

INTENSIVE PIG FARMING: ETHICAL CONSIDERATIONS

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SUMMARY

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I. INTRODUCTION

Pork is the most widely consumed meat in the world. To produce the quantities of pig meat needed to meet customer demand, pig farms have become industrialized systems and hundreds of millions of pigs around the world are kept in these factories. In these indoor facilities, pigs suffer from confinement, isolation or overcrowding and the frustration of their natural behavior. Also, they experience stress, discomfort, pain, injury and disease, are prone to tail biting and are routinely fed up with antibiotics. Therefore, the way pigs are treated in intensive systems poses ethical and welfare concerns. Here, I attempt to highlight the main knowledge on natural pigs behavior as well as the psychological characteristics of pigs like cognitive skills, intelligence and their capacity to feel emotions. Also, conditions of the intensive indoor systems and the consequences for pig welfare are summarized. Finally, and based on this information, intensive farming conditions are analyzed and discussed from an ethical point of view.

II. THE NATURAL BEHAVIOR OF PIGS

The domestic pig (*Sus scrofa*) is an eutherian mammal and a member of the

Cetartiodactyla order and originates from the European wild boar¹. Modern domesticated pigs are not too dissimilar, cognitively and behaviorally, from ancestral and modern wild boars²⁻⁴. Pigs are highly social animals that under free-ranging conditions live in groups of approximately eight individuals. Grouping promotes foraging, nursing, and protection against predators. The groups typically consist of three sows and their offspring, while boars are solitary⁵. A hierarchy is formed at social maturity; for instance, sows in the same group cycle at the same time and participate equally in group to the maternal behavior, although one sow will remain with the piglets while the others forage. Pigs also build nests that they use to rest, to huddle and to give birth by selecting a secluded area and collecting grass and small branches⁶. Pigs wallow in mud, using its cooling properties to help them regulate their body temperature and skin care since they have only few sweat glands⁷.

Our understanding of pigs' psychology, intelligence and cognition, however, is less studied because the scientific research has been mainly focused on themes related to intensive farming. However, recently, Marino and Colvin⁸, demonstrated that pigs possess complex ethological traits similar to dogs or chimpanzees. They showed that pigs have the capacity for long-term memory and for the comprehension of gestural and verbal symbols and actions. Also, these animals seem to have the abilities of time perception and anticipation as well as self-awareness. As social animals, pigs are playful animals⁹, which is related with creativity, cognitive complexity and certain personality traits. The study of personality is important to recognize in non-human animals individuality and then, they can be viewed not only as one-dimensional interchangeable members of a species, but rather as more complex individuals. Several studies have found personality profiles, dimensions and structures in pigs comparable to the human dimensions of agreeableness, extraversion and openness^{10,11}. Finally, pigs have demonstrated feeling emotions like anxiety, fear and even empathy^{12,13}. Therefore, pigs are sensitive to the emotions of other pigs and they respond with anticipation to positive and negative events of other pigs, revealing the importance of the environment and circumstances that surround them.

III. INTENSIVE PIG FARMING

At the present time, more than one billion pigs are killed each year worldwide¹⁴. The majority of pigs are used for human feeding but also supply skin, fat and other materials destined for clothing, ingredients for processed foods, cosmetics and other medical uses. To achieve these high numbers, pig farms have become massive and commercial pig production industries.

Firstly, pigs on commercial facilities are raised in much smaller spaces than they would normally occupy if they were permitted to roam freely. The lack of space and the artificial group structure can negatively influence social interactions¹⁵. Inadequate space allowance also contributes to stress and increased levels of aggression, harmful social behaviors and transmission of diseases¹⁶. For pigs in the fattening stage of production, respiratory and enteric diseases are common infectious disorders¹⁷. Secondly, indoor facilities are characterized by slatted floors and steel fixtures in order to facilitate the handling and the cleaning of the area. However, this industrial facility characterized by the absence of enriched, interesting surroundings, produces apathy and frustration that may manifest itself in abnormal behaviors such as tail biting or biting others^{15,18}. To prevent tail biting, the tails of newborn piglets are usually cut off quickly and without any pain relief. In the industrial facilities, the inadequate flooring also causes foot lesions in pigs, leading to claw injuries, over grown claws and pain¹⁹.

