Humane Society Veterinary Medical Association (HSVMA) Veterinary Report on Gestation Crates

April 2013

Gestation crates are stalls with metal bars and concrete floors that are used by the commercial pork production industry to individually confine pregnant sows. The industry standard is only 0.6-0.7 m (2.0-2.3 ft.) by 2.0-2.1 m (6.6-6.9 ft) in size, which is only slightly larger than the animals themselves, and restricts movement so severely that the sows are unable to turn around.[1] They are typically placed side by side in long rows on concrete floors, which are slatted to allow excrement and other waste to fall into a pit below.

It has been declared that difficulty performing the simple movements of standing and lying is indicative of poor sow welfare.[2] Jeremy Marchant-Forde, now a research animal scientist with the U.S. Department of Agriculture (USDA), and Donald Broom, professor of Animal Welfare at the University of Cambridge, assert that commercial stalls were not designed based on an understanding of these movements and note: "With these dynamic space requirements taken into account, the vast majority of gestation stalls and farrowing crates are too small in width and length to allow standing and lying to be carried out without spatial restriction."[2] Other animal scientists have made similar determinations and also suggest that crated sows experience increasingly severe discomfort as pregnancy advances.[3]

It is believed that the first time gestation crates appeared in the United States popular press was in December of 1960.[4] Called "sow holding pens" back then, they appeared at a time when North American indoor production systems were developing. Economic pressures caused pork producers to widely adopt gestation crates,[5] because more sows can be confined under one roof, thereby spreading the cost of capital investments over more animals, they require less labor to monitor feed intake, body condition, and interaction of social groups, and manure removal takes less time due to planned placement in a defined and small location (behind the sow). By the end of 2012, more than 5.8 million pigs were used for breeding in the U.S. pork industry.[6] Presently, the majority of the breeding sows are confined in gestation crates for nearly the entirety of their approximately four-month (112-115 day)[7] pregnancies.

Within U.S. animal agriculture, breeding sows produce an average of 2.1-2.5 litters each year[8] and are typically first impregnated around seven months of age,[9] primarily through artificial insemination.[10] About a week before birthing, sows are customarily moved into farrowing crates, and although these stalls have additional space to allow for piglets, the space allocated to their mother is just as restrictive as the gestation crate. The piglets are weaned at 17- 21 days old,[11] and the sows are re-impregnated 4 - 9 days later.[12] In the U.S., breeding sows are typically culled after 8 parities.[11]

So what does this mean for the pregnant sow? She spends over 80% of her existence—much greater than three quarters of her short lifetime—housed in extreme confinement. [Refer to Text Box 1 for detailed calculations.]

The welfare implications of this type of intensive confinement for such a prolonged period of time warrant a critical look, as there are serious physical, psychological, and ethical consequences. Given the viable alternatives to gestation crates, namely a variety of group housing options, there is a global trend toward phasing out gestation crate use in countries where growing social concern has taken hold.

Text Box 1: Calculations Used for Percent of Lifetime Breeding Sows are in Extreme Confinement

Numbers used for calculations:

Average number of litters/lifetime (before culled) = 8 litters/lifetime[11]

Mean gestation period = 113.5 days7

Age before 1st impregnation = 7 months = 210 days9

Mean number of days between weaning and next impregnation = 6.5 days[12]

Mean number of nursing days/litter = 19 nursing days/litter[11]

Typical number of days moved to farrowing crate before giving birth = 7 days

Typical lifetime of a breeding sow:

Pregnant days/lifetime:

8 litters/lifetime x 113.5 pregnant days/litter = 908 pregnant days/lifetime

Nursing days/lifetime:

8 litters/lifetime x 19 nursing days/litter = 152 nursing days/lifetime

Days between weaning and next impregnation/lifetime:

7 litters/lifetime x 6.5 days between weaning and next impregnation

= 45.5 days between weaning and next impregnation/lifetime

Total days/lifetime:

Pregnant days/lifetime (908) + Nursing days/lifetime (152) + Days between weaning and next impregnation/lifetime (45.5) + Age before 1st impregnation (210) = ***1,315.5 days/lifetime***

Note: This means that the typical breeding sow's lifetime is 1,315.5 days (i.e., she lives for 1,315.5 days before she is culled).

