Horses in the United States no longer wanted have been sold or discarded by their owners throughout history, but it is only in the last few years this subset of the horse population has been designated “unwanted”. To many, the horse is a symbol of beauty, grace, and the American West. A study of American attitudes toward animals in 1980, found the horse to be one of the top 3 most beloved animals. \(^{(1)}\) Public sentiment and misinformation provided by animal activist groups have greatly complicated the unwanted horse issue and the discussion of end-of-life decisions for horses. Adding to the divisiveness in the unwanted horse debate is the fact the American horse industry and the Federal government classify horses as “livestock” whereas the non-horse owning public considers the horse a “companion animal” or pet.

U.S. horse population numbers increased gradually from their introduction into North America, peaking in 1910 at 19.8 million head. That number decreased dramatically with the start of industrial mass production of motorized vehicles and reached an all time low of 1.6 million head in 1974. \(^{(2)}\) Because most horses no longer had value as work animals and the interest in horses as recreational animals had not yet surfaced, horse surplus reduction occurred at dozens of horse processing plants across the country where they were processed for both human and animal consumption. Later, as the number of surplus horses dwindled and pet food manufacturers
turned to cast off products from beef and hog processing plants, the number of horse processing plants dwindled to a very few. American consumers never developed a preference for horse meat and as their economic situation improved in the post-war years, horse meat largely fell out of favor. As these events were occurring in the United States, post-World War II European and Asian populations were being encouraged to eat horse meat that was considered lean and a good source of iron. The result was the development of a U.S. horse meat export market to European and Asian countries for human consumption. The U.S. horse slaughter industry steadily grew to meet that demand and in the late nineteen eighties was processing over 300,000 horses per year on average. Overtime, the number of horses processed gradually declined and reached a low of only 42,303 head in 2002 before stabilizing at approximately 100,000 head per year over the last few years.

Today, over one billion people, or 16% of the world’s populations, eat horse meat. According to the Food and Agriculture Organization of the United Nations (FAO) total production of horse meat for human consumption world-wide in 2007 was 1,040,450 tons, roughly five million horses. This is an increase of 27.6% in consumption since 1990. The top five leading horse meat producing countries in 2007 were China, Mexico, Kazakhstan, Mongolia, and Argentina. Generally, English speaking countries, such as the United Kingdom, Australia and the United States, do not consume horse meat, yet often export it to countries that do. The horse processed for meat represents the lowest economic level of the U.S. horse population and epitomizes the unwanted horse. Therefore, when addressing the unwanted horse problem, the issue of processing horses for human consumption and its welfare implications must be considered. Unfortunately, the debate over the processing of horses for human consumption has polarized the
U.S. horse industry and non-horse owning public. Segments of each have strong, emotional opinions on the subject and share little common ground. This may be due to the change in modern American culture, which is two to three generations removed from the ranch or farm, toward animal advocacy and away from viewing animals as a food or labor source. That coupled with increased costs in boarding, farriery, hay, fuel, and veterinary care has made it harder and more problematic to keep a horse until its natural death. When age, physical disability, or behavior decreases the horse’s value below a certain point, it often ends up at a slaughter plant. And therefore, the issues of the unwanted horse and the horse processed for meat cannot be separated.

Until the Bovine Spongiform Encephalopathy (BSE) outbreak in Europe in 2000 and the Foot and Mouth disease epidemic that occurred in the United Kingdom in 2001, Americans, both the horse owning and non-horse owning public, were not aware horses were being processed in the United States and their meat shipped to foreign markets. In addition, both disease outbreaks were responsible for changing many European consumers’ preferences from beef to horse meat. (6) This change drew American media attention to the fact horses were being processed for meat in the United States and their meat exported to Europe for human consumption. Media coverage of the issue not only drew the attention of the horse owning public, but also equine breed associations, animal rights/welfare organizations, veterinary associations and the non-horse owning public. Because of the resultant focused lobbying efforts of many animal activist groups and some horse owners, federal legislation was introduced in the U.S. Congress in 2001 to prohibit processing of horses in the United States for human consumption. The legislation
sparked aggressive debate on equine welfare and initiated a series of unintended horse industry welfare and financial consequences.

