a milking cow. A calf raised in its own hutch or pen also has less chance of getting intestinal or respiratory infections.

A calf needs about 10-15% of its body weight in milk or milk replacer each day. That is only ten to fifteen pounds of milk for a hundred pound calf. These dairy cows can produce up to 125 lbs. of milk or more each day, which is far more than the calf needs. This is the milk that the dairy farmer sends to the creamery to be used for fluid milk, cheese, yogurt, and ice cream.

How much milk can a cow produce in a year?

A good herd of cows nowadays can produce about 25,000 lbs. of milk per cow per year. This is about 3,000 gallons! Early in lactation a cow can produce 10 to 15 gallons of milk per day. The record production from an individual cow in one year is around 50,000 lbs!

How often does a cow have a calf?

Ideally, a dairy farmer would like to have a calf from each cow about once per year. Gestation length in a cow is 283 days, just over 9 months. After a cow freshens (delivers a calf), her average lactation length is about 10-11 months. She is then dried off for about two months when she hopefully will be ready to freshen again. This means that the cow will be bred the first time about two months after she freshens.

What do you feed a cow?

A cow's diet consists of forage and grain. Good quality alfalfa and corn silage are the most common forages, but other grasses and silages are used as well. Grain is composed primarily of corn as an energy source and soybean meal as a protein source. Many other ingredients are used to fine-tune the ration and are introduced based on price and availability. Cows are able to convert low quality plant "left-overs" from other industries (potatoes, oranges, almond hulls, wet brewers grain, distillers grain) into high quality protein foods (meat and milk). Without cows these by-products would just go to waste. It is common to combine the forages and grain into a "Total Mixed Ration" to prevent digestive upsets and to encourage the cow to eat as much as possible. The more she eats, the more milk she can produce.

A calf is fed milk or milk replacer for the first six to eight weeks. During this time it is presented with a high quality creep feed which she learns to eat and becomes able to digest by the time she is weaned. After that the calves are fed a combination of forage and grain to promote steady growth without becoming too fat.

What age is the cow when she first calves?

A heifer is bred at about 15 months of age if she has grown to the proper size at that time. This means that she will freshen for the first time at about two years of age.

How old can a cow live?

Some cows can stay in a herd for ten to twelve years or more, but it is more common for a cow to have around four lactations before she is replaced by a young heifer.

What happens to a cow after she can no longer be in the milking herd?

Cows that are no longer used as milking cows are sold for meat.

What about BST in milk?

Most creameries no longer accept milk from cows that have been treated with BST despite the fact that it is safe to consume.

BST (Bovine Somatotropin) is an injectable hormone given to cows to improve milk production. It is a naturally occurring product normally found in all cows and all milk. The FDA has found commercially made BST to be safe and wholesome for cattle and consumer. It is impossible to detect any difference in milk from cows given BST compared to cows that have not been given the product. It has been up to the producers and their creameries to decide whether or not they will incorporate BST into their herds. Most creameries have elected to eliminate milk from BST-treated cows. All milk is tested by the milk plant according to FDA regulations so that it will be safe and wholesome for consumers.

SHEEP TOPICS

- What breed are they? Polypay – a Finn (for the multiple births), Dorset (milking ability and out of season breeding), Rambouillet (out of season breeding and wool quality) and Targhee (wool quality and size) cross created in Dubois, Idaho in the 1970's. A popular all-purpose breed.
- How many lambs do they have? We strive for a 200% lamb crop so most have twins but anywhere from 1-4 is seen with triplets being very common. They can usually feed all their lambs if they are healthy.
- Do they usually lamb this time of year? No, they normally come into heat (estrus) in the fall. With a 5 month gestation, they lamb in the spring. We have tricked them into coming into estrus in the spring so they would have lambs for the State Fair.
- Why do they breathe so fast – are they in labor? The lambs take up a large amount of space in their abdomen as does the big hay-filled rumen (1st stomach). This causes pressure upon the diaphragm and less room for the lungs to expand – therefore they have to take short quick breaths. There just isn't enough room the last few weeks of their pregnancy! They also lose heat and "sweat" through their panting (like dogs) so breathe faster when it is warm out.
- Why are the ewes' tails short and the lambs' tails long? We dock (cut off) the lambs' tails when they are very young to prevent flies from gathering around any manure that may cling to the lamb's rear end and laying eggs.
- What do they eat? We feed pasture grass, hay and some corn/oats depending on the time of year and what the sheep are doing. If they are growing or making milk for 2-3 lambs, they need more energy (corn/oats).
- Do they mind if we watch them have lambs? Sheep usually move away from the flock to have their lambs which helps prevent mis-mothering. These sheep are accustomed to people and many of them have lambed here at the fair before. They just want to have the lambs born and safe beside them – which is also our goal. I believe most mothers in labor do not really care who is in the room – they are focused on the impending birth.
- How often do you shear them? Sheep are usually shorn once per year prior to lambing.
- Where are the daddies? The rams are at home on the farm. They only stay with the ewes during the breeding season which lasts about 30 days.
- How long do the lambs stay nursing the ewes? The ewes' milk supply starts to diminish after about 45 days. The lambs start eating solid food (grain and hay) after 2-4 weeks. So we wean the lambs from their mothers at about 60 days.