Number of days per lifetime and percent of lifetime in a gestation crate:

Days moved to farrowing crate before giving birth/lifetime:

8 litters/lifetime x 7 days moved to farrowing crate before giving birth/litter

= 56 days moved to farrowing crate before giving birth/lifetime

Total number of days/lifetime spent in a gestation crate:

Pregnant days/lifetime (908) – Days moved to farrowing crate before giving birth/lifetime (56)

= ***852 days/lifetime spent in a gestation crate***

Percent of lifetime spent in a gestation crate:

Days/lifetime spent in a gestation crate (852) divided by Total days/lifetime (1,315.5)

= ***64.77% of lifetime spent in a gestation crate***

Number of days per lifetime and percent of lifetime in a farrowing crate:

Total number of days/lifetime spent in a farrowing crate:

Days moved to farrowing crate before giving birth/lifetime (56) + Nursing days/lifetime (152)

= ***208 days/lifetime spent in a farrowing crate***

Percent of lifetime spent in a farrowing crate:

Days/lifetime spent in a farrowing crate (208) divided by Total days/lifetime (1,315.5)

= ***15.81% of lifetime spent in a farrowing crate***

Number of days per lifetime and percent of lifetime spent in extreme confinement:

Total number of days/lifetime spent in extreme confinement:

Days spent in a gestation crate/lifetime (852) + Days spent in farrowing crate/lifetime (208)

= ***1,060 days/lifetime spent in extreme confinement***

Percent of lifetime spent in extreme confinement:

Days/lifetime spent in extreme confinement (1,060) divided by Total days/lifetime (1,315.5)

= ***80.58% of lifetime spent in extreme confinement***

Physical and Psychological Consequences of Gestation Crates

Scientific literature demonstrates the adverse effects of gestation crate confinement on the well-being of sows and raises animal welfare concerns, including tangible physical and psychological consequences. Studies document a decrease in sow muscle weight, bone density, and bone strength due to movement restriction and lack of exercise. Crated sows also suffer from health problems associated with confinement, including urinary tract infections, overgrown hooves, and lameness, at a higher rate than do uncrated sows. Lack of bedding in gestation crates leads to poor hygiene, systemic and local cold stress, pressure soars on the skin, and limb injuries. Unable to engage in their natural rooting and foraging behavior, crated sows often engage in stereotypic bar-biting, an abnormal behavior characterized by repeated mouthing movements on the metal rails of their crates, as well as head weaving, repetitive drinker pressing without drinking, and sham or vacuum chewing.

Physical Health Concerns

Crated gestating sows have difficulty moving due to the spatial restriction, lack of exercise, and flooring type,[2] whereas group-housed sows have a greater range of movement and show fewer abnormities of bone and muscle development.[1] In addition, several factors relating to the construction of gestation crates and the unsanitary conditions prevalent in pig production facilities may predispose crated sows to disease and/or injury, including the physical and psychological impact of confinement on a highly intelligent species, slatted floors with sharp corners, rough concrete flooring, lack of bedding, and endemic infections.[3,13]

Discomfort can be compounded by problems associated with barren crates. Without any bedding materials, sows have no thermal protection, which can cause systemic and local cold stress, and may exacerbate injuries to skin and limbs.[14] Since gestation crates are barely larger than the sow's body, the animals must urinate and defecate where they stand. As such, the concrete floors of the crates are often partially or fully slatted to allow waste to fall into a pit below. Housing the sows directly above their own excrement has been shown to expose the animals to aversively high levels of ammonia,[15] and irritation of the respiratory tract by prolonged exposure to pollutants can make pigs more susceptible to respiratory diseases,[16] and ocular irritation.

Research led by Broom found 33% of crated sows required removal from production as a result of health problems, compared with less than 4% of group-housed sows.[17]

Injury Due to Gestation Crate Design

The welfare of the pig was not the primary consideration in the design of most current housing systems.[18] A survey of manufacturers revealed that engineers never used sow measurements while designing the first gestation crates.[19] Lack of welfare considerations, coupled with the increasing size of modern sows, has led to space restrictions so severe that the gestation crate is a significant cause of injuries to pregnant sows.