Thirdly, odors, dust, and noxious gases, including ammonia, hydrogen sulfide, and methane, emanate from industrial confinement farming operations due to the decomposition of animal waste²⁰. Poor air quality also causes serious consequences for the health of pigs, such as pulmonary diseases²⁰.

Moreover, pregnant sows are commonly confined in individual stalls, small cages that restrict normal postural adjustments that are so narrow that they prevent the sow from even turning around¹⁵. Sow stalls negatively affect the health of the animals. The restriction of movement and the lack of exercise can lead to a reduction in muscle weight and bone strength. These restricted animals also have higher basal heart rates due to their inactivity and they can experience soreness and injuries from rubbing against the bars. As a consequence, sows suffer from psychological problems, as evidenced by the presence of stereotypies (repetitive behavioral patterns induced by repeated coping attempts, frustration, and/or brain dysfunction²¹) like bar-biting (on the stalls that confines them) and sham-chewing (with nothing in their mouth)²². Fortunately, the use of sow stalls is already limited or prohibited by legislation in several European countries, including the UK, Sweden, Finland, Norway and Switzerland. However, in the EU as a whole, individual housing in stalls still remains the most widely used housing system for sows during gestation¹⁵.

Finally, there are also other problematic issues related to intensive industrial pig

farming. For instance, individualized attention to each animal is generally nonexistent and thus, when animals become sick or injured and their pain and suffering cannot be controlled, the pigs are sometimes killed on-farm. In commercial pig confinement operations, the animals are largely not used to novel experiences and human handling. So, moving them between production sites or onto a transport truck can be difficult for both pigs and handlers. Handlers often use an electric prod - a device that delivers a high voltage electric shock. Despite industry-wide recognition that electric prods are stressful for pigs, their use remains widespread. The castration of male piglets is also commonly performed to avoid “the boar taint” (offensive odor or taste that can be evident during the cooking or eating of pork products derived from non-castrated male pigs once they reach puberty). Surgical castration represents a serious welfare problem and some studies confirm that it is painful. Following castration, piglets show behavioral changes indicative of pain, including trembling, spasms, stiffness, prostration, huddling up, avoidance of certain postures, tail wagging and scratching the rump, and some of these behaviors persist for several days following the procedure²³. The transportation of young pigs from farrowing operations to grow-out facilities and the transportation of adult pigs to the slaughter plant are a source of several welfare problems too. Although conditions for each trip vary, pigs can experience a range of stressors, including loading onto the truck, the comfort and postural stability of animals during the journey, the difference of temperature outside and inside the truck, the restriction of feed and water and the inhumane handling and loading of the animals. Upon arrival at the slaughter facility, some pigs are too sick, injured, stressed or fatigued to walk on their own. Others do not survive the trip. Once the pigs arrive to the slaughter plant, they are sometimes rendered insensitive prior to slaughter with the use of a captive bolt gun, an electric current, or by carbon dioxide (CO₂) gassing. The adequacy of stunning methods at producing unconsciousness has been elucidated in laboratory studies. The bolt gun is capable of producing an immediate, irreversible stun based on electrical activity recorded in the brain. CO₂ stunning, however, is not instantaneous, and neurological measures reported that it takes 60 seconds for pigs to become unconscious²⁴. Immediately after an animal is rendered unconscious, vigorous convulsions may occur. However, it is not completely clear whether muscular movements that occur during CO₂ stunning are reflexive, a consequence of convulsive activity in unconscious animals, or conscious attempts to avoid the gas²⁵.