GOAT TOPICS

- What breed are they? Boer goats – a South African meat type goat.
- Do you milk them? No – you typically milk dairy type goats (Alpine, Toggenbergs, Sanaans, La Manchans). Meat type goats keep their kids with them and raise them like a beef cow or sheep would. Dairy type kids are removed from their mother and raised by the farmer, much like a dairy calf is removed from the cow and raised by the farmer so the milk can be harvested for sale.
- How many kids do they have? From 1-3 kids per doe.
- Do they have horns? Almost all Boer goats are born with horns – male and female. Some farmers prefer to dehorn the kids a few days after birth. 4H goat projects require the goats are dehorned for safety reasons.
- What do they eat? Mostly grass from the pasture. Hay and some grains in the winter.
- Why meat type goats? Goat meat is probably the most commonly eaten meat in the world. With our rising ethnic population in this country, there is a growing demand for goat meat.
- Do they usually kid this time of the year? No, they usually kid in the spring after coming into heat (estrus) in the fall. We have tricked them into coming into estrus in the spring so they would kid around State Fair time.

CHS Miracle of Birth Center
Poultry Q & A

Q. What is this type of housing?

A. This is a caged housing system. As of 2021, 70.7% (231.7 million hens) are conventionally housed. There are two conventional cages containing eight hens each and one “Enriched” cage with 32 hens. This represents a normal stocking density for laying hens. Other housing options include cage free aviaries and open range systems. Each system has pros and cons. The organic and cage-free shell egg production accounted for 29.3% (96.1 million hens) of the current table egg production. Of this, 6.8% are organic (22.3 million hens) and 22.5% are non-organic cage-free (73.8 million hens).

Q. What are the different parts of the cage that we can see?

A. The “Enriched” cage has a nest box and a scratch pad. It also has perches. Both cages have free-choice access to water and feed. Droppings fall through the flooring so as not to contaminate the eggs and to keep the birds clean.

Q. What breed are these chickens?

A. Hy-Line W36 in the conventional cages
Lohman in the Enriched cage

Q. How old are chickens when they start to lay eggs?

A. Chickens start laying eggs around 18-22 weeks of age.
These chickens are 33 weeks of age and have already been laying for 15 weeks.

Q. How many eggs does a chicken lay every year?

A. Young chickens lay 250-280 eggs per year. On average a hen will lay an egg every 25-26 hours. 90% of the eggs are laid in the morning. They need 8 hours of darkness and 16 hours of light each day.

Q. How old can a chicken be to still lay eggs?

A. A healthy hen can lay eggs for 10-12 years but slow down as they age.
Most modern farms have their birds lay eggs for about 80-90 weeks at which time they will be replaced with younger birds.

Q. What is molting?

A. Molting is the natural process when a chicken loses its feathers and re-grows new ones. It happens about once a year and lasts for 14-16 weeks. Egg production slows during molting.

Q. Do you need a rooster for a hen to lay eggs?

A. A hen does not need a rooster to lay an egg but most layers need an average of 14 hours of light per day to lay eggs.

Q. What is “hormone free” chicken?

A. All living organisms have hormones to regulate body functions, however no additional hormones are allowed in raising market hogs or poultry.

Q. Are brown eggs more nutritious than white eggs?

A. Eggshell color does not affect the nutritional value of an egg.

Q. How long will eggs stay fresh?

A. Refrigerated eggs will stay fresh for 5 weeks but will stay fresh up to 2 months if kept in an airtight container.

Q. How can you tell if an egg is fresh?

A. Fresh eggs sink in water while old eggs float. Always store eggs with pointed end down in the original carton as eggs are porous and can absorb other smells.