Sows experience soreness and injuries from rubbing against the bars of their enclosures and from standing or lying on barren concrete flooring.[3] As gestation crates are narrow and typically placed side by side within pig production facilities, recumbent sows must extend their limbs into adjacent stalls where they may be stepped on by neighboring sows.[3] The slatted floors often have sharp corners that can injure exposed limbs and sows who slip and fall in their crates.[3] Food-restricted sows can also suffer head and snout injuries from attempting to access an adjacent stall's feeder.[3] Research has shown that rates of injury increase with time spent in the gestation stall.[20] Despite concerns regarding injuries and research showing that providing extra stall space can

considerably reduce injuries and improve breeding sow welfare,[3] industry observers believe the trend may be towards even narrower stalls.[21] Though stalls have not yet become *physically* smaller, over time, they have become *effectively* smaller relative to the increased size of the modern day sow. The industry journal *National Hog Farmer* reported that in 1989 the sow stall was of adequate size to hold the average gestating sow,[22] but research from 2004 found that more than 60% of sows could not fit in conventional stalls without being compressed against the crate's sides.[23]

Foot and Leg Problems

In their natural habitat, pigs evolved to walk in woodlands and scrub. Putting sows in gestation crates with unnatural flooring changes the stresses on sows' feet[24] and is considered to significantly contribute to toe lesions.[25] Gestation crate confinement has also been found to excessively[26] cause damage to joints[27] and lameness.[28,29] Erosion of the cement floor from water and feed may leave rocks and sharp edges that can contribute to foot, leg, and shoulder sores,[30] and the bolts that fix the crates in place also contribute to similar injuries.[31]

Reduced Muscle Mass and Bone Strength

The health and welfare of breeding sows housed in gestation crates has been determined to be negatively affected by their inability to turn around or exercise.[28] The restriction of movement can lead to a "reduction of muscle weight and considerable reduction of bone strength,"[28] making the most basic movements difficult[28] and leading to a "greater chance of the sow slipping during lying and standing and incurring physical damage."[28] Successive pregnancies exacerbate the problems of diminished muscle mass and bone strength.[28]

Urinary Tract Infections

Gestation-crated sows suffer from a higher rate of urinary tract infections (UTIs) than uncrated sows[32] due to their inactivity, decreased water consumption, infrequency of urination,[33] and possible contact with their own waste.[29] These infections can result in a high mortality rate, with one study estimating that half of breeding sow mortalities were caused by UTIs.[33] In comparison, group-housed sows suffer a lower incidence of UTIs associated with inactivity.[1] Increasing the sow's water intake at one commercial operation using group pens rather than gestation crates nearly eliminated UTIs.[30]

Mortality

Sows confined in gestation crates have been found to suffer from dramatic weight loss after successive pregnancies and a high incidence of health problems requiring the animals to be "removed from the [production] system."[17] Research on crate-free production has found that both outdoor,[34] and loose-housing[17] systems offer benefits to sow health and longevity. Compared with typical U.S. crate production methods, deep-bedded, loose housing systems studied in Sweden result in lower cull rates and greater sow longevity.[35] Commercial operations have also recorded better reproductive performance and lower mortality rates for sows housed in pens rather than confined in crates.[30]

Compared to group-housed sows, gestation-crated sows show increased resting heart rates, likely due to decreased muscle fitness from chronic lack of exercise,[36] and are more likely to suffer decreased cardiovascular fitness.[1] The deaths of many pigs during transport can be traced to cardiovascular problems.[26]

Mental Health and Behavioral Concerns

When pigs are not confined, they are active and curious animals. Pigs are intelligent, social, inquisitive, and capable of learning complex tasks,[37,38,39] perceiving time, and anticipating future events.[40] Near immobilization in gestation crates without environmental enrichment or mental stimulation dramatically impairs their welfare.

Inability to Express Natural Behavior

Despite legislative and industry shifts away from individually confining pregnant sows, presently the majority of sows spend nearly their entire pregnancy in gestation crates. This prevents the animals from satisfying basic psychological needs and engaging in most of their natural social and individual behaviors,[41] including rooting, foraging, nest-building, grazing, and wallowing.[42,43] In natural environments, sows spend approximately 31% of their time grazing, 21% rooting, 14% walking, and 6% lying down.[42] Pigs also perform thermoregulatory behavior, such as wallowing and shade-seeking, when permitted.[43] When given space, sows elect separate areas for nesting, feeding, and eliminating.[42,44]