The term “Unwanted Horse” was first coined by the American Association of Equine Practitioners (AAEP) at a horse industry meeting in Washington D.C. in 2005. Unwanted horses are defined as “those no longer wanted by their current owner because they are old; injured; sick; unmanageable; fail to meet their owner’s expectations; or the owner can no longer afford to keep them”.(7) Generally, these are horses which are geriatric, incurably lame, have behavior problems, or are dangerous. They also include un-adoptable feral horses and horses that fail to meet their owner’s expectations because they are unmarketable, unattractive, not athletic, unmanageable, have no color, are the wrong color, or cost too much to maintain. Normal healthy horses of varying ages and breeds may also become unwanted.(8) In many cases, these animals have had multiple owners, have been shipped from one sale barn, stable or farm to another, and have ultimately been rejected. In 2007, approximately 58,000 horses were processed for meat in the United States, ±35,000 horses were exported to Canada for processing, ±45,000 were exported to Mexico for processing.(T.Cordes, USDA, personal communication) In 2008, after closure of the U.S. horse processing plants, ±57,000 horses were exported to Mexico and ±50,000 were exported to Canada for slaughter. In addition, ±21,000 un-adoptable feral horses were kept in Bureau of Land Management (BLM) funded long-term sanctuaries, ±9,000 feral horses were in the BLM adoption pipeline and an undetermined number of unwanted horses were potentially abandoned, neglected or abused. As of February 2008, there are approximately 29,500 wild horses and 3,500 wild burros roaming free on BLM-managed range lands. Because feral horses have few predators, the herds double in size every four years unless animals are captured and
removed. Since 1971, 235,000 wild horses and burros have been removed from federal lands and adopted (9). Feral horses that are over ten years of age when captured or have been put up for adoption three times and not adopted are placed in long-term BLM funded refuges where they live out the rest of their lives. In 2007, BLM spent $26 million to support wild horses and burros kept in short and long-term holding facilities (10). That is well over three-fourths of the BLM’s 2007 fiscal budget of $38.8 million. The BLM is authorized under a 2004 amendment to the 1971 Wild Free Roaming Horses and Burro Act to sell “without limitations” unadoptable horses and burros, but pressure from animal activists and public sentiment has not allowed these animals to be euthanized or sold for slaughter.

Initially, there was debate in the horse industry on what type of horses were primarily represented and who was responsible for creating the significant number of unwanted horses in the U.S. However, U.S. Department of Agriculture (USDA) export records on U.S. horses shipped to Canadian processing plants in 2002-2005 reveal 42.8 percent were geldings, 52.1 percent were mares, 3.41 percent were stallions, and the gender was not recorded on 1.70 percent. In addition, 70 percent were western type horses, 11 percent were English or Thoroughbred type horses, 3.6 percent were draft type horses, and the rest included various breeds or types of horses or mules (11). Observational studies conducted in 2001 reveal that “riding” horses make up 74% of the horses processed for meat as opposed to draft or other horse types (12). In general, these types of horses reflect the demographics of the U.S. horse population with no specific type or breed of horse standing out as the quintessential unwanted horse. On average, over the past 10 years, 1-2% of the 9.2 million head (75,000 – 150,000 horses) domestic equine population in the United States has been deemed unwanted and sent to processing.
According to the 2005 USDA National Animal Health Monitoring System survey, ± 167,000 (1.8 percent) horses in the United States 30 days of age or older were euthanized or died that year. In addition, ± 112,000 (1.3 percent) horses were processed for meat. The total mortality for horses in the United States in 2005 was approximately 3 to 4 percent of the horse population of 9.2 million. These percentages have varied little during the last decade. The question facing the horse industry is if the option of annually removing many of the unwanted horses from the general horse population via euthanasia at a processing plant is legislated out of existence, will the horse industry be able to provide adequate care and accommodations for these animals or will it be forced to absorb the additional cost of their euthanasia and carcass disposal?

In recent years horse rescue/adoption/retirement organizations have, to their credit, made a conscientious and concerted effort to provide care, funding or suitable accommodations for unwanted horses in both the private and public sector. The number and capacity of these facilities can only be estimated as they function relatively independently and do not have a national organization. The American Horse Council’s National Assessment of Contributing Factors Surrounding the Unwanted Horse Problem found the average maximum capacity of rescue/retirement/retraining facilities is 42 horses or an estimated total of 18,060 horses per year. Due to the long natural life span of twenty five to thirty years for most horses, rescue/adoption/retirement facilities face a potentially long, costly care period for each horse, and have placed funding as the critical, limiting factor for those striving to provide an adequate standard of care. In addition, there is a strong need for the formation of a national oversight organization that could inspect and register equine shelters that meet humane husbandry
standards in order to prevent animal hoarders and unscrupulous horse traders from taking in horses under false pretenses. According to the American Horse Council study, rescues reported the cost to maintain a horse for one year to be $2,300 on average. If the horses sent to processing plants in 2008 had been rescued, it would have cost the industry $343 million. This annual cost, however, understates the total cost required because unwanted horses that would have been processed in previous years will now remain in the horse population.