IV. ETHICS

The scientific research described above clearly proves that our knowledge about natural pig behavior, psychology, intelligence and cognition is currently well known. At the same time,

it is demonstrated, and supported by science, that intensive farming produces serious problems of suffering, pain and misery to pigs. Therefore, the mandatory question which we, as humans, should ask ourselves is as follows: is it ethical and moral to continue manipulating the lives of pigs for the enjoyment of humans, knowing the suffering that it involves?.

It is evident that there is discordance between the behavioral needs of pigs and the life afforded to those raised commercially for the meat industry, which has created many physical and physiological animal welfare problems. However, the answer to this question will depend on how we think that animals should be treated, and what we consider to be their status as living beings. Peter Singer, a utilitarian philosopher, affirms in his book "Animal Liberation", that the interests of animals should be considered because of their ability to experience suffering, regardless of whether they have the faculty of reason or language. If a being suffers, "there can be no moral justification for regarding the pain (or pleasure) that animals feels as less important than the same amount of pain (or pleasure) felt by humans"²⁶. Based on Singer's formulations, intensive pig farming represents a serious ethical issue. Among all the animals that humans raise for feeding, the pig is the most intelligent, comparable to dogs and chimpanzees, as mentioned above. Thus, we must keep in mind that pigs have high level of intelligence, that they are social animals, and that they also have sensations and emotions to assess the breeding conditions. However, emotional and social needs are ignored in intensive pig farming. Animals are locked in tiny cages, mutilated, mothers separated from offspring, with the overcrowded and barren facilities in the farming industries failing to offer pigs the opportunity to display their full range of complex social and exploratory behaviors. Therefore, the application of industrial methods to animal production causes a great degree of suffering.

Despite being aware of this suffering, humans continue raising pigs through intensive farming methods. Singer also argues in his book that most human beings are what he called "speciesist", which entails "a prejudice or attitude of bias in favor of the interests of members of one's own species and against those members of other species"²⁶. Therefore, we can conclude that the human interest in pig breeding is higher than in their welfare. The interest may be economic, or related to preferences of a meat diet or the use of certain clothing that demands pigskin. Nevertheless, the problem may be that most humans consider animals as a property²⁷; therefore animals have only the value that we choose to give them. If we give animals the right not be treated as our property, we may not use them for our benefit. Treating animals in a way that we would never think it appropriate to treat any human; this is because we think that we have the right to do it because they are our property²⁷. We breed pigs in order to take advantage

of them, and then we have an obligation to take care of their welfare. But, maybe we should stop bringing them into existence on such a massive scale, and using them as a resource, thus reducing suffering and ensuring that we would not be responsible for more innocent deaths.

Finally, our attitude towards animals is conditioned by our education. In the case of pigs, from childhood onwards, the word “pig” is used to suggest someone to be dirty, indecent, dishonest or despicable. This meaning of the word is then applied to the animal, however this is very far detached from reality. As it was described above, pigs are quiet, social and intelligent animals with cognitive and emotional capabilities. The ignorance and the lack of information, however, leads us to consider pigs to be animals that do not deserve our consideration. A more complete, accurate and realistic education about pig biology and behavior may change the value and importance of pig welfare in our society. Another important point to consider is the lack of information that society has about intensive pig farming. The lack of awareness in our society about animal abuse and cruelty in intensive farming may be due to the lack of awareness of citizens. Most consumers do not know what happens before the meat hits the plate; they do not know how pigs are bred, grown or killed. A society that is more informed about the reality of industrial farming could be more sensitive to animal farming problems and, in this case, about pigs.

V. CONCLUSIONS

The way that we treat pigs in intensive farming has led to several ethical concerns. Pigs are treated simply as units of production rather than as the sentient beings that they are. Most pigs are now raised in industrial confinement operations, massive industries where animal welfare concerns often remain unaddressed despite substantial scientific evidence that the animals in these conditions routinely suffer in a variety of ways. The pig production industry has failed to fully recognize and adequately address welfare concerns. There is a desperate need to improve their housing, care, and treatment throughout the industry and to work on a new way of viewing farmed animals.

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