As highly social animals, pigs learn to perform simple tasks for the reward of contact with familiar individuals.[37,45] They develop behavioral and acoustic signals important to the organization of their social structure. Researchers have described more than twenty different sounds emitted by pigs while performing various social activities including feeding, play, maternal behavior, and sexual interactions.[46] For wild boars and feral pigs, their home range, for which they show a high degree of site fidelity, can vary from less than 1 km^2 (0.39 mi^2) to more than 25 km^2 (9.65 mi^2).[47] When released from confinement to semi-natural enclosures, sows quickly revert to natural behavior including rooting, nest-building, and traveling long distances, and spend considerable time performing such behaviors when given the opportunity.[42]

Intensive confinement, however, thwarts nearly all this behavior, reducing daily activity to approximately ten minutes—the time it takes sows to eat their concentrated diet. According to one veterinarian, confinement in gestation crates is "so foreign to what I perceive to be the natural habits of swine that it is unjustified by the economic benefits perceived to result."[48] Compared to group-housed sows, crated sows have been found to be more often frustrated, indicated by the amount of time spent performing stereotypic behaviors,[17] due to their inability to express natural behavior such as foraging. Confinement in gestation crates, according to Marchant-Forde and Broom, "has resulted in alteration or prevention of many of the sow's normal behaviours, increases in abnormal behaviour and in various other indicators of poor welfare."[28]

Stereotypies

Stereotypies are characterized as movement or behavior that is abnormal, repetitive, and seemingly with no function or goal.[49] Researchers attribute this behavior to boredom and frustration resulting from an impoverished environment, confinement, restraint, and unfulfilled needs.[49,50] Stereotypies are commonly described in animals in zoos and laboratories, indicating the animal has difficulty coping with the conditions of his or her confinement or is in an environment deleterious to welfare.[50]

Stereotypic behavior is common among gestation-crated sows and includes repetitive bar-biting, head-weaving, pressing their drinkers without drinking, and making chewing motions with an empty mouth, called sham- or vacuum-chewing.[18,49,51] Stereotypic behavior can lead to physical injury, such as sores from excessive rubbing against the crate's bars or damage in the mouth from bar-biting and sham-chewing.[49]

Confined sows are typically fed half the amount they would eat *ad libitum* to prevent excessive weight gain and fat deposition,[52] which can result in poor reproductive performance. It is believed that this restrictive diet, combined with the inability to forage, contributes to the development of stereotypic behavior and stress.[53,54]

Crated sows spend considerably more time performing oral stereotypic behavior than those housed in small groups. In one study by Broom *et al.*, sows in crates exhibited abnormal behavior approximately ten times more often than group-housed sows. One crated sow spent more than 40% of her time performing stereotypies. The authors commented: "Using a wide range of welfare indicators, it was clear that stall-housed sows had more problems than group-housed sows and that these problems were worse in the fourth than in the first pregnancy." The amount of time sows engaged in stereotypies in the study increased with the time spent in crates.[17] By comparison, in situations where sows have greater freedom in more complex environments, the amount of stereotyped behavior is virtually zero.[55]

"That stereotypies are an indication of welfare problems was a strong consensus among nearly all authors whose work was reviewed,"[56] concluded the American Veterinary Medical Association's (AVMA's) Task Force on the Housing of Pregnant Sows. The European Scientific Veterinary Committee agreed: "The extent of stereotypy gives an indication of how poor the welfare is."[55]

Unresponsiveness

Unresponsiveness in sows is another behavioral disorder indicative of poor welfare. Over time, crated sows respond less to external stimuli, including water poured on their backs, sow grunts, an electronic buzzer, and even squeals from piglets[57,58] The SVC commented that inactivity and unresponsiveness are abnormal and it is likely that crated sows become clinically depressed.[59]

Aggression

Limiting aggression is often given as justification for confining sows in gestation crates, yet antagonistic interactions remain a problem in stall housing systems. Studies have shown that confinement in individual stalls may lead to "unsettled dominance relationships" and "high aggression levels."[60] These unresolved antagonistic interactions are likely to cause stress and worsen with successive pregnancies.[17,61] Crated sows have been found to experience agonistic interactions up to three times more often than group-housed sows and cannot readily practice avoidance.[17] This same study found that stall-housed sows were more aggressive than group housed sows by their fourth pregnancy.[17] Although aggression can be a welfare problem in group housing, it can be curtailed with responsible management and good practices,[62] including selective breeding for temperament and housing by size and behavior.