There are a number of options for horses that are unwanted or no longer considered useful. Some can be retrained for other uses. This is common in racehorses that often find second careers in dressage or hunter jumper competition or cutting horses that find second careers in team penning or as pleasure horses. Some are donated to university animal science departments, law enforcement agencies, veterinary teaching hospitals or therapeutic riding programs. As has been discussed earlier, some are simply euthanized at the request of their owners or sent to processing plants. Whenever there are large numbers of unwanted horses, there is always concern for their welfare and the reality for many unwanted horses is that they become a burden and are potential candidates for abuse, neglect or abandonment.

For those responsible horse owners who do not want to burden others with the disposition of a horse that is old, lame or no longer useful, the option of euthanasia and carcass disposal is available. The term euthanasia is derived from the Greek terms *eu* meaning good and *thanatos* meaning death. A good death occurs with minimal pain and at the appropriate time in the horse’s life to prevent unnecessary pain and suffering. According to the American Veterinary Medical Association’s 2000 Expert Panel on Euthanasia Report, there are three acceptable forms
of euthanasia for horses: an overdose of barbiturate anesthetic, gunshot and penetrating captive bolt.\textsuperscript{(18)} Sodium pentobarbital is the most commonly used barbiturate for euthanasia in the horse and, when administered intravenously, depresses the central nervous system, causing loss of consciousness and deep anesthesia progressing to respiratory and cardiac arrest.\textsuperscript{(19)} Unacceptable injectable agents include strychnine, nicotine, caffeine, magnesium sulfate, cleansing agents, solvents, disinfectants and other toxins and salts.\textsuperscript{(18)} Physical methods of euthanasia include gunshot and penetrating captive bolt. When properly applied, both cause trauma to the cerebral hemisphere and the brainstem, resulting in immediate unconsciousness and a painless, humane death. A non-penetrating captive bolt only stuns animals and should not be used for euthanasia of horses.\textsuperscript{(19)}

After euthanasia, it is important the horse’s carcass is properly disposed of in a safe manner that does not pose a hazard to people or animals. However, approved methods vary widely with animal species and regulatory authority. There are a number of carcass disposal options available including burial, composting, incineration, rendering and bio-digestion.\textsuperscript{(20)} Rendering plants that supply by-products to dog and cat food companies will not accept horses euthanized with sodium pentobarbital. Recent studies at West Texas A&M demonstrate that when Sodium Pentobarbital is used to euthanize horses and the horse is composted, residues remain in the compost.\textsuperscript{(21)} Further studies will be required to determine if this is a potential health risk to people and animals. Many landfills will not accept carcasses of horses that have been euthanized with barbiturate overdose. In addition, many counties and municipalities will not allow burial of horses chemically euthanized.
A review of the unwanted horse issue would not be complete without a brief review of anti-slaughter legislation and the effect it has had on the horse industry. The term euthanasia has already been defined, but because the term slaughter is used frequently in the proposed legislations it is important to understand its meaning. In North America, slaughter is used to describe the humane ending of an animal’s life under strict federal regulations and is used only when the carcass is processed at a licensed meat plant for food purposes. In the European Union, slaughter is used by authorities to describe humane animal death, no matter the end result of the carcass.\(^{22}\) The 1996 Farm Bill gave the USDA’s Animal and Plant Health Inspection Service (APHIS) regulatory responsibility for the humane commercial transport of horses to processing plants. APHIS oversees the requirements on access to food, water and rest during shipment, as well as the types of horses that cannot be shipped. In addition, the regulations phased out the use of double-decker trailers in 2006 and require that origin/shipper certificates accompany each shipment that document identifying marks, breed, color and gender.\(^{23}\) A major concern by proponents of the anti-slaughter legislation is they believe horses, despite USDA oversight, suffer during transportation to the processing facilities. In a study reported in 1999 and conducted at the two Texas horse processing plants, a total of 1,008 horses in sixty-three trailer loads were observed during unloading. Conditions considered severe welfare problems in horses were body condition scores of 1 to 2 (emaciated) of 9; recumbency or the inability to walk; fractured limbs; and severe wounds. Ninety-two percent of the horses arrived in good condition. Fighting was the major cause of the injuries that occurred during transport and marketing. Abuse or neglect by the owner, not transportation, was the cause of 77% of the severe welfare problems observed.\(^{24}\) In a study conducted by Stull et al, nine trailer loads of horses (n=306) transported to slaughter facilities with distances ranging from 596 to 2,496 kms were observed to
characterize the physiological responses and number of injuries due to transportation under summer conditions. The percent of horses injured was greater for two-tiered “potbelly” (29.2%) compared to straight-deck (8%) trailers.\(^{(25)}\)