Q. What is the nutrient value of one egg?

A. 1 large egg provides 75 calories and all necessary nutrients needed except Vitamin C.

Q. What is the incubation time for a fertilized chicken egg?

A. The incubation time for a chicken egg is 21 days.

Q. What is candling eggs?

A. Candling is the process of shining a bright light through the egg in order to identify any imperfections in the egg like a cracked shell.

Q. How much feed will a laying hen eat?

A. $\frac{1}{4}$ lb/bird/day of a balanced ration that is high in calcium.

FREE RANGE VS. ENVIRONMENTALLY CONTROLLED CAGES

The move from raising laying hens under free range conditions to environmentally controlled cages has taken place over the years to improve the health and well-being of the birds.

1. Death loss has been reduced from 40% in free range conditions to 5% when in well-managed, environmentally controlled cage systems.
2. Egg production has improved from 140 eggs per hen per year to 240-300 eggs per hen per year.
3. Chickens are healthier in modern production systems and therefore require less need for antibiotic or anti-parasitic treatments.
4. Chickens are less stressed when kept in small groups of 4-8 birds because they do not have to re-establish a “pecking order” like they do in big groups.
5. The move to environmentally controlled caged housing has provided the consumer with a cleaner, safer and healthier product than ever before—the incredible edible egg.

Why do environmentally controlled cages provide a better life for chickens?

1. An environmentally controlled barn protects the birds from the ravages of extreme weather changes.
2. Modern chicken barns protect the birds from predators.
3. The birds and the eggs are cleaner in modern facilities.
 - a. Manure is carried away immediately with a moving belt beneath the cage so air quality is improved and there is less chance for fecal contamination.
 - b. Once an egg is laid it rolls gently to another conveyor belt and is transported safely to be cleaned and processed, giving consumers a fresher, more wholesome product.
4. Modern barns allow all birds to consume a high quality ration specially designed for their needs consisting of corn, soybean meal, vitamins, and minerals.
5. Modern barns allow a farmer or manager to walk through the barn and see each bird at a glance to make sure all is well.
6. Birds that are more comfortable, cleaner, and less stressed are healthier and happier birds, which is the goal of all farmers.

There are now 300 million laying hens in the United States, which produce 75 billion eggs per year—about 10% of the world’s supply.

CHS MIRACLE OF BIRTH HEN HOUSE POULTRY MESSAGE POINTS

The underlying goal of the CHS Miracle of Birth Center is to share the miracles of birth that happen every day on modern livestock farms. We want to demonstrate to the public how veterinarians and farmers have dedicated their professional careers to keeping their animals clean, comfortable and healthy. Modern housing systems have been designed to *improve* animal welfare!

The miracle at the hen house is how these laying hens can transform ¼ pound of high quality feed into a new egg every 24-26 hours.

There are several different types of housing for laying hens: conventional cages, enriched cages, cage-free, free range, and back yard. With all of the consumer interest in how birds are housed, we feel it is important that the consumer is well informed.

Farmers originally moved their birds into clean, climate-controlled housing to improve animal welfare and production. Caged housing prevents the birds from coming in contact with manure; it prevents the eggs from coming in contact with manure; and it minimizes the social stress associated with establishing and maintaining a stable “pecking order.”

Conventional 2' X 2' cages that hold eight hens may appear crowded (minimum of 67 sq. inches/bird) but this system has the lowest death loss, injury and social stress.

Enriched cages offer more space to the hens (minimum of 116 sq. inches/bird), perches, a nesting box and scratch pad.

Although lower cost of production is not a valid explanation to those who believe welfare improves in cage-free systems, consumers must be aware of the increased costs that must be passed on to the consumer. Average retail prices in the Midwest is \$0.93 per dozen. Average price is \$1.45 in California where hen housing is mandated by law. The average price of Certified Organic Eggs is \$6.50 per dozen. (USDA Egg Market News 8/21)

Additional important information with comparisons of the different housing systems is available on the posters next to the hens and on the Poultry Q&A.

All poultry industry volunteers should familiarize themselves with these message points, check in at the MOBC office, and wear a name tag that clearly identifies them as a volunteer. Thanks to all for helping to make the Hen House such a successful addition to the CHS Miracle of Birth Center.