Ethical Concerns about Continuous Close Confinement

Gestating sows are often subjected to repeated four month confinement periods in gestation crates, which can lead to a lifetime of confinement. Continuous close confinement is a topic of serious ongoing ethical deliberation worldwide. Given the growing social concern regarding the way farm animals are managed and housed in intensive agriculture, gestation crates have, to date, already been banned in nine U.S. states, with further legislation moving forward in additional states, as well as Sweden and the United Kingdom.

The veterinarian's role in addressing ethical concerns about animal welfare was brought to the forefront when the American Veterinary Medical Association Executive Board approved a recommendation from the Animal Welfare Committee to amend the Veterinarian's Oath to clearly identify animal welfare as a priority of the veterinary profession in November 2010.[63] The revised section of the oath now reads: "Being admitted to the profession of veterinary medicine, I solemnly swear to use my scientific knowledge and skills for the benefit of society through the protection of animal health *and welfare,* the *prevention and* relief of animal suffering, the conservation of animal resources, the promotion of public health, and the advancement of medical knowledge." (The committee's additions appear in italics.) This oath should not be applied selectively, depending on the purpose for which the animal is kept. Whether loved as a companion animal in someone's home or used for agricultural purposes, the underlying biology that affords each animal the ability to experience either a positive quality of life or a poor one is the same.

Severe behavioral restriction is inherent to crate confinement, making it impossible to provide an acceptable level of welfare in such a system. We would not accept continual confinement in a crate for a dog or a cat, because it is such an obvious cruelty, and we should be consistent in requiring that animals used in agriculture are held to the same ethical mandate.

Global Trend Toward the Elimination of Gestation Crates

For welfare reasons, gestation crates are being phased out in the European Union (with a total ban on use after the fourth week of pregnancy effective in 2013),[64] Tasmania,[65] and New Zealand.[66] The pork industry has initiated a voluntary ban in the whole of Australia,[67,68] and South Africa is discussing a phase-out by 2020.[69] The European Union Scientific Veterinary Committee criticized gestation crates in its 1997 report, "The Welfare of Intensively Kept Pigs," and concluded: "No individual pen should be used which does not allow the sow to turn around easily."[70]

Despite the clear international trend, gestation crates remain at present a common animal agribusiness practice in the United States. In 2001, animal scientists estimated that 60-70% of breeding sows are confined to gestation crates,[71] but a 2012 survey conducted by a University of Missouri economist reportedly found that for pig production operations with 1,000 or more sows, 82.7% are kept in gestation crates.[72]

State Bans in the United States

Recent policy changes in the United States have indicated a clear move away from gestation crate practices. In 2002, Florida voters legislated against the use of gestation crates, with the ban going into effect in November 2008.[73] In 2006, Arizonans passed the Humane Treatment of Farm Animals Act, a voter proposition that disallows both gestation crates for pregnant sows and crates for calves raised for veal beginning January 1, 2013.[74] In 2007, Oregon became the first state to ban the use of gestation crates through the state legislature, a ban effective on January 1, 2012.[75] Colorado followed suit in 2008, banning crates for both calves raised for veal and pregnant pigs with a ten year phase-out period.[76] A November 2008 ballot measure in California, which passed with 63.5% of the vote, bans gestation crates, veal crates, and battery cages for egg-laying hens, effective January 1, 2015.[77,78,79] In May 2009, the Maine legislature passed a law banning gestation stalls for sows and veal crates for calves throughout the state, effective January 1, 2011.[80] Michigan followed in October 2009, with passage of state legislation that will phase out veal crates and gestation crates within ten years.[81] In 2010, an agreement in Ohio led to a comprehensive set of rules banning the use of gestation crates for pregnant

sows after 2025, among other animal welfare improvements.[82,83] In 2012, the state of Rhode Island enacted a legislative ban against gestation crates.[84]