In 2001, the first proposed law to outlaw horse slaughter was introduced into Congress. The bill was never taken up by the full House, however, it did strike an emotional chord within both the horse industry and the non-horse owning public and started a debate that continues today. Proponents argued the ban on slaughter would eliminate pain and suffering of those horses shipped to processing plants and the surplus of unwanted horses that would result could easily be absorbed by the horse retirement/rescue industry. Opponents to the bill argued that banning the slaughter of unwanted horses would result in unintended consequences that would include increased neglect, abuse and abandonment. They also argued that unwanted horses, which in the past could have been sold for a profit, will now become a cost to the horse owner who must pay for care or euthanasia and carcass disposal.\(^{(26)}\) They believed this would most severely impact the approximately 45% of U.S. horse owners that have an annual household income below $75,000 per year.\(^{(14)}\) They also pointed out the bill did not provide funding, an infrastructure or enforcement authority to address the welfare of unwanted horses no longer processed for meat. There was also concern voiced that if the processing plants overseen by USDA veterinarians were closed, horses would be transferred longer distances to foreign processing plants. The bill was not passed, but in subsequent years bills have again been introduced in Congress to prohibit the slaughter of horses for human consumption. Independent inspections of processing plants in the U.S., Mexico, and Canada by AAEP veterinarians verified that animals at the plants were
handled properly and their use of captive bolt and gunshot were acceptable forms of humane euthanasia for the horses being processed.\(^{(27)}\)

Federal legislation to stop horse processing for meat became a moot point when in 2007 a 1949 Texas law that prohibits the slaughter of horses for human consumption (Texas Agriculture Code, Section 149.002) was discovered and enforced, closing the two horse processing plants in Texas.\(^{(28)}\) In that same year, Illinois Bill H.B.1711 was passed and amended the Illinois Horse Meat Act, thus making it unlawful for any person in Illinois to slaughter a horse if that person knows that any of the horse meat will be used for human consumption.\(^{(29)}\) Now that there are no longer horse processing plants operating in the U.S., activists have turned their attention to introducing federal legislation to prevent the export of U.S. horses to processing plants in foreign countries.

Although the Unwanted Horse issue appears to be a U.S. only problem, animal activists in Canada and Europe are beginning to stimulate discussion on banning horse slaughter in their respective countries. From the U.S. experience with both the horse slaughter and unwanted horse issues it can be predicted that such activities will have a negative affect on the horse industry and equine welfare in countries where it occurs. The U.S. unwanted horse issue coupled with a dramatic downturn in the economy has produced several negative affects on the horse industry. The cost of caring for horses has increased and the amount of money available to owners has decreased. This has resulted in an increased sell-off of horses and the inability of owners to adequately care for them if they will not or cannot sell them. Because the processing
plants in the U.S. have been closed, horses are currently shipped to Mexico or Canada for processing. The resultant high cost of transporting the horses has lowered the price buyers are willing to pay to only a few hundred dollars for a standard sized horse in good flesh. Horses that have traditionally be sold at sale barns for 50 to 60 cents per pound are now bringing 10 to 15 cents per pound. As a result, the lowered price being paid for low-end horses has lowered the sale price of all U.S. horses. In addition, the number of horses abandoned and neglected has significantly increased. In a recently conducted national survey, over 90% of those polled indicated the number of neglected and abused horses is increasing. Eighty seven percent indicated the issue of the unwanted horse has become a “big problem”, compared with only 22% who felt it was important three years ago. Sixty-three percent of rescue/retirement/retraining facilities surveyed reported they are currently at or near capacity and, on average, turn away 38% of the horses brought to them.\(^{17}\) Other problems created by the issue include a push by animal activist to reclassify the horse as a companion animal rather than livestock. The general public supports this initiative because they no longer view horses as working animals, but rather a luxury item that is to be treated as a pet. If horses were to be officially reclassified as companion animals, the horse industry would lose all federal and state funding for disease control, equine research, and disaster relief. The debate over horse processing and the unwanted horse has also fragmented the U.S. horse industry and created strong, emotional divides in an industry that traditionally collaborates.

The horse industry will never be able to completely eliminate unwanted horses. Horses will always age, sustain career ending injuries, not perform up to owner expectations or not be attractive enough. However, the horse industry has turned its attention to the unwanted horse
issue and is developing strategies to both reduce the number of unwanted horses on the front end through responsible breeding as well as on the rear end through rescue/retirement facilities, retraining for alternative careers, and low-cost euthanasia options. It is the responsibility of all horse owners to learn the facts about the unwanted horse issue and to own responsibly. They must be aware of how their actions affect the welfare of the horses they own and consider the consequences before they breed, buy, or discard a horse at the local sale barn. The unwanted horse issue will not be resolved over night and over time will extend to other countries.

Concerted efforts to reduce the number of unwanted dogs and cats in the United States have been underway for decades, yet millions of dogs and cats are still euthanized at animal shelters and veterinary clinics each year. (30) Key equine stakeholders are now working together to develop effective strategies to improve the quality of life of unwanted horses and to reduce their numbers.
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