Food Industry Trends

Industry shifts within North America also indicate a pronounced movement away from the use of gestation crates. In 2007, Smithfield Foods, the world's and United States' largest pig producer,[85,86] and Maple Leaf, Canada's largest pig producer,[86] made corporate commitments to phase-out their use of gestation crates.[87,88] Said Smithfield Foods CEO Larry Pope, "Our own research has demonstrated that group pens are as good as individual gestation stalls in caring for pregnant sows."[89] Hormel Foods has indicated they will stop using gestation crates in their company owned facilities by 2017,[90] and Cargill has reached 50% gestation crate-free production.[91] Celebrity chef Wolfgang Puck has committed to purchasing pork from crate-free sources for all of his restaurants;[92] Denny's Corporation, a national chain of diners, has endeavored to purchase products from companies that do not use gestation crates;[93] Wendy's is working with suppliers in the United States and Canada to eliminate gestation crates;[91] Burger King has begun purchasing crate-free pork in increasing quantities;[94] Cracker Barrel stores plans to transition to crate-free pork;[95] Bon Appétit Management Company, operating over 400 cafés for corporations, universities, and other venues, plans to be 100% gestation crate-free by 2015;[96] Oscar Mayer, owned by Kraft Foods,[97] and the Sonic drive-in chain[98] have set a specific time frame to eliminate gestation crate use by 2022. In 2012, grocery store giants, Safeway[99] and Kroger,[100] announced plans to move away from gestation crates in their supply chains, and the largest foodservice company in the world, Compass Group, has stated it also will eliminate gestation crates.[91] McDonald's 2008 Corporate Responsibility Report states it "has long supported suppliers that choose to move away from sow gestation crates and tethers,"[101] and in 2012 the company announced a goal to source all of its pork from producers who do not use gestation crates within 10 years.[102]

Alternatives to Gestation Crates

Alternative systems that do not rely on gestation crate confinement have the potential to greatly improve the welfare of sows. Such alternatives include "turn-around" stalls, free-range and pasture-based systems, and, most commonly, indoor group housing. Turn-around stalls are slightly larger than customary gestation crates and may have a moving wall that allows the sow to turn around inside the crate. In free-range systems, sows are afforded access to the outdoors and, optimally, are given the freedom and materials to express natural behavior such as nest-building and rooting. Sows are raised outdoors in pasture-based production and typically are provided portable housing or shelters to allow for sustainable rotational practice. With indoor group housing, the main alternative to gestation-crate systems, groups of up to several dozen sows are housed together in indoor pens, sometimes with deep litter allowing for access to bedding materials, and are given freedom to move and the opportunity to socialize.

Feeding practices in group-housing systems vary. Often, group-housed sows are fed through automated or manual on-ground distribution of enough food for the entire group. This practice can result in aggression among sows during feeding, due to competition for resources. Various types of feeding stalls have been introduced to reduce this aggression. Free-access stalls allow sows to enter an individual stall to feed, but do not resolve all welfare issues, particularly when sows who eat at different speeds are housed together; those who finish eating quickly may exit their stalls and bite slower-feeding sows in other stalls. Some free-access stalls are fitted with a back gate or an automated, controlled rate feeder, so that faster-eating sows are forced to eat more slowly,

thereby eliminating this aggression. The most effective alternative to date is the electronic sow feeder (ESF) system, which allows entry of one sow at a time, identifies her through an electronic tag or collar, and distributes the appropriate ration. When the sow finishes eating, she leaves through a separate exit. In the ESF system, feeding aggression is eliminated because sows do not have to compete for food. In several countries, ESF systems are being widely adopted and their welfare advantages are well-documented in scientific reviews.[17,103]

Higher sow productivity is possible in group housing than in individual crates, resulting from reduced rates of confinement injuries and urinary tract infections,[32] earlier first estrus,[104,105] larger litter size, and lower stillbirth incidence.[12] Commenting on the increased litter size in group versus crated housing systems, Iowa State University animal science professor Mark Honeyman was quoted as saying it is "a large difference….It's significant from an economic value and productivity value viewpoint."[106]

In its review, the Scientific Veterinary Committee reported that sows in groups "have more exercise, more control over their environment, more opportunity for normal social interactions and better potential for the provision of opportunities to root or manipulate materials.…As a consequence, group-housed sows show less abnormality of bone and muscle development, much less abnormal behaviour, less likelihood of extreme physiological responses, less of the urinary tract infections associated with inactivity, and better cardiovascular fitness."[70] Currently more than four million sows are raised in group housing systems in Europe.[107]

Conclusion

The welfare implications of the use of gestation crates are very significant. These crates curtail the pregnant sow's movement so severely that she is unable to even turn around, which prevents the expression of normal patterns of behavior, while the lack of bedding exacerbates their extreme discomfort. Furthermore, an extensive body of scientific evidence confirms that gestation crates result in poor health and welfare. Housing intelligent, sentient beings for months at a time in this manner is inhumane and constitutes cruelty. A better and more humane choice is the use of well-managed group housing systems for gestating sows.

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